BHAGAT PHOOL SINGH MAHILA VISHWAVIDYALAYA
KHANPUR KALAN (SONIPAT)

Agenda for 20th Meeting of Academic Council

Date:- 20/06/2018

Time:- 11.00 a.m.

Venue:-Conference Hall of Administrative Block

BPS Mahila Vishwavidyalaya, Khanpur Kalan

Bhagat Phool Singh Mahila Vishwavidyalaya

Khanpur Kalan (Sonepat), Haryana-131305
Office No. 01263-283001,283038, Fax No. 01263-283154, www.bpswomenuniversity.ac.in

Ref No. BPSMV/Acad/18/2898-2935 **Dated:** 19/06/18

To

All the members of
Academic Council,
BPS Mahila Vishwavidyalaya,
Khanpur Kalan.

Subject:- Agenda for the 20th meeting of Academic Council.

Sir/ Madam,

In continuation to this office letter No. BPSMV/Acad/18/2233-66 dated 25/05/2018, the agenda for the 20th meeting of the Academic Council scheduled to be held on 20/06/2018 at 11.00 a.m. in the Conference Hall, Administrative Block, BPS Mahila Vishwavidyalaya, Khanpur Kalan (Sonipat) is enclosed herewith. The content of the agenda and the deliberations in the meeting may, however, kindly be kept confidential.

Kindly make it convenient to attend the meeting.

With kind regards.

Yours sincerely,

Registrar

Endst.No. BPSMV/Acad/18/ **Dated:**

Copy of the above is forwarded to the following for information and necessary action, please:-

1. The Secretary to Governor-Chancellor (for kind information of His Excellency Governor-Chancellor, Haryana), Haryana Raj Bhawan, Chandigarh.
2. PA to Vice-Chancellor (for kind information of the Vice-Chancellor), BPSMV, Khanpur Kalan.
3. PA to Registrar (for kind information of the Registrar), BPSMV, Khanpur Kalan.

Supdt. I/c (Acad)
for Registrar

BPS MAHILA VISHWAVIDYALAYA KHANPUR KALAN (SONEPAT)

AGENDA FOR 20th MEETING OF THE ACADEMIC COUNCIL TO BE HELD ON 20/06/2018 AT 11.00 A.M. IN THE CONFERENCE HALL, ADMINISTRATIVE BLOCK, BPS MAHILA VISHWAVIDYALAYA KHANPUR KALAN (SONEPAT).

1. **Confirmation of the Minutes of the 19th meeting of Academic Council held on 14/09/2017.**

To confirm the Minutes of the 19th meeting of the Academic Council held on 14/09/2017 and observations received from Dean Faculty of Commerce & Management on the Agenda item No. 10,12,13 and any other 14 (iii), the revised resolutions has already been sent to the concerned Deptts. vide letter No. BPSMV/Acad/18/1371-76 dated 23/03/2017 **(Annexure-1, pages- 1-11).**

2. **Follow up Action Report.**

To note the follow up action report on the decisions taken by the Academic Council in its 19th meeting held on **14/09/2017 (Annexure-2, pages-12-14C).**

3. **To consider the recommendations of the Faculty of Commerce & Management held on 27.02.2018 for Registration of Ms. Priyanka D/o Sh. Amarnath in Ph.D Programme in Management along with following research topic and name of the supervisor w.e.f 04.12.2017 (i.e date of meeting of PGBOS).**

S. N.	Name of the Candidate	Title/ Research Topic	Name of the Supervisor
1.	Ms. Priyanka	Impact of Rural Entrepreneurship Programmes on Socially Disadvantaged Groups	Prof. Sanket Vij

Statement of the case:-

Ms. Priyanka has successfully completed her Pre-Ph.D. Course Work in Management. Her case has been duly approved by the Departmental Research Committee, Post Graduate Board of Studies and Faculty, Department of Commerce & Management. The minutes of all the bodies are **(Annexure-3, page-15-21).** As per Ph.D. Ordinance of BPSMV Khanpur Kalan, her case is to be placed before the Academic Council for approval.

The case was put up to the Vice-Chancellor who after due consideration has ordered to place the same before the Academic Council for consideration.

4. **To note the action taken by the Vice-Chancellor in anticipation of approval of Academic Council to approve the 45 days maternity leave to the women students.**

Statement of the case:-

The Principal Secretary, Govt. of Haryana, Higher Education Deptt. vide Memo No. 18/172-2016 UNP (4) dated 30/06/2017 **(Annexure-4, page-22)** has been informed that the State Govt. has decided to support the women students to complete their education without any gap/hindrance. The State Government has taken a policy decision for grant of Maternity Leave upto 45 days to such women students, who are studying in State Universities/Colleges in the State.

The maternity leave will be granted by the competent authority on the recommendation of Government Hospital Authorities, then the women students will have to attend the extra classes as per requirement of attendance of the specified course/professional research programme.

The Vice-Chancellor, keeping in view the urgency has approved the same in anticipation of approval of Academic Council and ordered to refer the same to the Academic Council for information and approval.

5. **To consider the request of Ms. Manjit Gill, a student of M.Tech (ICT) Department of Electronics and Communication Engineering to grant permission to complete pending dissertation work.**

Statement of the case:-

Ms. Manjit Gill, a student of M.Tech (ICT) in the Department of Electronics and Communication Engineering has submitted a request to grant permission to complete her pending dissertation work. She took admission in the Admission Session 2013-15, but due to some reason, she could not submit her thesis even after completion of stipulated period of four years.

The Chairperson ECE has also given his recommendations, which may be read as under:-

"May be allowed, in the interest of student being girl student, however the candidate has not indicated any specific reason. The Necessary procedure may be followed."

As per Ordinance for M.Tech programme clause No. 2 "The normal duration of the programme is two years and maximum duration of M.Tech programme offered by the School of Engineering and Sciences is four years (n+2). The student to be eligible for the award of degree has to clear all the necessary academic requirements during

normal or maximum duration of all the specified programmes. Failing which she will not be allowed to continue her programme."

The student Ms. Manjit Gill, has not completed the dissertation work of M.Tech (ICT) within time frame as per Ordinance.

The Vice-Chancellor after considering the matter ordered to refer the same to the Academic Council for consideration and approval.

6. **To consider & approve the introduction of M.A. Course in Hindi & Sanskrit with an intake of 30 seats per course for Regional Centre of BPSMV, Kharal from the Academic session 2018-19.**

Statement of the case:-

There are approximately 700 students studying at Regional Centre Kharal in different Under Graduate courses. At present two PG Courses are being run there. The parents of students from nearby villages frequently visit Regional Centre Kharal with a request to start the PG Course(s) at Regional Centre Kharal, so that their wards may study PG classes in this rural area as there is shortage of good conveyance to the nearby city/town. In view of the requests of parents & academic growth of the students that the following PG courses may be started at Regional Centre Kharal:-

S.No.	Name of course	Intake	Duration
1.	M.A. Hindi	30	02 years
2.	M.A. Sanskrit	30	02 years

Faculty required:-

At present there 23 Teaching Assistants are working at Regional Centre Kharal to teach various Under Graduate Courses. These Teaching Assistants are taking their full workload as per norms. Following faculty is required to be appointed as per UGC norms to start any PG Course:-

Professor-01
Associate Professor-02
Assistant Professor-04

Hence, the following posts are required to be sanctioned/approved to start both the courses:-

Professor-02
Associate Professor-04
Assistant Professor-08

Non Teaching Staff :-

Assistant-01
Clerk-01
Peon-01

Lab Attendant-01

Financial Liabilities:-

The total annual financial liability of the teaching and non-teaching posts is as under:-

S.No.	Name of Post	Scale	Annual liability Amount in Rs.
1.	Professor (02)	37400-67000+10000GP	30,66,960/-
2.	Associate Professor(04)	37400-67000+9000GP	55,25,184/-
3.	Assistant Professor(08)	15600-39100+6000GP	51,69,792/-
4.	Assistant(01)	9300-34800+3600GP	3,88,356/-
4.	Clerk(01)	5200-20200+1900GP	2,16,444/-
5.	Lab Attendant(01)	5200-20200+1900GP	2,16,444/-
	Total		1,45,83,180/-

Current Requirement:-

The sanctioning of posts require the approval of Executive Council and State Government which is a time consuming process, if the authorities wish to start the PG courses from the next session at least 04 Teaching Assistants may be engaged for smooth functioning.

Furniture & other requirements:-

The existing furniture at Regional Centre Kharal is not sufficient to meet the requirement of PG Courses. Hence, it is proposed that the following items are required for the same:-

S.No.	Name of Item	Quantity	Financial Liability Amount in Rs.
1.	Dual Desks	60	3,00,000/-
2.	Lecture Stands	04	50,000/-
3.	Green Boards	04	15,000/-
4.	Almirah	02	30,000/-
5.	Chairs	10	20,000/-
6.	Book Racks	20	2,00,000/-
7.	Books for Library	500	5,00,000/-
	Total		11,15,000/-

Infrastructure Required:-

At present there are 16 rooms in which UG/PG courses are being run. Therefore, to start PG Courses at least 04(four) class rooms are required.

The Vice-chancellor after considering the matter has ordered to refer the case to the Academic Council for information and approval in principle.

7. **To consider the recommendations of the Committee constituted for allocation of five seats for Ph.D. in reserved category and to reconsider the Clause D & F of University Research Scholarship rules.**

Recommendations of the Committee are as under:-

EXISTING	PROPOSED BY THE COMMITTEE
Clause C (ii) Five additional seats of URS will be allotted to reserved categories-two seats for SC students, one for BC(A), one for BC(B), one for Differently-abled/ESM/EBC. Allotment of these seats to various Departments	**The five additional reserved extra seats for URS i.e. two SC/ST and one for BC(A), one for BC(B), one for differentially-abled/ESM/EBC will be allotted in alphabetical order to the first five Departments where the Ph.D programme is going on. In the next year the seats will be respectively allotted to the next five Departments in the same alphabetical order and so the cycle will go on in subsequent years. Further, the new Department, if any, will be added at the tail of the existing Departments and the new Department will get the reserved seats on its turn. A roster register shall also be maintained by the Registration and Scholarship Branch.**
Clause- D (i) The Research and Scholarship Branch shall invite the applications for award of University Research Scholarship from the candidates admitted in Pre-Ph.D/Ph.D by DRC within two month from the date of admission.	The Research and Scholarship Branch shall invite the applications for award of University Research Scholarship from the candidates admitted in Ph.D by DRC within two month from the date of admission. **The University Research Scholarship (URS) will be awarded to the candidate who has been registered to Ph.D programme from the date of PGBOS in which her case for Registration has been approved.**
Clause- F (ii) A Scholar will be required to submit a half yearly progress report through the supervisor. The progress reports should be found satisfactory by the DRC for the further continuation of the Scholarship.	**A Scholar will be required to submit a half yearly progress report through the supervisor. The progress reports should be found satisfactory by the DRC for the further continuation of the Scholarship.** **The attendance of the URS students shall be maintained by the supervisor and the copy of the same be sent to Registration and Scholarship Branch at the time of payment. An undertaking from the student to this effect that she is not working anywhere on Temporary/Regular basis be obtained**

Statement of the case:-

The University Research Scholarship rules were duly approved by the Academic Council in its 41th meeting and by the Executive Council in its 51th meeting respectively. As per rules, five additional seats are required to be allotted to

reserved category through a Committee. Moreover, there was some confusion in the Clause D & F, which was required to be re-considered. Accordingly, the case was put up to the Vice Chancellor and the following Committee was constituted to resolve the issue.

1.	Prof. Ipshita Bansal	Convener
2.	Prof. Sanket Vij	Member
3.	Prof. Vijay Nehra	Member
4.	Sh. Rajesh Kumar	Member Secretary

The meeting of the Committee held on 27.03.2018 at 02.00 PM in the office of the Dean Academic Affairs and the recommendations of the Committee were put up to the Vice-chancellor, who has ordered to place the same before Academic Council for consideration.

8. **To consider the recommendations of the Faculty of Pharmaceutical Sciences made in its meeting held on 28.10.2017 for Ph.D registration of MS. Shyna Madan in Pharmaceutical Sciences w.e.f 28.10.2017 (i.e. date of meeting of PGBOS). The details are as under:-**

Sr. No.	Name of the Candidate	Father's Name	Title	Name of the Supervisor
1.	Ms. Shyna Madan	Sh. Suresh Madan	"Syntheses, Characterization and Biological Evaluation of Some 4-Thiazolidinones clubbed with Benzimidazoles"	Prof. Neelam Jain

Statement of the case:-

Ms. Shyna Madan has successfully completed her Pre Ph.D. Course Work (Pharmaceutical Science) under Roll No. 14071002. Her case has been duly approved by the Departmental Research Committee, Post Graduate Board of Studies and Faculty, Department of Pharmaceutical Science in its meeting held on 28.10.2017. The minutes of the DRC, PGBOS & Faculty are attached **(Annexure-5, Page-23-24).** As per Ph.D. Ordinance of BPSMV Khanpur Kalan, the case needs the approval of Academic Council.

The case was put up to the Vice-Chancellor who after due consideration ordered to refer the case to the Academic Council for consideration.

9. **To consider and approve recommendation made by the committee constituted by the Vice-Chancellor under the the Convenership of Dean Academic Affairs regarding adoption of MOOCs courses on SWAYAM in BPSMV.**

Statement of the case:-

The committee constituted by the Vice-Chancellor for adopting of MOOCs Courses in BPMSV in its meeting held on 16/03/2018 has recommended the following for approval in Academic Council:-

a) Adoption of MOOCs courses through SWAYAM platform by Bhagat Phool Singh Mahila Vishwavidyalaya from ensuing academic session i.e. 2018-19.

b) Issuing directions to all the Departmental Heads for adding in the Ordinance of all the PG programs the following "The University has adopted the MOOCs-SWAYAM program of UGC-MHRD since July 2018. Hence upto 20% or less of the credits of the P.G. program will be earned by the students through MOOCS-SWAYAM courses."

The minutes of the meeting is placed at **(Annexure-6, page-25-28)**, may be approved by the Academic Council to enable the smooth adoption of MOOCs programmes in BPSMV.

The Vice-Chancellor after considering the matter ordered to refer the same to the Academic Council for consideration and approval.

10. To note the action taken by the Vice-Chancellor in anticipation of approval of Academic Council to approve the syllabus of BCA and B.Com.

Statement of the case:-

The Chairperson Deptt. of Computer Science and Commerce was requested to provide the Syllabus for BCA and B.Com as these courses are being run by the Affiliated Colleges. The meeting of UG BOS of Department of Computer Science and Commerce has approved the syllabus of BCA **(Annexure-7 page-29-55)** and B.Com **(Annexure-8 page-56-114)** respectively.

The Vice-Chancellor, keeping in view the urgency has approved the same in anticipation of approval of Academic Council and ordered to refer the same to the Academic Council for information and approval.

11. To note the action taken by the Vice-Chancellor in anticipation of approval of Academic Council to approve some minor changes in paper "Contemporary Issues in Indian Education" code MPE-2106 2nd SEM of M.Phil. in Education.

Statement of the case:-

The PG BOS, Institute of Teacher Training and Research (ITTR) has approved some minor changes in paper "Contemporary Issues in Indian Education" code MPE-2106 2nd SEM of M.Phil through circulation and the same has also been approved by the Faculty of Education in its meeting held on 05/03/2018 **(Annexure-9, page-115-117).**

As per Academic Calendar for the session 2017-18, the Even semester has already been started from 01/01/2018. The Chairperson, ITTR wanted to implement

this syllabus of paper "Contemporary Issues in Indian Education" code MPE-2106 2nd SEM of M.Phil. (after minor changes) **(Annexure-10, page-118-121)** during the academic session 2017-18. As per University Act, the same is required to be approved by the Academic Council of the University.

The Vice-Chancellor, keeping in view the urgency has approved the same in anticipation of approval of Academic Council and ordered to refer the same to the Academic Council for information and approval.

12. **To consider and approve the recommendation made by the Committee constituted by the Vice-Chancellor under the Convenership of Dean Academic Affairs for proper implementation of subject of "Environmental Studies".**

Statement of the case:-

The Vice-Chancellor has constituted a committee, for proper implementation of subject of "Environmental Studies" in various Teaching Departments/Institutes/Constituent and Affiliated Colleges/Regional Centers of BPSMV at undergraduate level, the meetings of said committee were held on 15/03/2018 and 06/04/2018. The minutes of the meeting are placed at **(Annexure-11, page-122-136).**

The Vice-Chancellor after considering the matter ordered to refer the same to the Academic Council for consideration and approval.

13. **To consider and approve the recommendation made by the Committee to review the Ph.D. Ordinance of BPSMV.**

Statement of the case:-

The Executive Council of the University vide resolution No. 5 in its 56th meeting held on 19/12/2017 constituted a committee of the following to review the Ph.D. Ordinance of BPSMV with directions to submit its report within 15 days positively:-

1. Dean Academic Affairs
2. Dean Faculty of Commerce & Management
3. Dean Faculty of Arts & Languages
4. Dean Faculty of Engineering & Technology
5. Prof. Sudesh Chikkara, EC Member

The meetings of the committee were held on 15/02/2018, 23/02/2018 & 13/03/2018, the committee has recommended the draft Ph.D. Ordinance for approval. The minutes of the meeting is placed at **(Annexure-12, page-137-157).**

The Vice-Chancellor after considering the matter ordered to refer the same to the Academic Council for consideration and approval.

14. To consider the Internal and External examiners for evaluation of Ph. D Thesis.

Statement of Case:-

As per Ordinance No. BPSMV/Ph. D/2011/01 the examination branch put up the case to the Vice-Chancellor regarding ticking the names of examiners for evaluation of thesis of Ph. D.

The rule position regarding Appointment of Examiner is as under:-

11. APPOINTMENT OF EXAMINERS

11.1. On receiving application request along with an abstract of the thesis including synopsis/chapter scheme from the research scholar duly certified by the Supervisor that her research work is complete and ready for submission, the P.G. Board of Studies shall approve, a panel of at least six external examiners not below the rank of Professor to evaluate the thesis provided by the concern Supervisor. The supervisor shall ensure that the proposed examiners are from the same area of specialization to which Ph. D. thesis to be evaluated pertains. The Board of Studies may ensure while recommending the examiners that 50% of the external examiners are from within Haryana and 50% from outside of the state. Efforts should be made to recommend examiners of national and international repute and from the leading Institutes/Universities in the country. It shall be up to the P.G. Board of Studies concerned to recommend the examiners from outside the Country.
(Annexure-13, page-158-159).

The matter with regard to evaluate the Ph. D thesis from the internal as well as external examiner was discussed with the Vice-Chancellor and it has been felt that there should be three examiners from within Haryana and six from the outside of the state be recommended by the concerned department. To implement this provision of the external examiner the approval of Academic Council is required. The case was put up to the Vice-Chancellor who has ordered to refer the case to the Academic Council. This provision shall also be incorporated in the Ph. D ordinance after approval of Academic Council.

15. To consider the Rules regarding Submission of University Examination Form Fee.

Statement of Case:-

Examination Branch of BPSMV charged the examination fee from the students as under:

Sr. No	Name of Courses	Date of Exam for Regular/Re-appear/Additional/Improvement.	Last date for submission of exam form without Late fee (Including grace days) Rs. 500/-	Last date for submission of exam form with late fee of Rs 50/-	Last date for submission of examination form with late fee of Rs 100/-
1.	Even Semester	30.04.18	16.02.18	23.02.18	05.03.18
2.	Odd Semester	14.11.17	24.09.17	04.10.17	11.10.17

But the Maharishi Dayanand University, Rohtak charged the examination fee from the students as under:

Sr. No	Name of Courses	Date of Exam for Regular/Re-appear/Additional/Improvement.	Last date for submission of exam form without Late fee.	Last date for submission of exam form with late fee of Rs 500/-	Last date for submission of examination form with late fee of Rs 1000/-
1.	Even Semester	30.04.18	16.02.18	23.02.18	05.03.18
2.	Odd Semester	14.11.17	24.09.17	04.10.17	11.10.17

In addition to above Executive Council of MDU vide resolution No. 6 in its meeting held on 01.02.2013 has made amendment in Clause-24 of the Ordinance "General Rules for Examinations" as under:-

EXISTING	AMENDMENT
In a very exceptional and hard cases, the Vice-Chancellor when he deems it appropriate may allow as a special case to accept the examination form and fee (with late fee of Rs.500/-) 15 days prior to commencement of the examination and upto one days before the commencement of the examination, the late fee shall be charged Rs. 2000/-	"In exceptional and hard cases the examination forms and fee may be accepted with late fee as under: (i) Upto 15 days prior to commencement of examination with late fee of Rs. 500/- (ii) Upto one day prior to commencement of examination with late fee of Rs. 5000/- No form shall be accepted after commencement of examination for whatever reason.

Further, the Executive Council vide Resolution No. 7 of its meeting mentioned above has revised the fee for holding special practical examinations (on the request of such students who may have missed their practical examinations for some cogent reasons) from Rs. 1000/- to Rs. 2000/- per paper. The request for holding special practical examination will not be entertained after 30 days from the date of declaration of result.

The above rule proposal may also be implemented in BPSMV, Khanpur Kalan (Sonepat).

16. **To consider the Rules regarding University Examination Re-evaluation Reform Note-Marks obtained by the candidate whichever are higher by State University/Central University in Haryana.**

Statement of Case:-

All the state universities have framed their rules of re-evaluation. In this connection a letter was received through Vice-Chancellor office from The Director Higher Education, Haryana, Shiksha Sadan, Sector-05, Panchkula vide memo no. 18/90-2015 UNP(4) dated 08.02.2017 **(Annexure-14, page-160)**. In this letter all the Registrars were asked to consider and to present their report regarding University Examination Re-evaluation Reform Note Marks obtained by the candidate whichever are higher by State University/Central University in Haryana. In this context, a meeting was called on 01.03.2017 at 11:00 A.M. under the chairmanship of the Vice Chancellor, CDLU, Sirsa to frame the rules of re-evaluation. The minutes of the meeting are enclosed at **(Annexure-15, page-161-162)**. The minutes of meeting were sent to DHE, Haryana by CDLU, Sirsa, but DHE, Haryana directed the Vice-Chancellor, CDLU, Sirsa to revisit the clause (2). Further another meeting of all the members was held on 20.09.2017 at 11:30 AM **(Annexure-17, page-166-168)**. The minutes of the meeting was sent to DHE, Haryana vide Endst. No. CDLU/Re-val./17/1834-1842 dated 30.11.2017 and also sent to the Registrars of all State University/Central University in Haryana for information and further necessary action.

EXISTING RULES	AMENDED RULES
(No Condition)	1. Eligibility criteria for re-evaluation of answer books(s): (i) If the award(s) in the paper(s) is/are less than 20% of maximum marks (theory only), no re-evaluation of answer books will be allowed.
A candidate may apply for re-evaluation on the prescribed form, along with the original DMC's & requisite fee, **within 15** days of the declaration of the result or dispatch of the DMC to the Department whichever, is later.	(ii) Eligible candidate may apply for re-evaluation of answer book(s) to the Controller of Examinations of respective Universities on the prescribed application form along with requisite fee, as prescribed by the University, **within 30** days from the declaration of the result of the particular examination, in particular the date on which the result uploaded on respective University website, without the Detailed Marks Card/Certificate in original.
When Increase/Decrease in upto 15% of the maximum marks of the paper concerned. Average of the Original Examiner & Re-	**2.** If the increase or decrease of marks between re-evaluated score and the original score in a paper does not **exceed 20%** of the maximum marks of that paper, the average of the two scores will be taken as final award. **However, if the increase of marks is more than 20%, the**

evaluator to be given. **When increase/decrease is more than 15% of the maximum marks of the paper concerned.** **Answer book to be sent to the second re-evaluator and average of two highest scores out of the original examiner and both the re-evaluators, to be given.** The final result of re-evaluation favourable or not will be binding upon the candidate and subject to above provision it will supersede, suo moto, the original score/result.	**answer book will be referred to 2nd re-evaluator and the average of the best two scores will be taken as final award.** (i) The Controller of Examinations of KUK and MDU pointed out that due to larger strength of students in their respective Universities, the implementation of Previous Result Stands (PRS) in case of decrease of marks, could not be feasible. Therefore, after a deliberation at length, it was decided that in case of decrease of marks and the student gets marks below the level of passing marks in that paper, the character of the result will not be changed i.e. the student will be given minimum pass marks as per the ordinance of the concerned University. (ii) A Committee will be constituted by all the Universities for evaluation/re-evaluation cases where variation in re-evaluation marks is more that 30% of the maximum marks of that paper. The constitution of the committee will be as under: (a) Dean of the concerned Faculty. (b) Head/Chairperson of the concerned Department (c) Controller of Examinations (d) One subject expert (to be nominated by the chairperson/HOD The committee will recommend action against the examiner to the Vice-Chancellor of the concerned university. 3. The Controller of Examinations will ordinarily declare the results of re-evaluation within two months of the last date fixed for receipt of applications for re-evaluation. If a candidate fails or earns compartment/re-appear in a paper(s) and has applied for re-evaluation but his/her result of re-evaluation is not declare before the next examination and he/she appear in the next examination in the paper(s) in which he/she has failed, the better of two

	scores "Re-appear Score or Re-evaluation score, would be taken into account. 4. Further, in order to avoid confusion between rechecking and re-evaluation of answer books among the stake holder, it is decided that instructions for rechecking and re-evaluation of answer books may be uploaded on website mentioning: Rechecking of answer books involves marks awarded to various answer have been correctly added and if all the answers have been assessed/evaluated. However, re-evaluation of answer books involves complete evaluation of answer book(s) by the eligible examiner after first evaluation of the answer books.

In addition to, others rules of re-evaluation i.e. fee, identification of answer books etc. will be applicable as per ordinance of BPSMV, Volume-II (Part-A) 2013 Chaper-10 **(Annexure-16, page-163-165)**.

17. **To consider the action taken by the Vice-Chancellor in awarding Ph.D. Degree to the following Research Scholars in the subjects mentioned against each in anticipation of the approval of Academic Council.**

Statement of the Case:-

It is submitted that the research scholars are to be awarded Ph.D. as per orders of the Hon'ble Vice-Chancellor subject to the anticipatory approval of next meeting of Academic Council meeting.

BPSMV Ordinance for award of Ph.D. at point no./clause 13 says that **"A student shall be awarded the Ph.D. Degree after the approval of the Academic Council. However, notification and provisional certification after the successful viva-voce were issued by the Controller of Examinations on the recommendations of Board of the Research Studies after the approval of the Vice-Chancellor".** Accordingly, a draft agenda item for the following research scholars is placed below for approval:-

Sr. No	Name of Student/ Fathers name/ Regd. No.	Faculty & Deptt. Name	Name of Guide	Title of Thesis	Date of Ph.D. degree awarded
1	Rita D/o Sh. J.N. Singh Reg. No. 13060405	BPS Institute of Teacher Training & Research	Dr. Sandeep Berwal	"Self Concept of Students with Learning Disabilities in relation to	06.12.2017

				Achievement Motivation and Coping Strategies"	
2	Poonam D/o Sh. Rajpal Reg. No. 11050401	Department of Laws	Dr. Ashok Kumar	"Hindu Undivided Family in India Tax Scenario"	15.01.2018
3	Preeti Malik D/o Sh. Satyawan Malik Reg. No. 11050402	Department of Laws	Dr. Pawan Kumar	"Honour Killing: Law & Social Order in Haryana "	15.01.2018
4	Jyoti D/o Sh. Dhan Singh Reg. No. 11050409	Department of Laws	Dr. Parmod Kumar	"Surrogacy in India: A Socio Legal Study'	15.01.2018
5	Sonia D/o Sh. Ram Niwas Reg. No. 11050411	Department of Laws	Dr. Parmod Kumar	"Concept of Patents in India: A Critical Study"	15.01.2018
6	Ms. Sarla Rani D/o Sh. Dharam Pal Reg. No. 12060452	BPS Institute of Teacher Training & Research	Dr. Suman Dalal	Study of Well-Being, Occupational Stress and Role Commitment on Effectiveness of Teachers	08.05.2018
7	Ms. Manisha D/o Jai Kumar Reg. No. 12060453	BPS Institute of Teacher Training & Research	Dr. Suman Dalal	A study of Home Environment in Relation to Scientific Attitude, Study Habits and Emotional Maturity of Adolescents	08.05.2018
8	Ms. Monika D/o Sh. Ramniwas Reg. No. 13060412	BPS Institute of Teacher Training & Research	Dr. Sumitra Devi	Study of Relationship of Pupil Related Factors with Linguistic Skills among Secondary School Students	08.05.2018
9.	Ms. Tripti Goel D/o Ramesh Chand Goel Regn..No.11 010601	Department of ECE	Prof. (Dr.) Vijay Nehra & Virender Prasad Vishwkar ma Dept. of ECE ,	"Neuro Fuzzy Approach For the Recognition System Under Varying Constraints "	02.11.2017

			BPSMV khanpur Kalan		
10.	Anisha D/o Arjun Singh 11030401	English/Department of English	Dr. Amrita Sharma Assoc. Prof. in English, Dept. of English , BPSMV khanpur Kalan	English Translation of Mira Bai: " A Comparative Study in Stylistics"	31.07.2017
11.	Ms. Sumaya D/o Mohammad Amin Regn..No.13 030453	Department of English	Dr. Ashok Verma	"Studying Sheikh-Ul-Alam's Poetry in Sufi Cultural Contexty. "	15.11.2017
12.	Ms. Nisha D/o Ramkishan Regn..No.12 030405	Department of English	Dr. Geeta Phogat BPSMV Khanpur Kalan	"Representative Women in The Mahabharata: A Critical Study. "	28.02.2018
13.	Ms. Rinu D/o Ramesh Kumar Regn..No.12 030454	Department of English	Dr. Ravi Bhushan	"Figures of Speech or Figures of Thought-Emily Bronte and Emily Dickinson's Imagery in Bhamaha's Framework. "	15.11.2017
14.	Ms. Astha D/o Nanak Chand Kukerja Regn..No.11 030403	Department of English	Dr. Amrita Sharma BPSMV Khanpur Kalan	"Proficiency in Receptive and Productive Skills at Senior Secondary Level: A Case Study of Govt. Schools. "	28.02.2018
15.	Ms. Poonam D/o Om Parkash Regn.No.13 030451	Department of English	Dr. Ravi Bhushan	"Keats 'Odes in the Perspective of Rasa Theory : An Analytical Study. "	15.11.2017
16.	Ms. Sonal D/o Sh. Ramphal 11010602	ECE/Department of ECE	Dr. Vijay Nehra Prof. in ECE Dept. of ECE, BPSMV Khanpur Kalan	"Modeling, Simulation and Analysis of Photovoltaic System as a Renewable Green Power Measure for Rural Sector."	25.04.2018

17.	Ms. Garima Sharma D/O Sh. Vinod Sharma 13030457	English/Dept. of English	Dr. Ravi Bhushan Assoc. Prof. Dept. of English BPSMV	"Comparing Narrative Structure: A Study Of "The Yudh Kand "Of the Mahabharata and Homer's Iliad."	08.05.2018
18.	Ms. Ishrat D/O Sh. Israil 13030452	English/Dept. of English	Dr. Daisy Assoc. Prof. Dept. of English BPSMV	"Constitution of Meaning Oral Literature: An Analytical Study Of Haryana's Folklore."	08.05.2018
19.	Ruchika Bhateja D/o Sh. Hansraj Bhateja 14020401	Commerce/Department of Commerce	Dr. Bhavna Sharma Assistant Prof. in Commerce, Dept. of Commerce , BPSMV Khanpur Kalan	"Measuring Service Quality and Customer Satisfaction of Life Insurance Products Distributed through Bancassurance: A Study of Delhi-NCR and Haryana."	25.04.2018

Submitted the case to the Hon'ble Vice-Chancellor for order to refer the matter before the Academic Council for consideration and approval.

18. **To consider the recommendations made by the Faculty of Education in its meeting held on 03.05.2018 for Registration in Ph.D. in Education of the following candidates w.e.f 26.04.2018 (i.e date of meeting of PGBOS) along with their research topic and name of the supervisor as mentioned against each.**

S. N	Name of the Candidate Ms./Sh.	Title	Name of the Supervisor	Date of meeting of PGBOS
1.	Jyoti Singh D/o Satbir Singh 16061001	Effect of Remedial Instruction Programme on Academic Achievement in Science of Children with Visual Impairment	Dr. Poonam	26.04.2018
2.	Kanchan Khatreja D/o Uttam Chand 16061002	Relationship of Creativity in Mathematics of Elementary School Students with Anxiety and Parenting Style	Dr. Suman Dalal	26.04.2018

3.	Kusum D/o Ajit Singh Sangwan 16061003	Study of Academic Performance of Senior Secondary Students in relation to their Scientific Aptitude, Interest and Metacognitive Skills	Dr. Sumitra Devi	26.04.2018
4.	Mamta D/o Ram Chander 16061004	A Study of Creative Thinking of School Students in relation to their Home Environment, Intelligence and Self Confidence	Dr. Sumitra Devi	26.04.2018
5.	Manju Bala D/o Ramphal 16061006	Study of Teacher Enthusiasm and Quality of Life in Different Organizational Climate of Secondary Schools	Dr. Poonam	26.04.2018
6.	Meena D/o Mahender Singh 16061007	Effectiveness of Instructional Package in Mathematics on the Performance of Children with Dyscalculia	Dr. Renuka Sharma	26.04.2018
7.	Meenu Rani D/o Ved Singh 16061008	Comparative Study of Government and Private School Students with respect to Creativity, Self-Efficacy, Resilience and Academic Achievement	Dr. Anu Balhara	26.04.2018
8	Partibha Devi D/o Upender Singh 16061009	An Assessment of the Implementation of Inclusive Education of the Disabled at Secondary Stage Scheme in Haryana	Dr. Sandeep Berwal	26.04.2018
9	Satvinder Kaur D/o Jarnail Singh 16061010	Study of Educational Aspects of the Patanjali Yog of Acharya Ramdev Ji	Dr. Suman Dalal	26.04.2018
10	Seema D/o Balwan	Effect of Yoga Intervention Programme on Metcognition,	Dr. Suman Dalal	26.04.2018

	16061011	Emotional Maturity and Academic Achievement of Secondary School Students		
11	Seema Rani D/o Balraj Singh 16061013	Effectiveness of Constructive Pedagogy of Teaching Mathematics on Learning Outcomes of Children with Hearing Impairment	Dr. Varuna	26.04.2018
12	Sudesh Rani D/o Mahabir 16061014	Impact of an Adapted Physical Activity Programme on Psychophysical Health of Differently Abled Children	Dr. Sandeep Berwal	26.04.2018
13	Sunita Devi D/o Mahaveer Singh 17061002	Effectiveness of Self Regulated Learning Module in Social Sciences on Academic Achievement of Secondary School Students	Dr. Suman Dalal	26.04.2018

Statement of the case:-

The above mentioned 13 students (12 students of 2015-16 & 1 student of 2016-17) have successfully completed their Pre-Ph.D. Course Work in Education. Their cases have been duly approved by the Departmental Research Committee, Post Graduate Board of Studies and Faculty of Education. The minutes of all the bodies are **(Annexure-18, page-169-172).** As per Ph.D. Ordinance of BPSMV Khanpur Kalan, their cases are to be placed before the Academic Council for approval.

The case was put up to the Vice-Chancellor who after due consideration has ordered to place the same before the Academic Council for consideration.

19. To consider the recommendations made by the Faculty of Art & Languages for Registration in Ph.D. in English of the following candidates w.e.f 20.02.2018 (i.e date of meeting of PGBOS) along with their research topic and name of the supervisor as mentioned against each.

S. N	Name of the Candidate Ms./Sh.	Title	Name of the Supervisor	Date of meeting of PGBOS
1.	Monika Sandhu D/o Maan Singh Sandhu 14031003	Treatment of Myths in Asura: The Tale of the Vanquished, Sita, The Palace of illusions, Ajaya: The Roll of Dice, and The Rise of Kali	Dr. Ajeet Singh	20.02.2018

2.	Esha D/o Surat Singh 16031001	Philosophical Tenets of the Bhagavadgita in Patrick White's Voss, William Golding's Darkness Visible, Arun Joshi's The Last Labyrinth and Saul Bellow's Herzog	Dr. Ravi Bhushan	20.02.2018
3.	Sonia Kumari D/o Ranbir Singh 16031002	Revisiting the Mahabharata in M.T. Vasudevan Nair's Bhima: Lone Warrior, Kavita Kane's Karna's Wife: The Outcaste Queen and Sivaji Sawant's Mrityunjaya	Dr. Shalini	20.02.2018
4.	Swati Punia D/o Mahavir Singh 16031003	Matrices of War in Select Short Stories of Ambrose Bierce, Ernest Hemingway, Roald Dahl, Saadat Hasan Manto, Tim O' Brien and Katey Schultz	Dr.Himanshu Parmar	20.02.2018

Statement of the case:-

The above mentioned 04 students have successfully completed their Pre-Ph.D. Course Work in English. Their cases have been duly approved by the Departmental Research Committee, Post Graduate Board of Studies and Faculty of Art & Languages. The minutes of all the bodies are **(Annexure-18, page-169-172).** As per Ph.D. Ordinance of BPSMV Khanpur Kalan, their cases are to be placed before the Academic Council for approval.

The case was put up to the Vice-Chancellor who after due consideration has ordered to place the same before the Academic Council for consideration.

20. **To note the action taken by the Vice-Chancellor in anticipation of approval of Academic Council to approve the rules/Ordinance/Statutes for affiliated colleges.**

Statement of the case:-

The meeting of the committee constituted by the Vice-Chancellor to frame the Rules/Ordinance/Statute for the affiliated Colleges was held on 10.01.2018 at 2.00 p.m. in office of Dean of Colleges, BPSMV Khanpur Kalan. The minutes of the said committee is placed at **(Annexure-19, page 173-190).**

The Vice-Chancellor, keeping in view the urgency has approved the same in anticipation of approval of Academic Council and ordered to refer the same to the Academic Council for information and approval.

21. **To consider and approve the syllabus and scheme of examination of B.A./B.B.A. LL.B. 3rd and 4th semester implemented to the students admitted in 2017-18 w.e.f. 2018-19.**

Statement of the case:-

The UG BOS, Deptt. of Laws in its meeting held on 23/04/2018 and Faculty on 15/05/2018 approves the scheme of examination **(Annexure-20, page-191-194)** and syllabus of B.A. LL.B. **(Annexure-21, page-195-219)** and B.B.A. LL.B. (Hons) 3rd and 4th semester **(Annexure-22, page-220-243)** in the process of continuous evaluation and modification of curriculum as per Bar Council of India.

The minutes of UG BOS of law is placed at **(Annexure-23, page-244)** and the minutes of the Faculty of Law is placed at **(Annexure-24, page-245-246).**

22. **To consider and approve the recommendations of Principal Secretary to Govt. Haryana, Technical Education Department, Chandigarh regarding implementation of AICTE model curriculum in M.Tech (Computer Science & Engineering) & M.Tech (Network Security) 1st to 4th semester w.e.f. academic session 2018-19 in the Department of CSE & IT.**

Statement of the case:-

The Principal Secretary to Govt. Haryana, Technical Education Department, Chandigarh vide D.O. No. 332 dated 08/03/2018 **(Annexure-25, page-247-248)** has sent his recommendations, regarding implementation of the Model curriculum of AICTE including Induction programme, Teacher's Training and Internashala in the Department of CSE & IT in M.Tech (Computer Science & Engineering) & M.Tech (Network Security) 1st to 4th semester w.e.f. from the academic session 2018-19.

The same has been approved by the PG BOS, Deptt. of CSE IT& Faculty in its meeting held on 16/05/2018 and 18/05/2018 respectively. **(Annexure-26, page-249-253).**

The minutes of PG BOS alongwith scheme & syllabus of M.Tech (CSE & NS) 1st to 4th semester are placed at **(Annexure-27, page-254-408).**

23. **To consider and approve the revise pre-Ph.D course work in the department of Electronics and Communication Engineering.**

Statement of the case:-

A meeting of PG Board of Studies in Department of Electronics and Communication Engineering was held on 05/05/2018 to revise the syllabi and Scheme of examination of Pre-Ph.D in the department of Electronics and Communication Engineering and resolved as follows:-

"Syllabi and Scheme of examination of Pre-Ph.D course work in Electronics and Communication Engineering was considered and approved after detailed deliberation and discussion."

Further, the matter has also been approved in the Faculty of Engineering and Technology held on 18/05/2018 **(Annexure-28, page-409-410).**

The minutes of PG BOS and Faculty alongwith scheme & syllabus of pre-Ph.D Course work are placed at **(Annexure-29, page-411-421).**

The Vice-Chancellor after considering the matter ordered to refer the same to the Academic Council for consideration and approval.

24. To consider and approve the implementation of CBCS in LLM course and scheme of examination and amendment in Ordinance.

Statement of the case:-

The PG BOS, Deptt. of Laws in its meeting held on 24/04/2018 and Faculty on 15/05/2018 resolved to implement CBCS in LLM. one year course w.e.f. 2018-19. The scheme of examination & Ordinance are placed at **(Annexure-30, page-422-428).**

The minutes of PG BOS of law is placed at **(Annexure-31, page-429-430)** and the minutes of the Faculty of Law is placed at **(Annexure-32, page-431-432).**

The Vice-chancellor after considering the matter ordered to place it before the Academic Council for consideration and approval.

25. To consider and approve the recommendations of Principal Secretary to Govt. Haryana, Technical Education Department, Chandigarh regarding implementation of AICTE model curriculum in M.Tech (ECE) & M.Tech (ICT).

Statement of the case:-

The Principal Secretary to Government of Haryana, Technical Education Department vide D.O No. 332 dated 08/03/2018, directed to implement the Model Curriculum as drafted and prepared by All India Council for Technical Education **(Annexure-33, page-433-434)**. Further vide Memo No. 431-40/univ. dated 22/03/2018, Deputy Director, Technical Education Haryana ask to send the Action Taken Report for implementing of Model Curriculum of All India Council for Technical Education. **(Annexure-34, page-435-36).**

The same has been approved by the PG BOS, Deptt. of ECE in its meeting held on 05/05/2018 and resolved the following:-

"The Model Curriculum of AICTE is implemented in toto w.e.f 2018-19 for M.Tech(ECE). The contact/credits/course title/hours per week will be implemented,

the same as incorporated in the model curriculum of AICTE. Moreover, there is no model curriculum for M.Tech(ICT) Innovative programme granted by UGC. The structure of AICTE curriculum will be followed for M.Tech (ICT).

The same has also been approved in the meeting of Faculty held on 18/05/2018. The minutes of PG BOS and Faculty are placed at **(Annexure-35, page-437-448).**

The Vice-Chancellor after considering the matter ordered to refer the same to the Academic Council for consideration and approval.

26. **To consider and approve the recommendations of Principal Secretary to Govt. Haryana, Technical Education Department, Chandigarh regarding implementation of AICTE model curriculum in B.Tech (Electronics and Communication Engineering).**

Statement of the case:-

The Principal Secretary to Government of Haryana, Technical Education Department vide D.O No. 332 dated 08/03/2018, directed to implement the Model Curriculum as drafted and prepared by All India Council for Technical Education **(Annexure-33, page-433-434)**. Further vide Memo No. 431-40/univ. dated 22/03/2018, Deputy Director, Technical Education Haryana ask to send the Action Taken Report for implementing of Model Curriculum of All India Council for Technical Education. **(Annexure-34, page-435-36).**

The same has been approved by the UG BOS & Faculty, Deptt. of ECE in its meeting held on 09/04/2018 and 18/05/2018 respectively.

The minutes of UG BOS and Faculty alongwith scheme of 1st to 8 semester & syllabus of 1st year are placed at **(Annexure-36, page-449-476).**

The Vice-Chancellor after considering the matter ordered to refer the same to the Academic Council for consideration and approval.

27. **To consider the recommendations made by the Faculty of Engineering & Technology w.e.f 28.03.2018 (i.e. date of meeting of PGBOS) along with their research topic and name of the supervisor as mentioned against each.**

S. N.	Name of the Candidate	Title/Research Topic	Name of the Supervisor	Date of meeting of PGBOS
1.	Anjana D/o Nafe Singh Roll No. 16011001	Design & Analysis of Effective Techniques for Information Security in Cloud Computing	Prof. Ajit Singh	28.03.2018
2.	Ekta D/o Beer Singh Roll No. 16011002	Design & Analysis of Hybrid Technique for Information Security Based on Visual Cryptography & Steganography	Prof. Ajit Singh	28.03.2018

Statement of the case:-

The above mentioned 02 students have successfully completed their Pre-Ph.D. Course Work in Computer Science & Engineering. Their cases have been duly approved by the Departmental Research Committee, Post Graduate Board of Studies and Faculty of Engineering & Technology. The minutes of all the bodies are **(Annexure-37, page-477-483).** As per Ph.D. Ordinance of BPSMV Khanpur Kalan, their cases are to be placed before the Academic Council for approval.

The case was put up to the Vice-Chancellor who after due consideration has ordered to place the same before the Academic Council for consideration.

28. To consider the recommendations made by the Faculty of Law for Registration to Ph.D. in Law of the following three candidates w.e.f 24.04.2018 (i.e. date of meeting of PGBOS) along with their research topic and name of the supervisor as mentioned against each.

S.N	Name/Father's Name of the Candidate Ms./Sh.	Title	Name of the Supervisor	Date of meeting of PGBOS
1.	Navya Gupta D/o Rajiv Kumar Gupta 16051004	Law Relating to Differently Abled Persons: A Critical Study.	Prof. Vimal Joshi	24.04.2018
2.	Anju D/o Rajkapoor 16051002	Women Centric Laws vis-a-vis Reverse Discrimination recent Judicial Trends.	Dr. Ashok Kumar	24.04.2018
3.	Rekha Kumari D/o Ranvir Singh 16051005	Sustainable Development and Human Rights: In National Perspective.	Dr. Kritika	24.04.2018

Statement of the case:-

The above mentioned 03 students have successfully completed their Pre-Ph.D. Course Work in Law. Their cases have been duly approved by the Departmental Research Committee, Post Graduate Board of Studies and Faculty of Law. The minutes of all the bodies are **(Annexure-38, page-484-488)**. As per Ph.D. Ordinance of BPSMV Khanpur Kalan, their cases are to be placed before the Academic Council for approval.

The case was put up to the Vice-Chancellor who after due consideration has ordered to place the same before the Academic Council for consideration.

29. To consider the recommendations of DRC & PGBOS regarding the case of Ms. Meenakshi Sharma D/o Sh. Rajpal Sharma, 13030458, Ph.D. scholar, Department of English, for change of her Research Supervisor from Dr. Ashok Verma, Associate Professor in English to Dr. Ajeet Singh, Assistant Professor in English, BPSV, Khanpur Kalan.

Statement of the Case:-

Ms. Meenakshi has been registered to Ph.D. degree in English under the supervision of Dr. Ashok Verma, Assistant Professor in English w.e.f. 07.03.2014. Her case was duly approved vide Resolution No.15 in 12th meeting of the Academic

Council held on 27.03.2014. Further, Ms. Meenakshi submitted her request to change her supervisor due to some academic reasons.

As per Clause 6.1 of Ph.D. ordinance-2011 "The change of supervisor may be allowed on academic grounds at the recommendations of the Departmental Staff Committee, Departmental Research Committee and PG Board of the studies. the change will be allowed after the approval of the Academic Council.

The case for change of Supervisor has recommended by the DSC, DRC and PGBOS, Department of English, BPSMV Khanpur Kalan. Minutes of DRC and PGBOS **(Annexure-39, page-489-494)**.

The case was put up to the Hon'ble Vice Chancellor who after due consideration has ordered to place the same before Academic Council for consideration.

30. **To consider and approve the recommendation of the UG BOS and Faculty of Ayurveda Medicine to start the Job Oriented New Diploma Courses in Ayurveda.**

Statement of the case:-

The Executive Council vide resolution No. 12 (iv) in its 57 meeting held on 05/02/2018 has approved the following:-

iv) Prof. Sanket Vij has also pointed out that it was decided in the last meeting of the Executive Council that M.D. and Ph.D. in Ayurveda be started.

It was resolved that the Principal, M.S.M. Instituted of Ayrveda be asked to submit the proposal for the same.

Accordingly a letter was issued to the MSM Institute of Ayurveda to submit the proposal **(Annexure-40, page-495-560)**

The detailed proposal of the course is placed as under:-

Sr. No.	Name of Course	Placed at Flag
1.	Diploma in Pharmacy (Ayurveda) **D.Pharma (Ayu.)**	'A'
2.	Diploma in Panchkarma Therapy **D.P.T.**	'B'
3.	Diploma in YOGA Science **D.Y.Sc.**	'C'
4.	Diploma in Kshar-sutra Therapy **D.K.T.**	'D'

The meeting of Introduction of new job oriented diploma courses (Diploma in Ayurvedic Pharmacy **D.Pharma (Ayu.)**, Diploma in Panchkarma Therapy **D.P.T.**,

Diploma in YOGA Science **D.Y.Sc.** & Diploma in Kshar-sutra Therapy **D.K.T.)** in Ayurveda to be started from next academic session commencing from July 2018. Three currently running 06 months certificate courses (i.e.- C.C.P.T., C.C.Y.N. and C.C.K.T.) will be replaced by one year diploma courses i.e.- D.P.T., D.Y.Sc. & D.K.T. respectively, & **D.Pharma (Ayu.)** introduced 1st time.

The existing teaching faculty of Ayurveda would teach the above said diploma courses @Rs.250/- per hour remunerations instead of the appointment of new faculty (except in Yoga Teaching assistant and a clerk in D.Pharma Ayu.) to run these courses. The new courses will provide enhanced employability to the pass out students as well as generate more revenue **(Profit Rs. 19,59,500/- per annum)**. One time expenditure of Rs 14,55,000/- would be incurred at the start of these 04 courses.

The Details are as under

Sr. No.	Name of Course	Seats	Duration in years	Eligibility	Age	Fee per Semester	Income per year	Expenditure per year	One time expenditure	Profit per year	Remarks
1.	Diploma in Ayurvedic Pharmacy D.Pharma (Ayu.)	30	02	10+2 or Equivalent with PCB	17-30 years	10000/- +10000/- (2 batches)	12,00,000/-	4,50,000/-	3,20,000/-	7,50,000/-	New Course
2.	Diploma in Panchkarma Therapy D.P.T.	30 + 5 Supernumeric for CCPT	01	10+2 or Equivalent in any stream	17-30 years	12500/-	8,72,500/-	65,000/-	1,40,000/-	8,07,500/-	Replace the current C.C.P.T
3.	Diploma in YOGA Science D.Y.Sc.	20 + 10 Supernumeric for CCYN	01	10+2 or Equivalent in any stream	Minimum 17 years	12500/-	6,25,000/-	3,05,000/-	4,80,000/-	3,20,000/-	Replace the current CCYN and classes time 7.00 to 9.00 a.m.
4.	Diploma in Kshar-sutra Therapy D.K.T.	5+ 2 Supernumeric for CCKT	01	BAMS	----	15000/-	1,80,000/-	98,000/-	5,15,000/-	82,000/-	Replace the current C.C.K.T.
Total						60000/-	28,77,500/-	9,18,000/-	14,55,000/-	19,59,500/-	

The matter was approved by the Academic Committee in its meeting held on 15/05/2018 in MSM Institute of Ayurveda, the minutes of the same are placed at **(Annexure-41, Page-561-563),** UG BOS and Faculty Medicine has also approved the

same in its meeting held on 16/05/2018 the minutes are placed respectively **(Annexure-42, Page-564-567).**

31. **To consider and approve the adoption of AICTE model curriculum in B.Tech. Fashion Technology and M.Tech. Fashion Technology (Functional Garments).**

Statement of the Case:-

The Principal Secretary to Government of Haryana, Technical Education Department vide D.O No. 332 dated 08/03/2018, directed to implement the Model Curriculum as drafted and prepared by All India Council for Technical Education **(Annexure-33, page-433-434)**. Further vide Memo No. 431-40/univ. dated 22/03/2018, Deputy Director, Technical Education Haryana ask to send the Action Taken Report for implementing of Model Curriculum of All India Council for Technical Education. **(Annexure-34, page-435-36).**

The same has been approved by the UG/PG BOS & Faculty of Deptt. of FT in its meeting held on 22/05/2018 and 23/05/2018 respectively.

The minutes of UG/PG BOS of FT are placed at **(Annexure-42, page-568-570)** and the minutes of the Faculty are placed at **(Annexure-43, page-571)** alongwith syllabi and scheme of B.Tech and M.Tech **(Annexure-44, page-572-645).**

The Vice-Chancellor after considering the matter ordered to refer the same to the Academic Council for consideration and approval.

32. **Any other item with the permission of the Chair.**

Registrar

BPS MAHILA VISHWAVIDYALAYA KHANPUR KALAN (SONEPAT)

TABLE AGENDA FOR 20th MEETING OF THE ACADEMIC COUNCIL TO BE HELD ON 20/06/2018 AT 11.00 A.M. IN THE CONFERENCE HALL, ADMINISTRATIVE BLOCK, BPS MAHILA VISHWAVIDYALAYA KHANPUR KALAN (SONEPAT).

32. **To consider and approve the recommendations of Principal Secretary to Govt. Haryana, Technical Education Department, Chandigarh regarding implementation of AICTE model curriculum in B.Tech (Computer Science & Engineering) & B.Tech (Information Technology) 1st to 2nd semester w.e.f. academic session 2018-19 in the Department of CSE & IT.**

Statement of the case:-

The Principal Secretary to Govt. Haryana, Technical Education Department, Chandigarh vide D.O. No. 332 dated 08/03/2018 **(Annexure-45, page-646-647)** has sent his recommendations, regarding implementation of the Model curriculum of AICTE including Induction programme, Teacher's Training and Internashala in the Department of CSE & IT in B.Tech (Computer Science & Engineering) & B.Tech (Information Technology) 1st & 2nd semester w.e.f. from the academic session 2018-19.

The same has been approved by the UG BOS and Faculty in its meeting held on 16/05/2018 and 18/05/2018 respectively.

The minutes of UG BOS and Faculty alongwith scheme & syllabus of B.Tech (CSE & IT) 1st & 2nd semester are placed at **(Annexure-46, page-648-725).**

33. **To consider and approve the Ordinance, Scheme and Syllabus of M.A Social Work (2 Year) w.e.f. 2018-19 for Department of Social Work.**

Statement of the case:-

The faculty approved the Ordinance, Scheme and Syllabus of M. A. Social work as recommended by PG Board of Studies in Social work in its meeting held on 1st June 2018.

The minutes of PG BOS and Faculty alongwith Scheme, Syllabus & Ordinance of M.A. Social Work (2 year) are placed at **(Annexure-47, page-726-798).**

The Vice-Chancellor after considering the matter, has ordered to refer the same to the Academic Council for consideration and approval.

34. **To consider and approve the scheme and syllabus for M.A Economics (2 year) for III and IV semesters for Department of Economics.**

Statement of the case:-

The faculty unanimously approved the scheme and syllabus of M. A. Economics 2 year (III and IV semesters) as recommended by Post Graduate Board of Studies in Economics in its meeting held on 21st May 2018. Further, the Faculty considered and resolved to interchange the words external in place of internal and vice-versa in the scheme of M.A Economics I and II semester syllabi owing to typing error besides change in Nomenclature of the paper (MAE-2017) in the scheme of 1st semester from Mathematical for Economic Analysis-I to Mathematics for Economic Analysis-I and in the scheme of the 2nd semester from Mathematical for Economic Analysis-II to Mathematics for Economic Analysis-II (MAE-2108). It is pertinent to mention here that the syllabi for M.A. Economics I year was approved in the 19th meeting of Academic Council held on 14th September 2017.

The minutes of PG BOS and Faculty alongwith Scheme, Syllabus of M.A. Economics (2 year) for III & IV semester are placed at **(Annexure-48, page-799-826).**

The Vice-Chancellor after considering the matter, has ordered to refer the same to the Academic Council for consideration and approval.

35. **To consider and approve the scheme and syllabus for B.A Economics (3 year) for III IV, V and VI semesters for Institute of Higher Learning.**

Statement of the case:-

The faculty approved the scheme and syllabus for B.A Economics (3 year) for III, IV, V and VI semesters for Institute of Higher Learning, BPSMV as approved by the Under Graduate Board of Studies in Economics in its meeting held on 13th June, 2018.

The minutes of UG BOS and Faculty alongwith Scheme & Syllabus of B.A. Economics (3 year) for III & IV & V & VI semester are placed at **(Annexure-49, page-827-833).**

The Vice-Chancellor after considering the matter, has ordered to refer the same to the Academic Council for consideration and approval.

36. **Provision of Graduation Degree B.A (Hons.) Economics to M.A. (Hons.) Economics (5 Year Integrated course) Students.**

Statement of the case:-

The faculty approved the resolution of awarding the dual degree, i.e., B.A. Economics (Hons.) after successful completion of 6th semester examination and M.A. Economics (Hons.) after successful completion of 10th semester examination. Post Graduate Board of Studies in Economics in its meeting on 27th October 2017 has already resolved the degree of B.A. Economics (Hons.) are to be awarded to all students who took admission in session 2009-10 to session 2016-17.

Some ex-students of Dept. of Economics have been asking for the award of Degree of B.A. Economics (Hons.) too along with their M.A. Economics (Hons.) degree as they were unable to take admission in B.Ed. & PhD Economics due to non-availability of graduation degree.The request made by the students is legitimate as they are deprived of admission in graduation base courses like B.Ed and also unable to score high merit as they are unable to fetch the weightage given for marks secured in graduation. It is pertinent to mention here that the Department of Economics offered M.A. Economics (Hons.) degree as a 5 year integrated course from session 2009-10 onwards which also included a policy of exit after successful completion of 6 semesters i.e after 3 year and they are awarded B.A. Economics (Hons.) degree.

The said scheme has been discontinued w.e.f. session 2017-18. **(Annexure-50, page-834-836).**

The Vice-Chancellor after considering the matter, has ordered to refer the same to the Academic Council for consideration and approval.

37. **To consider the recommendations made by the Faculty of Social Sciences for registration to Ph.D. in Economics of the following three candidates w.e.f 27.10.2017 (i.e. date of meeting of PGBOS) along with their research topic and name of the supervisor as mentioned against each.**

S.N	Name/Father's Name of the Candidate Ms./Sh.	Title	Name of the Supervisor	Date of meeting of PGBOS
1.	Sumesh Kumari D/o Sube Singh 16111002	Empowering Women through Microfinance: A Study of Haryana	Prof. Surender Singh	27.10.2017
2.	Anjali D/o Subhash	A Study of Poverty in Rural	Dr. Kiran	27.10.2017

	16111001	Haryana		
3.	Sunita D/o Mahavir 16111003	Dynamics of Female Labour Force Participation in Rural Haryana	Dr. Kiran	27.10.2017

Statement of the case:-

The above mentioned 03 students have successfully completed their Pre-Ph.D. Course Work in Economics. Their cases have been duly approved by the Departmental Research Committee, Post Graduate Board of Studies and Faculty of Social Sciences. The minutes of all the bodies are **(Annexure-51, page-837-893)**. As per Ph.D. Ordinance of BPSMV Khanpur Kalan, their cases are to be placed before the Academic Council for approval.

The Vice-Chancellor after considering the matter, has ordered to refer the same to the Academic Council for consideration and approval.

38. **To consider and approve the minor correction in Memorandum of Understanding signed between NCUI, New Delhi and BPSMV, Khanpur Kalan.**

Statement of the case:-

Memorandum of Understanding (MOU) was signed between NCUI, New Delhi and BPSMV, Khanpur Kalan for offering one year Certificate of Proficiency in Cooperative Management and one year Diploma of Proficiency in Cooperative Management. The corrected & updated MOU is attached at **(Annexure-52, page-894-901).**

The following minor changes in MOU signed between NCUI, New Delhi and BPSMV, Khanpur Kalan is being proposed:-

Existing	Proposed
On page number 3 the nomenclature of the paper written as Cooperative Concept and Management	The correct subject name is Cooperative Education and Management
On page number 4 the course code is written as CM-201.	The correct course code is CM-102.

The minutes of Advisory Board and Faculty of Social Sciences are placed at **(Annexure-53, page-902-904).**

The Vice-Chancellor has considered the matter and ordered to refer the recommendation of the Advisory Board to the academic council for consideration.

Academic Session 2018-19, approved by UG BOS and PG BOS meeting held on 22/02/2018 and Faculty of Engineering & Technology (FET) held on 18/05/2018.

Department of Fashion Technology is already running B.Tech., M.Tech. and Ph.D. programmes, thus there will be no need of extra laboratory equipments and other infrastructure for this new course as such. If approved the course may be started with 30 seats of intake with the following eligibility condition:-

A candidate shall be eligible for admission in Integrated M.Sc. (Fashion & Apparel Design), if she has passed the Senior Secondary Examination (10+2) with 45% marks (42.75 for SC/ST/differently-abled candidates) in aggregate in any stream from a recognized Board of Secondary Education with English as compulsory subject or five year recognized diploma in any stream with English as compulsory subject. For a candidate, who has not studied English as a subject, the condition of English may be waived off provided the candidate has studied in English medium in qualifying exam. The following agenda items were also approved in the meeting of UG/PG BOS:-

- The proposal of integrated M.Sc. (Fashion & Apparel Design) was resolved and approved with the exit policy after B.Sc. (Fashion & Apparel Design).
- The ordinance of B.Sc. (Fashion & Apparel Design) was resolved and approved.
- The scheme and syllabus of B.Sc. (Fashion & Apparel Design) were resolved and approved.
- The fees structure for B.Sc. (Fashion & Apparel Design) proposed in line with the existing fees structure of H&HA and other B.Sc. programme was discussed and approved as attached.
- The panel for paper setters/ examiners for theory and practical exams for even and odd semester for B.Sc . (Fashion & Apparel Design) were resolved and approved.
- Subsequently, the same has also been approved by the Faculty in its meeting held on 18/05/2018 as under :-

"The recommendations of UG & PG BOS of Studies of Department of Fashion Technology held on 22/02/2018 was considered and approved to start integrated M.Sc. (Fashion & Apparel Design). However the members of were opinion that suitable faculty may be assigned for the course as the same cannot started in Faculty of Engineering & Technology. Further, all the detail pertaining to Deptt. submitted on AICTE web portal may be taken into consideration before starting the course in department of Fashion Technology."

39. **To consider the request of Ms. Sonia Tyagi for submitting the M.Tech dissertation after completion of four years in M. Tech (ICT).**

Statement of the case:-

Ms. Sonia Tyagi a student of M.Tech (ICT) batch 2013-15, has submitted a request to grant permission for submission of dissertation after completion of maximum duration of course. She could not submit her thesis due to unavoidable condition of her family.

As per Ordinance for M.Tech programme clause No. 2 "The normal duration of the programme is two years and maximum duration of M.Tech programme offered by the School of Engineering and Sciences is four years (n+2). The student to be eligible for the award of degree has to clear all the necessary academic requirements during normal or maximum duration of all the specified programmes. Failing which she will not be allowed to continue her programme."

The matter has been discussed in the meeting of staff council of ECE for consider the same. The matter has also discussed between members of PG BOS Deptt. Of ECE and Chairperson ECE telephonically. The members are of view that case may be referred to Academic Council for consideration, further discussion and approval.

The Vice-Chancellor after considering the matter, has ordered to refer the same to the Academic Council for consideration and approval.

40. **To consider and approve the proposal to start the integrated M.Sc. (Fashion & Apparel Design) in the Department of Fashion Technology from the Academic session 2018-19.**

Statement of the case:-

A meeting of all the HODs with Hon'ble Vice-Chancellor was held on 05.02.2018, regarding vision plan/work plan concerned to research & innovation, add on courses, employability and skill development, etc. It was proposed by Chairperson, Deptt. of Fashion Technology, that there is great need to start Bachelor course in Fashion Technology even for non science students in the University, to cater the need of these students, Department of Fashion Technology wish to start new course entitled **"Integrated M.Sc. (Fashion & Apparel Design)** from the

The copy of minutes of UG, PG BOS and Faculty meeting held on 22/02/2018 and 18/05/2018 respectively, along with approved ordinance, scheme and syllabus, fee structure of first three years are enclosed at (Annexure-54, Page-905-968).

The Vice-Chancellor after considering the matter ordered to refer the same to the Academic Council for consideration and approval.

41. Any other item with the permission of the Chair.

Registrar

41. To consider and approve the synopsis & Supervisor of pre-Ph.D. course qualified Ph.D. students of Food & Nutrition.

Statement of the case:-

The meeting of DRC & PG BOS was held on 09/05/2018 & 10/05/2018 respectively and Faculty of science held on 11/05/2018 has approved the synopsis & Supervisor of pre-Ph.D. course qualified Ph.D. students of Food & Nutrition.

Sr. No.	Name	Topic of Research	Name of the Supervisor
1	Anmol	Photochemical Screening of some Indian Fruits and vegetables and Assessment of Nutritional Status of Adolescents in Relation of their Dietary Photochemical Intake in Sonipat District (Haryana)	Dr. Veena
2	Jyoti	Formulation of Herbal Supplements by Utilizing the Fruit peels and Spices with Physiochemical, Nutritional and Antioxidants Profile.	Dr. Veena
3	Sonal	Development and Nutritional Evaluation of value Added Products of Digera Muricate (Kondhra Leaves) and its impact on the Nutritional Status of Adolescents	Dr. Nutan

The minutes of the DRC is placed at (Annexure-55 page-969-970), the minutes of PG BOS is placed at (Annexure-56 page-971-972) and the minutes of Faculty of Sciences is placed at (Annexure-57-page-973-974).

The Vice-Chancellor after considering the matter ordered to refer the same to the Academic Council for consideration and approval.

42. To consider and approve the syllabus and scheme of examination of M.Sc. Chemistry (1st to 4th Semester) w.e.f. 2017-18

Statement of the case:-

The PG BOS in its meeting held on 13/04/2018 and Faculty of Sciences on 11/05/2018 approved the scheme of examination and syllabus of M.Sc. Chemistry (Annexure-58,page-975-1061)

The minutes of PG BOS is placed at (Annexure-59 page-1062) and the minutes of the Faculty of Sciences is placed at (Annexure-57-page-973-974).

The Vice-Chancellor after considering the matter has ordered to refer the same to the Academic Council for consideration and approval.

43. To consider and approve the syllabus and scheme of examination of M.Sc. Physics (1st to 4th Semester) w.e.f. 2017-18

Statement of the case:-

The PG BOS in its meeting held on 10/04/2018 and Faculty of Sciences on 11/05/2018 approved the scheme of examination and syllabus of M.Sc. Physics (Annexure-60, page-1063-1101)

The minutes of PG BOS is placed at (Annexure-61 page-1102) and the minutes of the Faculty of Sciences is placed at (Annexure-57-page-973-974).

The Vice-Chancellor after considering the matter, has ordered to refer the same to the Academic Council for consideration and approval.

44. To consider & approve the minor modification in Syllabus of CBCS papers of M.Sc. Mathematics w.e.f. 2018-19 (1) Solid waste Management (ENV 200) (2) Environmental Pollution (ENV 100).

The Faculty of Sciences in its meeting held on 11/05/2018 approved the minor modification in syllabi of M.Sc. Mathematics- (i) Solid Waste Management (ENV-200) (ii) Environmental Pollution (ENV-100) w.e.f. session 2018-19 (Annexure- 62, page- 1103-1104)

The Vice-Chancellor after considering the matter has ordered to refer the same to the Academic Council for consideration and approval.

Registrar

Annexure

ANNEXURE – 1

BPS MAHILA VISHWAVIDYALAYA KHANPUR KALAN SONIPAT

MINUTES OF THE 19th MEETING OF THE ACADEMIC COUNCIL HELD ON 14/09/2017 AT 11.00 A.M. IN THE CONFERENCE HALL, ADMINISTRATIVE BLOCK, BPS MAHILA VISHWAVIDYALAYA KHANPUR KALAN (SONEPAT).

Members Present:

01. Prof. S.P. Bansal, Vice-Chancellor	Chairperson --Ex Officio Member--
02. Prof. Ipshita Bansal, Dean, Academic Affairs	---do---
03. Prof. Mahesh Dadhich Dean, Faculty of Ayurvedic Medicine Dean, Students' Welfare	---do---
04. Dr. Suman Dalal Dean, Faculty of Physical Education Chairperson, ITTR	---do---
05. Dr. Sumitra Devi Dean, Faculty of Education Dean, Faculty of Social Sciences Chairperson, Deptt. of History	---do---
06. Prof. Vimal Joshi, Dean Faculty of Law, Chairperson, Deptt. of Laws	---do---
07. Prof. Vijay Nehra, Dean Faculty of Engineering & Technology Chairperson, Dept. of E.C.E.	---do---
08. Prof. Amrita Sharma Dean, Faculty of Arts & Languages Proctor, Chairperson, Deptt. of English	---do---
09. Prof. Neelam Jain Dean & Chairperson Deptt. of Pharmacy	---do---
10. Dr. Veena Rani Dean, Faculty of Sciences Principal, IHL	---do---
11. Prof. Ajit Singh Chairperson, Deptt. of CSE & IT	---do---
12. Prof. Lalit Jajpura, Chairperson, Deptt. of Fashion Technology	---do---
13. Dr. Ashok Verma,	

Chairperson, Deptt. of Political Science

14. Dr. Ravi Bhushan, ---do---
    Chairperson, Deptt. of Foreign Languages
15. Dr. J.S. Malik ---do---
    Controller of Examinations
16. Prof. Sarla, ---do---
    MSM Institute of Ayurveda
17. Smt. Krishna Rathi ---do---
    Chief Warden
18. Dr. Shobha, Associate Prof. --Other Member-
    Faculty of Ayurvedic Medicines
19. Dr. Sudipta Sil, Asstt. Prof., ---do---
    Faculty of Arts & Languages
20. Ms. Anju Rani, Asstt. Prof. ---do---
    Faculty of Social Sciences
21. Ms. Alka Bharti, Asstt. Prof. ---do---
    Faculty of Laws
22. Dr. Mamta Rani, Asstt. Prof., ---do---
    Faculty of Ayurvedic Medicines
23. Dr. Bhavna Sharma, Asstt. Prof. ---do---
    Faculty of Commerce & Mgt.
24. Dr. Reena Rani, Asstt. Prof. ---do---
    Faculty of Education
25. Priyanka Anand, Asst. Prof. ---do---
    Faculty of Electronics & Communication Engineering
26. Dr. Asha, Asstt. Prof. ---do---
    Faculty of Sciences
27. Prof. Rajbala Grewal, --Outside Expert--
    Former Director Centre of Food Science & Technology
    CCS HAU, Hisar
    9416252214
28. Prf. Usha Arora, Dean ---do---
    Haryana School of Business.
    Guru Jambheswar University of Science & Technology
    Hisar (Haryana)
    9416489310
29. Dr. (Mrs.) Savita Singal, ---do---
    Ex. Dean, College of Home Science
    CCS Haryana Agriculture University, Hisar.
30. Dr. Ritu Bajaj Member Secretary
    Registrar

INTRODUCTION

The Hon'ble Vice-Chancellor welcomed the members to the 19th meeting of the Academic Council. The Registrar introduced the Vice-Chancellor Prof. S.P. Bansal, to the House. The members congratulated Prof. Bansal for taking the additional charge of the University. Prof. Bansal, thanked all the members and he sought cooperation of the members in achieving the aims and objectives of the University. After the exchange of pleasantries, the formal agenda items were taken up one by one.

1. Confirmation of the Minutes of the 18th meeting of Academic Council held on 20/06/2017.

Resolved that minutes of the 18th meeting of Academic Council held on 20/06/2017 be confirmed.

2. Follow up Action Report.

The House noted the follow up action report on decisions taken in the meeting of the Academic Council, held on 20/06/2017.

3. Considered the action taken by the Vice-Chancellor in anticipation of approval of Academic Council to approve the changes in the syllabus of BA/BBALLB 1st and 2nd semester for implementation from the Academic Session 2017-18. (Annexure-3, Pages-14-43, already circulated)

Resolved that the action taken by the Vice-Chancellor as above be approved.

[Action by HOD, Law]

4. Considered the recommendations made by the committee constituted by the Vice-Chancellor under the the Convernorship of Dean Academic Affairs regarding Common Ordinance for M.Phil Programme. (Annexure-5, Pages-46-57, already circulated)

Resolved that the Common Ordinance for the M.Phil proramme be recommended to the Executive Council with modification in clause

No. 3.1 that for SC/ST/OBC(non-creamy layer)/Differently-able candidates of Haryana State only or for those who had obtained their Masters Degree prior to 19th Sept., 1991, requirement of marks will be 52.25%.

Resolved further that the Vice-Chancellor be authorized to constitute a committee for reviewing the provision of promotion of students to the next semester/class in the Ordinances of various courses.

[Action by Supdt. I/c Academic]

5. Considered the action taken by the Vice-Chancellor in anticipation of the approval of the Academic Council in approving the Ordinances, Scheme of Examination and Syllabus for B.A. (Hons.) Economics and M.A. Economics (Hons.) 5 Year integrated course w.e.f. session 2017-18.(Annexure-6, already circulated)

Resolved that the action taken by the Vice-Chancellor as above be approved.

Resolved further that the Ordinances for B.A. (Hons.) Economics and M.A. Economics (Hons.) Courses be recommended to the Executive Council for consideration.

[Action by Supdt. I/c Academic]

6. Considered the recommendations of the committee constituted by the Vice-Chancellor under the Convenorship of the Dean, Academic Affairs regarding relaxation in promotion policy of students for the current Academic Session 2017-18. (Annexure-7, already circulated)

Resolved that the recommendation of the committee be approved for the session 2017-18 only.

Resolved further that the Vice-Chancellor be authorized to constitute a committee to review the provision of the various Ordinances as resolved under item No.4.

[Action by Supdt. I/c Academic/COE]

7. Considered the action by the Vice-Chancellor to sign the Memorandum of Understanding between Shiksha Sanskriti Uthan Nyas, Narayana Vihar New Delhi and Haryana Vishwakarma Skill University with Bhāgat Phool Singh Mahila Vishwavidyalaya Khanpur Kalan, Sonipat. (Annexure-10 & 11, already circulated)

Resolved that the action taken by the Vice-Chancellor as above be noted.

Resolved further that the above be reported to the Executive Council also.

8. Considered the recommendations made by the Faculty of Social Sciences in its meeting held on 31/08/2017(Annexure-12 to 23, already circulated) regarding syllabus and Scheme of the following courses:-

1. M.A. History 2 years
2. M.Sc. Geography 2 years
3. M.A. Economics 1st and 2nd Sem
4. B.A. Geography 1st to 6th Sem
5. B.A. History 1st th Sem
6. B.A. Political Science 1st Sem
7. B.A. Economics 1st to 2nd Sem
8. B.A. Public Administration 1st to 2nd Sem
9. B.A. Psychology 1st to 2nd Sem
10. M.A. Psychology 1st to 2nd Sem
11. M.A. Political Science 1st Sem

It was brought to the notice of the House that the Hon'ble High Court of Punjab and Haryana in C.W.P. 18363 of 2017, has stayed operation of the notification issued by the State Govt. vide which women Colleges of Sonepat and Panipat Districts were affiliated with the University. The decision of the Hon'ble High Court was noted.

Resolved that the recommendations of the Faculty of Social Sciences as above be approved.

[Action by COE/Concerned Chairperson/Supdt. I/c Academic/]

9. Noted the action taken by the Vice-Chancellor in anticipation approval of Academic Council in approving the revised syllabus for the following subjects/courses (Annexure-24-40, already circulated):-

1. M.Sc. Math 1st semester
2. B.Com. Hons 3 yrs M.Com 2 yrs
3. B.B.A. 3 yrs
4. M.Sc. Computer Science 1st semester
5. B.Sc. Computer Science 1st semester
6. B.C.A. Math 1st semester
7. B.Sc. Home Science 1st semester
8. B.Sc. Chemistry
9. M.Sc. Chemistry
10. B.A./B.Sc. Mathematics
11. B.Sc. Botany
12. B.Sc. Zoology
13. B.Sc. Physics
14. M.Sc. Physics
15. B.Sc. Biotechnology
16. B.A./B.Sc Statics & B.Sc. Hons. Maths
17. Recommendations of adhoc committee of Deptt. of Physical Education for B.P.Ed., P.G. Diploma in Yoga Sciences, B.. Vocational in Sports and Physiotherapy course.

It was brought to the notice of the House that the Hon'ble High Court of Punjab and Haryana in C.W.P. 18363 of 2017, has stayed operation of the notification issued by the State Govt. vide which women Colleges of Sonepat and Panipat Districts were affiliated with the University. The decision of the Hon'ble High Court was noted.

Resolved that the action taken by the Vice-Chancellor as above be approved.

[Action by COE/Concerned Chairperson/Supdt. I/c Academic/]

10. Considered the recommendations made by the Faculty of Arts & Languages in its meeting held on 08/09/2014 regarding syllabus and Scheme of the following courses(Annexure-41-48, already circulated):-

1. M.A. English 5 years Integrated courses
2. M.A. English 2 years Integrated Course
3. M.A. Hindi
4. B.A. Music Vocal
5. B.A. English Pass Course
6. B.A. English Hons.
7. B.Sc. English (Medical/Non-Medical/Computer Science/Home Science/ Bio – Technology)
8. B.Voc. English
9. B.A. Elective Sanskrit
10. B.A. Sanskrit Pass Course
11. B.A. Sanskrit Hons.
12. Sanskrit in B.Sc. & B.Com
10. M.A. Sanskrit
11. B.A. Elective Hindi
12. B.A. Hindi Pass course
13. Hindi Compulsory in B.Sc. & B.Com.

It was brought to the notice of the House that the Hon'ble High Court of Punjab and Haryana in C.W.P. 18363 of 2017, has stayed operation of the notification issued by the State Govt. vide which women Colleges of Sonepat and Panipat Districts were affiliated with the University. The decision of the Hon'ble High Court was noted.

Resolved that the recommendations of the Faculty of Arts & Languages as above be approved.

[Action by COE/Concerned Chairperson/Supdt. I/c Academic/]

11. Considered the case of Ms. Renu Sharma a Student of B.A.LL.B. Course, for re-admission to B.A. LLB. 4th year after a gap of 3 years.

Resolved that the request of Ms. Renu as above be acceded to as a special case.

[Action by HOD Law/A.R. R&S/COE]

12. Considered the recommendations of the fee committee made in its meeting held on 01/09/2017 under the Convernorship of Registrar (Annexure-49, already circulated).

The issue was discussed in detail.

Resolved that new PG courses in Chemistry, Physics, Environmental Sciences, Hindi and Geography be not started from the session 2017-18 and that the same be started from the next session 2018-19.

Resolved further that the students who have applied for these courses be informed about the above decision by uploading a notice on the University website and that the application fee be refunded.

[Action by Supdt. I/c Academic/Finance Officer]

13. Considered the recommendation of the Faculty of Commerce held on 14/08/2017 for registration of the following candidates in Ph.D. Programme in Commerce alongwith their research topic and name of the supervisor w.e.f. 14/08/2017 (i.e the date of PG BOS).

S. N.	Name of the Candidate	Title	Name of the Supervisor
1.	Ms. Poonam Chahal	Impact of Country of Origin on Consumer Behaviour in Home-grown FMCG Companies in India	Dr. Bhavna Sharma

2.	Ms. Rajwanti	Intellectual Capital and Finahcial Performance: A Comparative Study of Public and Private Sector Banks in India	Dr. Seema Malik
3.	Ms. Rajni Kundu	Customers" Behaviour towards Bundling in Tourism Industry in India	Dr. Seema Malik
4.	Ms. Anjana Pandey	Factors Influencing Customer's Loyalty Towards Mobile Network Service Providers in Haryana	Dr. Ishani P. Chopra
5.	Ms. Anshu	Corporate Governance and Firm's Performance: A Study of BSE Listed Companies in India	Dr. Ishani P. Chopra
6.	Ms. Sushila	Impact of Behaviural Factors on Investment Decisions of Individual Equity Investors in NCR	Dr. Bhavna Sharma
7.	Ms. Jyoti	Ease of Doing Business and Foreign Direct Investment: An Analytical Study in Global Perspective	Dr. Seema Malik

Resolved that the matter be deferred and that the topic(s) of research be looked into again by the DRC/BOS/Faculty.

[Action by HOD Commerce]

14. Any other item.

(i). Considered the action taken by the Vice-Chancellor in anticipation of the approval of the Academic Council in awarding the Ph.D. Degree to the following Ph.D. Students in the subject as mentioned against her name in anticipation approval of the Academic Council.

Sr. no.	Name of the Student/Father's Name/Regn. No.	Faculty & Deptt. Name	Name of Guide	Title of Thesis	Date of Ph.D. Degree Awarded
1.	Anisha D/o Arjun Singh 11030401	English/Department of English	Dr. Amrita Sharma, Prof. in English, Deptt. of English, BPSMV Khanpur Kalan	English Translation of Mira Bai: "A Comparative Study in Stylistics"	31/07/2017

Resolved that the action taken by the Vice-Chancellor be approved.

[Action by COE]

(ii). Prof. Amrita Sharma, pointed out the case of regarding one year extension to Ms. Swati Punia Ph.D. scholar of Deptt. of English, who has been awarded Fulbright, Scholarship and suggested that she may be given extension of one year for registration to the Ph.D. Programme.

Resolved that the Vice-Chancellor be authorized to decide the matter.

[Action by A.R. R&S]

(iii). Prof. Mahesh Dadhich, Dean Faculty of Ayurveda raised the issue that the MSM Institute of Ayurveda is strictly following the instructions of CCIM which is regulatory body and that common paper(s) namely "Current Issues and Societal Development" and "Environmental Studies" may not be implemented in their Institute.

Resolved that the above mentioned common papers be implemented in all the UG Courses, except BAMS and B. Pharmacy which are governed by the statutory regulatory bodies.

The meeting ended with a vote of thanks to the chair.

Registrar

ANNEXURE-2

Report of follow-up action on the decisions taken by the Academic Council in its 19th meeting held on 14/09/2017.

Res No	Particulars	Follow up action taken
1.	Confirmation of the Minutes of the 19th meeting of Academic Council held on **14/09/2017.**	Noted
2.	Follow up Action Report.	Noted
3.	Considered the action taken by the Vice-Chancellor in anticipation of approval of Academic Council to approve the changes in the syllabus of BA/BBALLB 1st and 2nd semester for implementation from the Academic Session 2017-18.	Noted
4.	Considered the recommendations made by the committee constituted by the Vice-Chancellor under the the Convernorship of Dean Academic Affairs regarding Common Ordinance for M.Phil Programme.	The common Ordinance for M.Phil programme has been circulated to all concern vide letter No. BPSMV/Acad/17/5403-06 dated 04/12/2017.
5.	Considered the action taken by the Vice-Chancellor in anticipation of the approval of the Academic Council in approving the Ordinances, Scheme of Examination and Syllabus for B.A. (Hons.) Economics and M.A. Economics (Hons.) 5 Year integrated course w.e.f. session 2017-18.	Noted
6.	Considered the recommendations of the committee constituted by the Vice-Chancellor under the Convenorship of the Dean, Academic Affairs regarding relaxation in promotion policy of students for the current Academic Session 2017-18.	Noted and implemented
7.	Considered the action by the Vice-Chancellor to sign the Memorandum of Understanding between Shiksha Sanskriti Uthan Nyas, Narayana Vihar New Delhi and Haryana Vishwakarma Skill University with Bhagat Phool Singh Mahila Vishwavidyalaya Khanpur Kalan, Sonipat.	As per MOU with Shiksha Sanskriti Uthan Nyas,KGSSS and Campus School has organized a 3 days workshop on the subject "Charitra Nirmaan Evam Vyaktitva Ka Samagra Vikas".
8.	Considered the recommendations made by the Faculty of Social Sciences in its meeting held on 31/08/2017 regarding syllabus and Scheme of the following courses:- 1. M.A. History 2 years 2. M.Sc. Geography 2 years 3. M.A. Economics 1st and 2nd Sem	Noted and implemented

	4. B.A. Geography 1st to 6th Sem 5. B.A. History 1st th Sem 6. B.A. Political Science 1st Sem 7. B.A. Economics 1st to 2nd Sem 8. B.A. Public Administration 1st to 2nd Sem 9. B.A. Psychology 1st to 2nd Sem 10. M.A. Psychology 1st to 2nd Sem 11. M.A. Political Science 1st Sem	
9.	Noted the action taken by the Vice-Chancellor in anticipation approval of Academic Council in approving the revised syllabus for the following subjects/courses:- 1. M.Sc. Math 1st semester 2. B.Com. Hons 3 yrs M.Com 2 yrs 3. B.B.A. 3 yrs 4. M.Sc. Computer Science 1st semester 5. B.Sc. Computer Science 1st semester 6. B.C.A. Math 1st semester 7. B.Sc. Home Science 1st semester 8. B.Sc. Chemistry 9. M.Sc. Chemistry 10. B.A./B.Sc. Mathematics 11. B.Sc. Botany 12. B.Sc. Zoology 13. B.Sc. Physics 14. M.Sc. Physics 15. B.Sc. Biotechnology 16. B.A./B.Sc Statics & B.Sc. Hons. Maths 17. Recommendations of adhoc committee of Deptt. of Physical Education for B.P.Ed., P.G. Diploma in Yoga Sciences, B.. Vocational in Sports and Physiotherapy course.	Noted and implemented
10.	Considered the recommendations made by the Faculty of Arts & Languages in its meeting held on 08/09/2014 regarding syllabus and Scheme of the following courses:- 1. M.A. English 5 years Integrated courses 2. M.A. English 2 years Integrated Course 3. M.A. Hindi 4. B.A. Music Vocal 5. B.A. English Pass Course 6. B.A. English Hons. 7. B.Sc. English (Medical/Non-Medical/Computer Science/Home Science/ Bio –Technology) 8. B.Voc. English 9. B.A. Elective Sanskrit 10. B.A. Sanskrit Pass Course 11. B.A. Sanskrit Hons. 12. Sanskrit in B.Sc. & B.Com 10. M.A. Sanskrit 11. B.A. Elective Hindi 12. B.A. Hindi Pass course	Noted

	13. Hindi Compulsory in B.Sc. & B.Com.	
11.	Considered the case of Ms. Renu Sharma a Student of B.A.LL.B. Course, for re-admission to B.A. LLB. 4th year after a gap of 3 years.	The decision has been communicated to her and she has taken admission and continuing the class.
12.	Considered the recommendations of the fee committee made in its meeting held on 01/09/2017 under the Convernorship of Registrar.	Circulated to all the concern.
13.	Considered the recommendation of the Faculty of Commerce held on 14/08/2017 for registration of the following candidates in Ph.D. Programme in Commerce alongwith their research topic and name of the supervisor w.e.f. 14/08/2017 (i.e the date of PG BOS).	The meeting of BOS/Faculty could not be held till date due to non availabilities of external experts for the meeting on a common date.
14. (i)	**Any other item.** Considered the action taken by the Vice-Chancellor in anticipation of the approval of the Academic Council in awarding the Ph.D. Degree to the Ph.D. Students in the subject as mentioned against her name in anticipation approval of the Academic Council.	Noted
14 (ii)	Prof. Amrita Sharma, pointed out the case of regarding one year extension to Ms. Swati Punia Ph.D. scholar of Deptt. of English, who has been awarded Fulbright Scholarship and suggested that she may be given extension of one year for registration to the Ph.D. Programme.	Noted
14 (iii)	Prof. Mahesh Dadhich, Dean Faculty of Ayurveda raised the issue that the MSM Institute of Ayurveda is strictly following the instructions of CCIM which is regulatory body and that common paper(s) namely "Current Issues and Societal Development" and "Environmental Studies" may not be implemented in their Institute.	The letter has been sent to the President, Central Council of Indian Medicine, New Delhi vide Ref No. Inst Ayu.18/DP-134 dated 16/04/2018.

Receiving

Bhagat Phool Singh Mahila Vishwavidyalaya

Khanpur Kalan (Sonepat), Haryana-131305
Office No. 01263-283001,283002, Fax No. 01263-283779, www.bpswomenuniversity.ac.in

Ref No. BPSMV/Acad/18/ 1371

Dated: 22/3/18

To

The Incharge,
Deptt. of Commerce,
BPSMV, Khanpur Kalan.

Sub:- Observations regarding minutes of 19th meeting of Academic Council.

Madam,

With reference to agenda item no. 13 placed before the 19th meeting of Academic Council held on 14/09/2017. I have been directed to inform you that the matter has been reconsidered by the Vice-Chancellor on receipt of observations received from one member of Academic Council .

You are, therefore, requested to resubmit the topics of research to the Vice-Chancellor for approval.

Yours sincerely

Supdt. Incharge (Acad.)
for Registrar

22/3/18

<14A>

Receiving

Bhagat Phool Singh Mahila Vishwavidyalaya

Khanpur Kalan (Sonepat), Haryana-131305
Office No. 01263-283001,283002, Fax No. 01263-283779, www.bpswomenuniversity.ac.in

Ref No. BPSMV/Acad/18/ 1372-74 Dated: 22/3/18

To

The Dean,
1. Faculty of Arts & Languages,
2. Faculty of Social Sciences,
3. Faculty of Sciences,

Sub:- Observations regarding minutes of 19th meeting of Academic Council.

Sir/Madam,

With reference to Resolution no. 12 of 19th meeting of Academic Council held on 14/09/2017, I have been directed to inform you that the same has been reconsidered by the Vice-Chancellor on receipt of observations from one member of Academic Council and approved to start the following courses from the upcoming academic session i.e. 2018-19:-

1. M.A. Chemistry
2. M.A. Physics
3. M.A. Hindi
4. M.A. Geography
5. M.A. Environmental Sciences

Therefore, all the Deans are requested to propose further course of action alongwith Scheme/Syllabus/fee structure/required posts for introduction of these courses for approval of Academic Council from the next academic session i.e. 2018-19.

Yours sincerely

Supdt. Incharge (Acad.)
for Registrar

22/3/18 22/3/18 23/3/18

<14-B>

Receiving

Bhagat Phool Singh Mahila Vishwavidyalaya

Khanpur Kalan (Sonepat), Haryana-131305
Office No. 01263-283001,283002, Fax No. 01263-283779, www.bpswomenuniversity.ac.in

Ref No. BPSMV/Acad/18/ 1375-76 Dated: 22/3/18

To

1. The Principal,
   M.S.M. Institute of Ayurveda, 22/3/18
2. The Dean,
   Faculty of Pharmaceutical Sciences
   BPSMV, Khanpur Kalan.

Sub:- Observations regarding minutes of 19th meeting of Academic Council.

Sir/Madam,

With reference to Resolution no. 14 (iii) of 19th meeting of Academic Council held on 14/09/2017, I have been directed to inform you that the same has been reconsidered by the Vice-Chancellor on receipt of observations received from one member of Academic Council.

You are, therefore, requested to send a letter to your governing bodies i.e. CCIM & PCI respectively regarding introduction of common paper on Environmental Studies & CISD to avoid any legal/academic issues.

Yours sincerely

Supdt. Incharge (Acad.)
for Registrar
c/c Web

22/3/18

-14-C→

ANNEXURE 3.

FACULTY OF COMMERCE & MANAGEMENT
B.P.S. MAHILA VISHWAVIDYALAYA, KHANPUR KALAN

Proceeding of the meeting of Faculty of Commerce and Management (FCM) held on 27/02/2018 at 1.00 pm in the room of Chairperson, Department of Management Studies, B.P.S. Mahila Vishwavidyalaya, Khanpur Kalan.

The following members of were present:

1. Prof. Sanket Vij — Convener
2. Dr. Bhavna Sharma — Incharge, DC
3. Mr. Pankaj Misra — Incharge, DHM

The following decisions were taken:

Item No. 1 : The committee approved the recommendations of PGBoS of Department of Management Studies dated 04/012/2017 related to research proposal of the following for the registration in Ph.D. in Commerce :

Sr. No.	Candidate Name	Father Name	Title of the Research Proposal	Supervisor Name
1	Ms. Priyanka	Sh. Amarnath	Impact of Rural Entrepreneurship Programmes on Socially Disadvantaged Groups	Prof. Sanket Vij

27/02/2018

Prof. Sanket Vij
Convener

27/02/18

Dr. Bhavna Sharma
Member

27/02/18

Mr. Pankaj Misra
Member

B.P.S. MAHILA VISHWAVIDYALAYA, KHANPUR KALAN

OFFICE ORDER

Meeting of the Post Graduate Board of Studies of Department of Management Studies will be held on 04/12/2017 at 11.00 a.m. in the office of the Chairperson, Department of Management Studies, B.P.S. Mahila Vishwavidyalaya, Khanpur Kalan (Sonepat).

The agenda will be as under:

1. To consider and approve the synopsis of Ms. Priyanka for registration in Ph. D. (Management) progarmme.
2. To discuss and approve the modifications in the objectives/methodology of research proposal of registered Ph. D. Scholars as recommended by the Department Staff Council during the annual seminar and approved by the Department Research Committee vide its meeting held on 18/11/2017.
3. To consider and approve the panel of examiners for evaluation of Ph. D. Thesis of Ms. Monika Arya and Ms. Kavita as recommended by the Department Staff Council and approved by the Department Research Committee vide its meeting held on 18/11/2017.
4. Any other item with the permission of the Chair.

CHAIRPERSON

Ref. No. DMS/6365 - 6376 Dated: 30/11/2017

Copy of the above is forwarded to the following for information and further necessary action:

1. Prof. Ajay Kumar Rajan, Dean Academic Affairs, Institute of Management Studies and Research, M.D.U. Rohtak. Mobile: 9416536205, Email: rajanajay18@yahoo.com
2. Prof. Sudesh Chhikara, University School of Management, Kurukshetra University, Kurukshetra. Mobile: 9416782192, Email: sudesh@gmail.com
3. Prof. Ipshita Bansal, Department of Management Studies, BPSMV.
4. Prof. Shweta Singh, Department of Management Studies, BPSMV.
5. Dr. Anshu Bhardwaj, Department of Management Studies, BPSMV
6. Dr. Meenakshi Katyal, Department of Management Studies, BPSMV.
7. Supdt. – Incharge (Academic), BPSMV for information.
8. In-charge University Guest House, with the request to arrange lunch for six persons on 04/12/2017.
9. Mr. Karam Singh, Incharge – Payments, with a request to arrange on the spot payment of TA/DA and Honorarium for the outside experts.
10. Ms. Anju Rohilla – Special Invitee, Research Scholar, Department of Management Studies, BPSMV.
11. PA to Vice-Chancellor, for the kind information of the Vice-Chancellor, please.

CHAIRPERSON

DEPARTMENT OF MANAGEMENT STUDIES
B.P.S. MAHILA VISHWAVIDYALAYA, KHANPUR KALAN

Proceedings of the meeting of the Post Graduate Board of Studies (PGBoS) of Department of Management Studies held on 04/12/2017 at 11.00 a.m. in the office of the Chairperson, Department of Management Studies, B.P.S. Mahila Vishwavidyalaya, Khanpur Kalan (Sonepat).

The following members of Departmental Research Committee were present:

1.	Prof. Sanket Vij	Chairperson & Dean
2.	Prof. Sudesh Chhikara	External Expert
3.	Prof. Ipshita Bansal	Member
4.	Dr. Meenakshi Katyal	Member
5.	~~Dr. Anshu Bhardwaj~~	~~Member~~

The following decisions were taken;

Item No. 1 : The committee evaluated draft research proposal of Ms. Priyanka d/o Sh. Amarnath and after detail discussion with the candidate on relative draft research proposal, the committee approved the title "Impact of Rural Entrepreneurship Programmes on Socially Disadvantaged Groups".

Item No. 2 : The committee discussed and approved the modifications in the objectives/ scope/methodology of the study of following registered Ph. D. Scholars :

Sr. No.	Ph.D. Registration No.	Scholar Name	Remarks
1	13020453	Ms. Anju Rohilla	Modification in Scope of the Study
2	14020405	Ms. Ashima Garg	Modification in Objective No. 2 and 3 of the Study
3	14021001	Ms. Anita Sharma	Modification in Objective No. 1 and 2 of the Study

Item No. 3 : The committee considered and approved the panel of examiners for evaluation of Ph. D. Thesis of Ms. Monika Arya and Ms. Kavita.

Meeting ended with a vote of thanks.

Prof. Sanket Vij
Chairperson & Dean

Prof. Sudesh Chhikara
External Expert

Prof. Ipshita Bansal
Member

Dr. Meenakshi Katyal
Member

~~Dr. Anshu Bhardwaj~~
~~Member~~

18/11/2017

DEPARTMENT OF MANAGEMENT STUDIES
B.P.S. MAHILA VISHWAVIDYALAYA, KHANPUR KALAN

0/C

OFFICE ORDER

Meeting of the Departmental Research Committee of Department of Management Studies will be held on 18/11/2017 at 10.00 a.m. in the office of the Chairperson, Department of Management Studies, B.P.S. Mahila Vishwavidyalaya, Khanpur Kalan (Sonepat).

The agenda will be as under:

1. To select the candidates for Pre - Ph.D. course work (Management) for the academic session 2017-18 and also to assign the supervisors to the selected candidates for Ph. D. (Management) Programme.
2. To consider and approve the synopsis of Ms. Priyanka for registration in Ph. D. (Management) progarimme.
3. To discuss and approve the modifications in the objectives/methodology suggested by the Department Staff Council during the annual seminar presented by registered Ph. D. Scholars.
4. To consider and approve the panel of examiners for evaluation of Ph. D. Thesis of Ms. Monika Arya and Ms. Kavita.
5. To consider and approve the half yearly progress report of the Ph. D. scholars.
6. Any other item with the permission of the Chair

CHAIRPERSON 6/11/17

Dated: 06/11/2017

Ref. No. DMS/1071-1080

Copy of the above is forwarded to the following for infogmation and further necessary action:

1. Prof. Mukesh Kumar Dhunna, Institute of Management Studies and Research, M.D.U, Rohtak, Mobile:9896213511, Email: mukeshdhunna@rediffmail.com
2. Prof. M. C. Garg, Haryana School of Business, G. J. U, Hisar Mobile: 09960854-34, Email: mc_garg@yahoo.com.
3. Prof. Ipshita Bansal, Department of Management Studies, BPSMV.
4. Prof. Shweta Singh, Department of Management Studies, BPSMV.
5. Dr. Anshu Bhardwaj, Department of Management Studies, BPSMV.
6. Supdt. - Incharge (Academic), BPSMV for information.
7. In-charge University Guest House, with the request to arrange lunch for six persons on 18/11/2017.
8. Mr. Karam Singh, Incharge Payments, with a request to arrange on the spot payment of TA/DA and Honorarium for the outside experts.
9. Ms. Kiran Special Invitee, Research scholar, Department of Management Studies, BPSMV.
10. PA to Vice-Chancellor, for the kind information of the Vice-Chancellor, please.

DEPARTMENT OF MANAGEMENT STUDIES
B.P.S. MAHILA VISHWAVIDYALAYA, KHANPUR KALAN

Proceedings of the meeting of the Departmental Research Committee of Department of Management Studies held on 18/11/2017 at 10.00 a.m. in the office of the Chairperson, Department of Management Studies, B.P.S. Mahila Vishwavidyalaya, Khanpur Kalan (Sonepat).

The following members of Departmental Research Committee were present:

1.	Prof. Sanket Vij	Chairperson & Dean
2.	Prof. Mukesh Kumar Dhunna	Outside Expert
3.	Prof. M. C. Garg	Outside Expert
4.	Prof. Ipshita Bansal	Member
5.	~~Prof. Shweta Singh~~	~~Member~~
6.	Dr. Anshu Bhardwaj	Member
7.	Ms. Kiran	Special Invitee JRF Research Scholar

The following decisions were taken:

Item No. 1 : The DRC evaluated draft research proposal of 05 candidates on the basis of criteria approved by the DRC and after detail discussion with candidates on relative draft research proposal, individually, the committee recommended candidates for admission in Pre-Ph.D. Course Work. The following candidates were selected for Pre – Ph. D. Course work and following supervisors were allotted to the selected candidates by the DRC:

Entrance Test Category :

Cat. No.	Roll No.	Candidate Name	Father Name	Merit List	Grand Total	Supervisor Name
1.	170204	Seema Nashier	Raje Ram	I	72.87	Prof. Sanket Vij
2.	170224	Varuni Sharma	Naveen Kumar	II	69.26	Dr. Krishan Kumar
3.	170233	Sunny Arora	Parkash Chander	III	66.35	Dr. Anshu Bhardwaj
4.	170214	Anju Sharma	Vishal Sharma	IV	62.896	Dr. Kapil Kumar
5.	170212	Reshma Kamboj	Balvinder Singh	V	61.381	Dr. Meenakshi Katyal

All above recommendations of candidates for admission in Pre-Ph.D. Course Work are provisional subject to the verification of documents and eligibility from academic and registration branch.

Dr. Sanket Vij, Chairperson 18/11/17
Prof. Ipshita Bansal, Dean 18/11/2017
Prof. Mukesh Kumar Dhunna, Outside Expert 18/11/17
Prof. M. C. Garg, Outside Expert
~~Prof. Shweta Singh~~ ~~Member~~
Dr. Anshu Bhardwaj, Member 18/11/17
Ms. Kiran, Special Invitee 18/11/17

Item No. 2 : The committee evaluated draft research proposal of Ms. Priyanka d/o Sh. Amarnath and after detail discussion with the candidate on relative draft research proposal, the committee approved the title "Impact of Rural Entrepreneurship Programme on Socially Disadvantaged Groups.

Item No. 3 : The committee discussed and approved the modifications in the objectives scope methodology of the study of following registered Ph. D. Scholars :

Sr. No.	Ph.D. Registration No.	Scholar Name	Remarks
1	13020453	Ms. Anju Rohilla	Modification in Scope of the Study
2	14020405	Ms. Ashima Garg	Modification in Objective No. 2 and 3 of the Study
3	14021001	Ms. Anita Sharma	Modification in Objective No. 1 and 2 of the Study

Item No. 4 : The committee considered and approved the panel of examiners for evaluation of Ph. D. Thesis of Ms. Monika Arya and Ms. Kavita.

Item No. 5 : The committee approved the half yearly progress report of the following registered Ph. D. Scholars.

Sr. No.	Ph. D. Registration No.	Scholar Name	Supervisor Name	Progress Report From	Progress Report To	Recommendations of the DPC
1	13020453	Ms. Anju	Prof. Ipshita Bansal	01/04/13	30/09/17	
2	13020403	Ms. Seema	Prof. Shweta Singh	Dec 2012	Dec 2017	
3	13020472	Ms. Jaimati	Prof. Shweta Singh	08/09/15	30/06/17	
4	20150411 00002472	Ms. Jyoti Mor	Prof. Shweta Singh	23/07/16	30/06/17	
5	14020402	Ms. Sushma Kumari	Prof. Sanket Vij	Aug 2014	Jan 2016	
6	14020406	Ms. Sunidhi Jain	Prof. Sanket Vij	Aug 2014	Aug 2017	
7	13020473	Ms. Ridhi Gupta	Prof. Sanket Vij	Sept 2015	Aug 2017	
8	14021001	Ms. Anita	Prof. Sanket Vij	April 2016	Aug 2017	
9	14021005	Ms. Pooja	Dr. Anshu	April 2016	Aug 2017	Mar to S

Dr. Sanket Vij
Chairperson

Prof. Ipshita Bansal
Dean

Prof. Mukesh Kumar Dhunna
Outside Expert

Prof M. C. Garg
Outside Expert

Prof. Shweta Singh
Member

Dr. Anshu Bhardwaj
Member

Ms. Kiran
Special Invitee

		Gupta	Bhardwaj			report miss
10	14021004	Ms. Nisha Malik	Dr. Krishan Kumar	April 2016	Aug 2017	
11	20150411 00002464	Ms. Kiran	Dr. Krishan Kumar	23/07/16	23/07/17	
12	14020405	Ms. Ashima Garg	Prof. Ipshita Bansal	Sept. 2015	Aug. 2017	
13	14020403	Ms. Shweta Bansal	Prof. Ipshita Bansal	Sept. 2015	Aug. 2017	
14	13020471	Ms. Ila Sehrawat	Prof. Ipshita Bansal	Sept. 2015	Aug. 2017	
15	13020474	Ms. Priyanka	Prof. Ipshita Bansal	Sept. 2015	Sept. 2017	

The committee resolved and recommended that the chairperson shall ask the supervisors to ensure the submission of pending half yearly progress reports of the concern research scholars within 21 days.

Meeting ended with a vote of thanks.

Dr. Sanket Vij
Chairperson

Prof. Ipshita Bansal
Dean

Prof. Mukesh Kumar Dhunna
Outside Expert

Prof. M. C. Garg
Outside Expert

Prof. Shweta Singh
Member

Dr. Anshu Bhardwaj
Member

Ms. Kiran
Special Invitee

Attendance Sheet in front of DRC Admission for Pre. Ph. D. Course Work (Management)

Sr. No.	Roll No.	Candidate Name	Father Name	Signature
1	170233	Sunny Arora	Parkash Chander	
2	170204	Seema Nashier	Raje Ram	
3	170224	Varuni Sharma	Naveen Kumar	
4	170212	Reshma Kamboj	Balvinder Singh	
5	170214	Anju Sharma	Vishal Sharma	
6.	16021001	Priyanka	AMARNATH	

Dr. Sanket Vij
Chairperson

Prof. Ipshita Bansal
Dean

Prof. Mukesh Kumar Dhunna
Outside Expert

Prof. M. C. Garg
Outside Expert

~~Prof. Shweta Singh~~
~~Member~~

Dr. Anshu Bhardwaj
Member

Ms. Kiran
Special Invitee

Sr. No.	Roll No.	Candidate Name	Father Name	10% weightage to the research statement (10marks) (A)	20% weightage to performance in the interview conducted by DRC on the basis of criteria approved by DRC of the concerned Department (20 marks) (B)				Total (A+B)
					Domain Knowledge	Numeric Abilities	Communication Skills	Ability to answer queries	
1	170233	Sunny Arora	Parkash Chander	7	4	4	3	4	22
2	170204	Seema Nashier	Raje Ram	8	4	4	4	4	24
3	170224	Varuni Sharma	Naveen Kumar	6	3	4	4	3	20
4	170212	Reshma Kamboj	Balvinder Singh	5	3	3	4	3	18
5	170214	Anju Sharma	Vishal Sharma	5	3	3	2	3	16

Dr. Sanket Vij
Chairperson

Prof. Ipshita Bansal
Dean

Prof. Mukesh Kumar Dhunna
Outside Expert

Prof. M. C. Garg
Outside Expert

~~Prof. Shweta Singh~~
~~Member~~

Dr. Anshu Bhardwaj
Member

Ms. Kiran
Special Invitee

-20-

ORDINANCE NO. BPSMV/PH. D./2011/1

Amended on 25/07/2015 by the EC

ORDINANCE FOR ADMISSION, REGISTRATION AND AWARD OF DEGREE OF DOCTOR OF PHILOSOPHY (PH. D.)

1. DEFINITIONS :

1.1. Programme stands for Doctor of Philosophy (Ph. D.).
1.2. Course stands for individual paper
1.3. Credit is the weightage assigned to a course in terms of contact hours. One contact hour per week per course per semester is equivalent to one credit.
1.4. Grade stands for a letter grade assigned to a student on the basis of evaluation of a course on the 10 point scale.
1.5. Grade point stands for the numerical equivalent of the letter grade.
1.6. Semester Grade Point Average (SGPA) and Cumulative Grade Point Average (CGPA) are the weighted average of the grade points and describe the performance of the candidate in the courses of a particular semester.

2. ACADEMIC ELIGIBILITY :

2.1. *Master's degree in the subject concerned or in allied subjects with at least 55% marks in aggregate (52.5% for SC/ST/Differently abled candidates) or an equivalent grade from a University or a recognized institution of higher learning.

2.2. The Departmental Research Committee (DRC) of the department concern shall decide, subject to approval by the Academic Council, the relevance of allied subjects.

3. PROCEDURE FOR ADMISSION TO PRE Ph.D. COURSE :

3.1. Admissions to the Ph.D. Programme shall be advertised once in a year, normally in the month of March/April, each year.

*Added/Amended vide Executive Council Reso. No. 14 held on 25/07/2015.

ANNEXURE 7.

VC/PB/1905
05/7/17

1342
04/07/17

REGISTRAR 2823 5/7/17

From

The Principal Secretary, Govt. of Haryana,
Higher Education Department, Chandigarh.

To

The Registrar,

1. All State Universities in Haryana State (under the ambit of Higher Education Department)
2. The Principal, Govt. and Govt. Aided Colleges in Haryana State

Memo No. 18/172-2016 UNP (4)
Dated Panchkula, the: 30-06-2017

ael-551
10/7/17

Subject: Regarding grant of Maternity Leave of women students.

****

Kindly refer to the subject noted above.

The State Government has decided the matter in a broader perspective to support the women students to complete their education without any gap/hindrance. The State Government has taken a policy decision for grant of Maternity Leave upto 45 days to such women students, who are studying in State Universities/Colleges in the State.

The maternity leave to women students will be granted by the competent authority with the condition that if the women students avail the maternity leave upto 45 days on recommendation of Government Hospital Authorities as applicable as per prescribed rules in the case of Government Women Employees, then the women students will have to attend the extra classes as per the requirement of attendance of the specified course/ professional/ research program.

This is for your information and necessary action please.

Superintendent UNP
For Principal Secretary, Govt. of Haryana,
Higher Education Department, Chandigarh

5/7/17

Regd (Univ.) 6/7
Supdt I/c (Acad)

10/7/17
Asstt (Acad.)

22

ANNEXURE 5

Minutes of the 4th meeting of Departmental Research Committee (DRC) of DPER held on 28.10.17 at 11.00 a.m. at South Campus; Bhainswal Kalan (Sonipat):

Following were present:

1. Dr. Neelam Jain, Head, DPER — Chairperson
2. Prof. D.P. Pathak, Director, DIPSAR, New Delhi — Outside expert

Chairperson informed to the member that one of the members Prof. B. Narasimhan, Dept. of Pharm. Sciences, M D U, Rohtak (Haryana) expressed his inability to attend the meeting due to some urgent work. But he has given his consent to conduct the meeting.

Then agenda was taken point wise:

Item no.1: Confirmation of the minutes of the 3rd meeting of DRC held on 14.2.17.

Members of DRC confirmed the minutes of the 3rd meeting held on 14.2.17. (Attached as annexure-I).

Item no.2: Consideration for the registration of Mrs. Shyna (Roll no. 14071002) for Ph.D. in Pharmaceutical sciences.

Chairperson informed that two candidates (Mrs. Meenu & Mrs. Shyna) were admitted in academic session 2014-15 for the Ph.D.in Pharmaceutical Sciences. Out of these two, one of the candidates i.e. Mrs. Meenu got registered in PhD but due to some medical problems Mrs. Shyna could not complete her Pre Ph.D. course work at that time. Now Mrs. Shyna has completed her course work.

After the examination of the result of Pre- Ph. D. Course work & the application submitted by Mrs. Shyna along with Synopsis of Research (Attached as annexure-II), she was allowed to present her proposed topic for the Ph.D. before the members of DRC. The proposed topic for Ph.D. of Mrs. Shyna is **"Syntheses, Characterization and Biological Evaluation of Some 4 – Thiazolidinones clubbed with Benzimidazoles".**

DRC recommended that the Subject/Topic proposed for Research by Mrs. Shyna (Roll no. 14071002) is suitable for Research to place before the PGBOS of DPER.

Item no.3: To assign the Supervisor to Mrs. Shyna for Ph.D. in Pharmaceutical sciences

Dr. Neelam Jain, Professor is the only teacher who is eligible to be a Supervisor of Ph. D. Candidate. Therefore, DRC recommended to Dr. Neelam Jain, Professor as the Supervisor of Mrs. Shyna (Roll no. 14071002).

Meeting ended with vote of thanks to the chair.

D.P Pathak

28/10/17
Neelam Jain

Minutes of the 6rd meeting of Post Graduate Board of Studies (PGBOS) of Department of Pharmaceutical Education & Research (DPER) held on 28.10.17 at 12.30 p.m. at South Campus, Bhainswal Kalan

Following members were present:

1. Prof. Neelam Jain, Head, DPER — Chairperson
2. Mr. Anil Hooda, Assistant professor, DPER — Member
3. Mr. Ashwani Arya, Assistant professor, DPER — Member
4. Prof. D.P. Pathak, Director, DIPSAR, New Delhi — Outside expert

Meeting started with the General Introduction & the progress made by the Department during previous year. Head, DPER informed that one of the members Prof. B. Narasimhan, Dept. of Pharm. Sciences, M D U, Rohtak (Haryana) expressed his inability to attend the meeting due to some urgent work.

Thereafter the agenda was taken for discussion, item wise:

Item no. 1: Confirmation of the minutes of the 5th meeting of PGBOS held on 14.2.17.

Members of P G Board of Studies confirmed the minutes of the previous meeting held on 14.2.17. (Attached as annexure-I).

Item no. 2: Consideration & approval of the recommendations of Department Research Committee (DRC) for Ph.D. registration of Mrs. Shyna (Roll no. 14071002) in Pharmaceutical Sciences and regarding Supervisor.

Members of PGBOS approved the recommendations of Department Research Committee (DRC) (Attached as annexure-II) for Ph.D. registration of Mrs. Shyna (Roll no. 14071002) in Pharmaceutical Sciences. PGBOS approved the proposed topic for Ph.D. of Mrs. Shyna i.e. "Syntheses, Characterization and Biological Evaluation of Some 4 – Thiazolidinones clubbed with Benzimidazoles" & Dr. Neelam Jain, Professor as the Supervisor of Mrs. Shyna (Roll no. 14071002).

The meeting ended with vote of thanks.

28/10/17 Ashwani Arya

Anil Hooda

28.10.17 D.P. Pathak

28/10/17 Neelam Jain

ANNEXURE 6

Minutes of the meeting/awareness workshop on 16/03/2018 at 10:30 a.m. in the conference hall of administrative block, BPSMV, Khanpur Kalan to adopt MOOCs courses on SWAYAM and nomination of UGC SWAYAM mentors.

The Following were present:

1. Prof Ipshita Bansal — Chairperson
   Dean Academic Affairs
2. Prof.Vimal Joshi
   Dean, Faculty of Laws
3. Dr. Krishan Kumar
   for Dean, Faculty of Commerce & Mgt.
4. Prof. Sarla
   Dean Faculty of Ayurveda
5. Dr. Anu
   for Dean, Faculty of Physical Education
6. Dr. Sumitra Devi
   Dean, Faculty of Education & Social Sciences
7. Dr. Harinder Pal
   for Chairperson, Deptt. Of Fashion Technology
8. Dr. Ashok Verma
   Chairperson, Deptt. Of English
9. Dr. Ravi Bhushan
   Chairperson, Deptt of Foreign Languages
10. Dr. J.S. Malik

Controller of Examination

11. Dr. Bhavna Sharma

Incharge, Deptt of Commerce

12. Mr. Sunil Sangwan

Deptt. Of Basic and applied sciences

13. Dr. Manju Pawar

Chairperson, Deptt. Of Social work

14. Dr.Kiran Lamba

Incharge, Deptt. Of Economics

15. Dr. Sushma Joshi

Director, R.C. at Lulla Ahir (Rewari)

16. Dr Naresh Bhargava

Director HRDS

17. Supdt (Acad)

Prof. Ipshita Bansal gave the presentation regarding adoption of MOOCs courses on SWAYAM platform and explained the responsibilities of Head/Chairperson / In charges/SWAYAM mentors, teachers, academic branch and examination branch in the meeting. Queries and doubts raised by the audience clarified. All heads/chairperson gave consent to adopt the MOOCs courses from the session July, 2018.

After the deliberations the following decisions were taken in the meeting:

Ipshita

I. Academic branch will put up an agenda item in the forthcoming Academic Council meeting with respect to the following:

a. For approval of adoption of MOOCs through SWAYAM platform by Bhagat Phool Singh Mahila Vishwavidyalaya from july,2018.

b. For approval of issuing directions to all the Departmental Heads for adding in the ordinance of all the PG programs the following "The University has adopted the MOOCs-SWAYAM program of UGC-MHRD since July 2018. Hence upto 20% or less of the credits of the P.G. program will be earned by the students through MOOCs-SWAYAM courses"

c. Before the beginning of each semester in June and December, the departmental staff council of each department, institution, college will select the MOOCs courses from SWAYAM platform to be adopted in the forthcoming semester and sent the list to the Academic Branch. Such courses will be deemed to be approved by PGBOS and Academic Council (As, to adopt MOOCs, flexibility and speed in the systems is required and the MOOCs courses are already approved by Academic Committee of UGC.) Department staff council of all the departments will meet at the earliest to choose the courses to be adopted through MOOCs for PG programs and suitable amendment in the ordinance will be made to adopt the MOOCs program in the University

II. Responsibilities of all the Heads/Chairperson/Principals and departmental teachers.

a. All the Chairpersons will ensure the action is taken as per point no I-III (a, b, c)

b. All the Heads/Chairperson/Principals will nominate one SWAYAM mentor from their department and send the name to SWAYAM coordinator on swayambpsmv@gmail.com.

c. Department teachers and SWAYAM mentor will inform the students about the MOOCs courses and facilitate their enrolment

d. The SWAYAM mentor in the knowledge of Chairperson/principal/Incharge/Director will coordinate with the Host

Ipshita

university course coordinator of the course which is being offered to the students.

III. The marks of courses selected by various departments to be studied by students, as received through course coordinator of Host University will be entered in the DMC by examination branch.

IV. Prof Ajit Singh, Dean/Chairperson of Computer Science and Engineering cell will take care of the internet related requirements for the proper implementation of MOOCs courses in the University.

Ipshita 16/3/2018.

Prof Ipshita Bansal
Dean Academic Affairs
SWAYAM Coordinator

Department of Computer Science & Engineering and Information Technology
BPS Mahila Vishwavidyalaya Khanpur Kalan Sonipat
(A State University Established under the Legislative Act No. 31/2006)

Ref. No BPSMV/CSE/IT/18/149-1982
Dated 27/1/18

Minutes of the meeting of the UGBOS of Computer Science in Institute of Higher Learning, BPSM held on 27/01/2018 at 2:30 P.M. The following members of UGBOS were present:

1.	Prof. Ajit Singh, Chairperson, Deptt. of CSE & IT, BPSMV, Khanpur Kalan, Sonepat	Chairman
2.	Prof. Dharminder Kumar, Deptt. of CSE, GJUS&T, Hisar	Outside Expert
3.	Prof. Rahul Rishi, Deptt. of CSE, MDU, Rohtak	Outside Expert
4.	Mrs. Sonal Beniwal, Assistant Prof. Deptt. of CSE & IT,BPSMV	Member
5.	Dr. Veena, Principal, IHL, BPSMV, Khanpur Kalan, Sonipat	Special Invitee (on Leave)

The aforesaid meeting is convened in the Department of Computer Science & Engineering and Information Technology, Bhagat Phool Singh Mahila Vishwavidyalaya, Khanpur Kalan, Sonepat. The agenda items were discussed in detail and following decisions have been taken:

1. Item No. 1: Considered and Approved.
   The Scheme & Syllabus of BCA (2nd, 3rd, 4th, 5th & 6th Semesters) were considered and approved for its implementation w.e.f. academic year 2017-18 onwards.
2. Item No. 2: Any other item.
   i. The committee members also approved the minor changes in the scheme of 1st semester related to the numbers of lectures, tutorials and practical per week in order to make the symmetric with remaining semesters of BCA programme with no change in syllabus.
   ii. It was further resolved that every course should have pre–requisite, course objectives, course out comes and the suggestive practical list in case of practical to meet out National requirement for its implementation w.e.f academic year 2018-19 onwards.

With this the meeting ended with a vote of thank to the chair.

27.1.18	27.1.18	27/1/18	On Leave
Prof. Rahul Rishi (Outside Expert)	Prof. Dharminder Kumar (Outside Expert)	Mrs. Sonal Beniwal (Member)	Dr. Veena (Special Invitee)

27/01/18
Prof. Ajit Singh
Chairman, UGBOS

A copy of the above is forwarded to the following for information:

1. PA to Hon'ble Vice- Chancellor (for kind information of Hon'ble Vice-Chancellor)
2. PA to Registrar (for kind information of Worthy Registrar)
3. Assistant Registrar (Academic) for necessary action.
4. Controller of Examinations for information and necessary action.

27/01/2015

Prof. Ajit Singh
Chairman, UGBOS

B. P. S. Mahila Vishwavidyalaya, Khanpur Kalan
(Sonepat)

(State University Established Under the Legislative Act No 31/2006)

Course Curriculum & Scheme of Examination

For

BACHELOR OF COMPUTER APPLICATIONS (BCA)

(w.e.f. 2017-18)

Semester – I

Sr. No.	Paper No.	Title of Paper	Hrs/ Week			External Marks	Internal Marks	Total Marks
			L	T	P			
Theory								
1.	BCA-101	Computer & Programming Fundamentals	3	1	-	80	20	100
2.	BCA-102	PC Software	3	1	-	80	20	100
3.	BCA-103	Mathematics	3	1	-	80	20	100
4.	BCA-104	Logical Organization of Computer-I	3	1	-	80	20	100
Lab								
5.	BCA-105	Practical software Lab -- Based on paper BCA-102 i.e Word, Excel and Power point	-	-	2	80	20	100
Total			12	4	2	400	100	500

27/01/2018

B. P. S. Mahila Vishwavidyalaya, Khanpur Kalan
(Sonepat)

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Course Curriculum & Scheme of Examination

For

BACHELOR OF COMPUTER APPLICATIONS (BCA)

(w.e.f. 2017-18)

Semester – 2

Sr. No.	Paper No.	Title of Paper	Hrs/ Week			External Marks	Internal Marks	Total Marks
			L	T	P			
Theory								
1.	BCA-106	Programming in C	3	1	-	80	20	100
2.	BCA-107	Logical Organization of Computer-II	3	1	-	80	20	100
3.	BCA-108	Mathematical Foundations of Computer Science	3	1	-	80	20	100
4.	BCA-109	Operating System	3	1	-	80	20	100
5.	BCA-110	Personality Development	3	1	-	80	20	100
Lab								
6.	BCA-111	Programming in C Lab	-	-	2	80	20	100
7.	BCA-112	Operating System Lab	-	-	2	80	20	100
Total			15	5	2	480	120	700

27/01/2018

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Course Curriculum & Scheme of Examination

For

BACHELOR OF COMPUTER APPLICATIONS (BCA)

(w.e.f. 2017-18)

Semester – 3

Sr. No.	Paper No.	Title of Paper	Hrs/ Week			External Marks	Internal Marks	Total Marks
			L	T	P			
Theory								
1.	BCA-201	Programming in C++	3	1	-	80	20	100
2.	BCA-202	Data Structures	3	1	-	80	20	100
3.	BCA-203	System Design and Analysis	3	1	-	80	20	100
4.	BCA-204	Communication Skills (English)	3	1	-	80	20	100
5.	BCA-205	Computer System and Architecture	3	1	-	80	20	100
Lab								
6.	BCA-206	C++ Lab	-	-	2	80	20	100
7.	BCA-207	Data Structures Lab	-	-	2	80	20	100
Total			15	5	4	560	140	700

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Course Curriculum & Scheme of Examination

For

BACHELOR OF COMPUTER APPLICATIONS (BCA)

(w.e.f. 2017-18)

Semester – 4

Sr. No.	Paper No.	Title of Paper	Hrs/ Week			External Marks	Internal Marks	Total Marks
			L	T	P			
Theory								
1.	BCA-208	Data Base Management System	3	1	-	80	20	100
2.	BCA-209	Software Engineering	3	1	-	80	20	100
3.	BCA-210	Web Designing	3	1	-	80	20	100
4.	BCA-211	Computer Networks	3	1	-	80	20	100
5.	BCA-212	Accounting and Financial Management	3	1	-	80	20	100
Lab								
6.	BCA-213	Data Base Management System Lab	-	-	2	80	20	100
7.	BCA-214	Web Designing Lab	-	-	2	80	20	100
Total			15	5	4	560	140	700

27/01/18

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Course Curriculum & Scheme of Examination

For

BACHELOR OF COMPUTER APPLICATIONS (BCA)

(w.e.f. 2017-18)

Semester – 5

Sr. No.	Paper No.	Title of Paper	Hrs/ Week			External Marks	Internal Marks	Total Marks
			L	T	P			
Theory								
1.	BCA-301	Software Testing	3	1	-	80	20	100
2.	BCA-302	Computer Graphics	3	1	-	80	20	100
3.	BCA-303	Management Information System	3	1	-	80	20	100
4.	BCA-304	Visual Basic	3	1	-	80	20	100
5.	BCA-305	E-Commerce	3	1	-	80	20	100
Lab								
6.	BCA-306	Computer Graphics Lab	-	-	2	80	20	100
7.	BCA-307	Visual Basic Lab	-	-	2	80	20	100
Total			15	5	4	560	140	700

27/01/18

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Course Curriculum & Scheme of Examination

For

BACHELOR OF COMPUTER APPLICATIONS (BCA)

(w.e.f. 2017-18)

Semester – 6

Sr. No.	Paper No.	Title of Paper	Hrs/ Week			External Marks	Internal Marks	Total Marks
			L	T	P			
Theory								
1.	BCA-308	Multimedia Technologies	3	1	-	80	20	100
2.	BCA-309	Programming in Java	3	1	-	80	20	100
3.	BCA-310	Artificial Intelligence	3	1	-	80	20	100
4.	BCA-311	Mobile Computing	3	1	-	80	20	100
5.	BCA-312	Data Warehouse & Data Mining	3	1	-	80	20	100
Lab								
6.	BCA-313	Java Programming Lab	-	-	2	80	20	100
7.	BCA-314	Multimedia Lab	-	-	2	80	20	100
Total			15	5	4	560	140	700

27/01/18

Total Marks for BCA Degree

Sr. No.	Semester	Theory Marks	Practical Marks	Total Marks
1.	Semester- 1	400	100	500
2.	Semester- 2	500	200	700
3.	Semester- 3	500	200	700
4.	Semester- 4	500	200	700
5.	Semester- 5	500	200	700
6.	Semester- 6	500	200	700
Grand Total				4000

27/01/2018

BCA-101 : COMPUTER & PROGRAMMING FUNDAMENTALS

External Marks: 80

Internal Marks: 20

Time: 3 hours

Note: Examiner will be required to set NINE questions in all. Question Number 1 is compulsory and will consist of total 8 questions (short-answer type questions) covering the entire syllabus. Examiner will set two questions from each Unit of the syllabus. Student will be required to attempt FIVE questions in all selecting one question from each Unit. All questions will carry equal marks.

UNIT-I

Computer Fundamentals: Generations of Computers, Definition, Block Diagram along with its components, characteristics & classification of computers, Limitations of Computers, Human-Being VS Computer, Applications of computers in various fields.

Memory: Concept of primary & secondary memory, RAM, ROM, types of ROM, Cache Memory, flash memory, Secondary storage devices: Sequential & direct access devices viz. magnetic tape, magnetic disk, optical disks i.e. CD, DVD, virtual memory.

UNIT-II

Computer hardware & software: I/O devices, definition of software, relationship between hardware and software, types of software.

Overview of operating system: Definition, functions of operating system, concept of multi programming, multitasking, multithreading, multiprocessing, time-sharing, real time, single-user & multi-user operating system.

Computer Virus: Definition, types of viruses, Characteristics of viruses, anti-virus software.

UNIT-III

Computer Languages: Analogy with natural language, machine language, assembly language, high-level languages, fourth generation languages, compiler, interpreter, assembler, Linker, Loader , characteristics of a good programming language, Planning the Computer Program: Concept of problem solving, Problem definition, Program design, Debugging, Types of errors in programming, Documentation.

Structured programming concepts, Programming methodologies viz. top-down and bottom-up programming, Advantages and disadvantages of Structured programming.

UNIT-IV

Overview of Networking: An introduction to computer networking, Network types (LAN, WAN, MAN), Network topologies, Modes of data transmission, Forms of data transmission, Transmission channels(media), Introduction to internet and its uses, Applications of internet, Hardware and Software requirements for internet, Intranet, Applications of intranet.

SUGGESTED READINGS

1. Gill Nasib Singh: Computing Fundamentals and Programming in C, Khanna Books Publishing Co., New Delhi.
2. Balagurusamy E, Computing Fundamentals and C Programming, Tata McGraw Hill.
3. Norton, Peter, Introduction to Computer, McGraw-Hill
4. Leon, Alexis & Leon, Mathews, Introduction to Computers, Leon Tech World
5. Rajaraman, V., Fundamentals of Computers, PHI
6. Ram, B., Computer Fundamentals, Architecture & Organization, New Age International (P) Ltd.
7. Chhillar, Rajender Singh: Application of IT to Business, Ramesh Publishers, Jaipur.
8. Gill, Nasib Singh: Essentials of Computer and Network Technology, Khanna Books Publishing Co., New Delhi

Note: Latest and additional good books may be suggested and added from time to time.

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External Marks: 80

Internal Marks: 20

Time: 3 hours

Note: Examiner will be required to set NINE questions in all. Question Number 1 is compulsory and will consist of total 8 questions (short-answer type questions) covering the entire syllabus. Examiner will set two questions from each Unit of the syllabus. Student will be required to attempt FIVE questions in all selecting one question from each Unit. All questions will carry equal marks.

UNIT - I

MS-Windows: Operating system-Definition & functions, basics of Windows. Basic components of windows, icons, types of icons, taskbar, activating windows, using desktop, title bar, running applications, exploring computer, managing files and folders, copying and moving files and folders. Control panel – display properties, adding and removing software and hardware, setting date and time, screensaver and appearance. Using windows accessories.

UNIT - II

Documentation Using MS-Word - Introduction to word processing interface, Toolbars, Menus, Creating & Editing Document, Formatting Document, Finding and replacing text, Format painter, Header and footer, Drop cap, Auto-text, Autocorrect, Spelling and Grammar Tool, Document Dictionary, Page Formatting, Bookmark, Previewing and printing document, Advance Features of MS-Word-Mail Merge, Macros, Tables, File Management, Printing, Styles, linking and embedding object, Template.

UNIT - III

Electronic Spread Sheet using MS-Excel - Introduction to MS-Excel, Cell, cell address, Creating & Editing Worksheet, Formatting and Essential Operations, Moving and copying data in excel, Header and footer, Formulas and Functions, Charts, Cell referencing, Page setup, Macros, Advance features of MS-Excel-Pivot table & Pivot Chart, Linking and Consolidation, Database Management using Excel-Sorting, Filtering, Validation, What if analysis with Goal Seek, Conditional formatting.

UNIT - IV

Presentation using MS-PowerPoint: Presentations, Creating, Manipulating & Enhancing Slides, Organizational Charts, Excel Charts, Word Art, Layering art Objects, Animations and Sounds, Inserting Animated Pictures or Accessing through Object, Inserting Recorded Sound Effect or In-Built Sound Effect.

SUGGESTED READINGS

1. Microsoft Office -- Complete Reference -- BPB Publication
2. Learn Microsoft Office -- Russell A. Stultz -- BPB Publication
3. Courter, G Marquis (1999). Microsoft Office 2000: Professional Edition. BPB.
4. Koers, D (2001). Microsoft Office XP Fast and Easy. PHI.
5. Nelson, S L and Kelly, J (2002). Office XP: The Complete Reference. Tata McGraw-Hill.

Note: Latest and additional good books may be suggested and added from time to time.

BCA-103 : MATHEMATICS

External Marks: 80

Internal Marks: 20

Time: 3 hours

Note: Examiner will be required to set NINE questions in all. Question Number 1 is compulsory and will consist of total 8 questions (short-answer type questions) covering the entire syllabus. Examiner will set two questions from each Unit of the syllabus. Student will be required to attempt FIVE questions in all selecting one question from each Unit. All questions will carry equal marks.

UNIT I

SETS: Sets, Subsets, Equal Sets Universal Sets, Finite and Infinite Sets, Operation on Sets, Union, Intersection and Complements of Sets, Cartesian Product, Cardinality of Set, Simple Applications.

DETERMINANTS: Definition, Minors, Cofactors, Properties of Determinants, Applications of determinants in finding area of triangle, Solving a system of linear equations. **MATRICES:** Definition, Types of Matrices, Addition, Subtraction, Scalar Multiplication and Multiplication of Matrices, Adjoint, Inverse, solving system of linear equation Cramer's Rule.

UNIT II

RELATIONS AND FUNCTIONS: Properties of Relations, Equivalence Relation, Partial Order Relation Function: Domain and Range, Onto, Into and One to One Functions, Composite and Inverse Functions.

LIMITS & CONTINUITY: Limit at a Point, Properties of Limit, Computation of Limits of Various Types of Functions, Continuity of a function at a Point, Continuity Over an Interval, Sum, product and quotient of continuous functions, Intermediate Value Theorem, Type of Discontinuities.

UNIT III

DIFFERENTIATION: Derivative of a function, Derivatives of Sum, Differences, Product

& Quotient of functions, Derivatives of polynomial, trigonometric, exponential, logarithmic, inverse trigonometric and implicit functions, Logarithmic Differentiation, Chain Rule and differentiation by substitution.

UNIT IV

INTEGRATION: Indefinite Integrals, Methods of Integration by Substitution, By Parts, Partial Fractions, Integration of Algebraic and Transcendental Functions, Reduction Formulae for simple and Trigonometric Functions, Definite Integral as Limit of Sum, Fundamental Theorem of Integral Calculus, Evaluation of definite integrals by substitution, using properties of definite integral,

SUGGESTED READINGS

1. C.L.Liu: Elements of Discrete Mathematics, McGraw Hill.
2. Lipschutz, Seymour: Discrete Mathematics, Schaum's Series
3. Babu Ram: Discrete Mathematics, Vinayek Publishers, New Delhi.
4. Trembley, J.P & R. Manohar: Discrete Mathematical Structure with Application to Computer Science, TMH.
5. Kenneth H. Rosen: Discrete Mathematics and its applications, TMH.
6. Doerr Alan & Levasseur Kenneth: Applied Discrete Structures for Computer Science, Galgotia Pub. Pvt. Ltd.
7. Gersting: Mathematical Structure for Computer Science, WH Freeman & Macmillan.
8. Hopcroft J.E, Ullman J.D.: Introduction to Automata theory, Languages and Computation, Narosa Publishing House, New Delhi.

Note: Latest and additional good books may be suggested and added from time to time.

BCA-302 : Computer Graphics

External Marks: 80

Internal Marks: 20

Time: 3 hours

Note: Examiner will be required to set NINE questions in all. Question Number 1 is compulsory and will consist of total 8 questions (short-answer type questions) covering the entire syllabus. Examiner will set two questions from each Unit of the syllabus. Student will be required to attempt FIVE questions in all selecting one question from each Unit. All questions will carry equal marks.

UNIT – I

Overview of Computer Graphics: Historical background of Computer Graphics; Applications of Computer Graphics; Popular Graphics Softwares; Display devices: Pixel, Resolution, Aspect Ratio; Raster-Scan Systems and Display : CRT, Refresh Rate and Interlacing; Bit Planes, Color Depth and Color Palette, Frame Buffer, Video Controller, Raster-Scan Display Processor, Lookup Table, RGB Color Model, Color CRT monitors; Random-Scan Displays; Flat Panel Display : LCD, Plasma Panel; Graphics Monitors and Workstations; Popular Graphics Input Devices; Hard-Copy Devices;

UNIT – II

Coordinate Representations; Graphics Primitives: Line Drawing Algorithms- DDA Algorithm, Bresenham's Algorithm; Different Line Styles; Circle-Generating Algorithms- Properties of Circles, Circle Drawing using Polar Coordinates, Bresenham's Circle Drawing Algorithm; Ellipse-Generating Algorithms; Anti-aliasing;

UNIT – III

Geometric Transformations: Scaling, Translation, Rotation; Matrix Representations and Homogeneous Coordinates; Rotation Relative to an Arbitrary Point; Reflection; Shearing; Coordinate Transformation; Inverse Transformation; Affine Transformation; Raster Transformation; Composite Transformations; Fixed-point Scaling; Input Techniques: Pointing, Positioning, Rubber-band method, Dragging;

UNIT – IV

Two-Dimensional Viewing: Window-to-Viewport Coordinate Transformation; Zooming; Panning; Clipping: Point Clipping, Line Clipping- Cohen-Sutherland line clipping, Mid-point Subdivision Line Clipping; Polygon Clipping -- Sutherland-Hodgeman Polygon Clipping; Text Clipping; Graphics in Three Dimensions: Displays in Three Dimensions, 3-D Transformations; 3-D Viewing : Viewing Parameters, Projections, Parallel and Perspective projection; Hidden Surfaces: Z-Buffer Method, Painter's Algorithm;

SUGGESTED READINGS

1. "Computer Graphics", Donald Hearn, M. Pauline Baker, PHI.
2. "Computer Graphics", Apurva A. Desai, PHI, 2010
3. "Principles of Interactive Computer Graphics", Newmann & Sproull, McGraw Hill.
4. "Computer Graphics Principles & Practice", Foley etc. Addison Wesley.
5. "Procedural Elements of Computer Graphics", Rogers, McGraw Hill.

BCA-303 : Management Information System

External Marks: 80

Internal Marks: 20

Time: 3 hours

Note: Examiner will be required to set NINE questions in all. Question Number 1 is compulsory and will consist of total 8 questions (short-answer type questions) covering the entire syllabus. Examiner will set two questions from each Unit of the syllabus. Student will be required to attempt FIVE questions in all selecting one question from each Unit. All questions will carry equal marks.

UNIT – I

Introduction to system and Basic System Concepts, Types of Systems, The Systems Approach, Information System: Definition & Characteristics, Types of information, Role of Information in Decision-Making, Sub-Systems of an Information system: EDP and MIS management levels, EDP/MIS/DSS.

UNIT –II

An overview of Management Information System: Definition & Characteristics, Components of MIS, Frame Work for Understanding MIS: Information requirements & Levels of Management, Simon's Model of decision-Making, Structured Vs Un-structured decisions, Formal vs. Informal systems.

UNIT – III

Developing Information Systems: Analysis & Design of Information Systems: Implementation & Evaluation, Pitfalls in MIS Development.

UNIT – IV

Functional MIS: A Study of Personnel, Financial and production MIS, Introduction to e-business systems, ecommerce – technologies, applications, Decision support systems – support systems for planning, control and decision-making

SUGGESTED READINGS

1. J. Kanter, "Management/Information Systems", PHI.
2. Gordon B. Davis, M. H. Olson, "Management Information Systems – Conceptual foundations, structure and Development", McGraw Hill.
3. James A. O'Brien, "Management Information Systems", Tata McGraw-Hill.
4. James A. Senn, "Analysis & Design of Information Systems", Second edition, McGraw Hill. 3. Robert G. Murdick & Joel E. Ross & James R. Claggett, "Information Systems for Modern Management". PHI.
5. Lucas, "Analysis, Design & Implementation of Information System", McGraw Hill

BCA-304 : Visual Basic

External Marks: 80

Internal Marks: 20

Time: 3 hours

Note: Examiner will be required to set NINE questions in all. Question Number 1 is compulsory and will consist of total 8 questions (short-answer type questions) covering the entire syllabus. Examiner will set two questions from each Unit of the syllabus. Student will be required to attempt FIVE questions in all selecting one question from each Unit. All questions will carry equal marks.

UNIT – I

Introduction to VB: Visual & non-visual programming, Procedural, Object-oriented and event-driven programming languages, The VB environment: Menu bar, Toolbar, Project explorer, Toolbox, Properties window, Form designer, Form layout, Immediate window. Visual Development and Event Driven programming.

UNIT – II

Basics of Programming: Variables: Declaring variables, Types of variables, Converting variables types, User-defined data types, Forcing variable declaration, Scope & lifetime of variables. Constants: Named & intrinsic. Operators: Arithmetic, Relational & Logical operators. I/O in VB: Various controls for I/O in VB, Message box, Input Box, Print statement.

UNIT – III

Programming with VB: Decisions and conditions: If statement, If-then-else, Select-case. Looping statements: Do-loops, For-next, While-wend, Exit statement. Nested control structures. Arrays: Declaring and using arrays, one-dimensional and multi-dimensional arrays, Static & dynamic arrays, Arrays of array. Collections: Adding, Removing, Counting, Returning items in a collection, Processing a collection.

UNIT – IV

Programming with VB: Procedures: General & event procedures, Subroutines, Functions, Calling procedures, Arguments- passing mechanisms, Optional arguments, Named arguments, Functions returning custom data types, Functions returning arrays. Working with forms: Adding multiple forms in VB, Hiding & showing forms, Load & unload statements, Activate & deactivate events, Form-load event, menu designing in VB Simple programs in VB.

SUGGESTED READINGS

1. Steven Holzner, "Visual Basic 6 Programming: Black Book", Dreamtech Press.
2. Evangelos Petroutsos. "Mastering Visual Baisc 6", BPB Publications.
3. Julia Case Bradley & Anita C. Millspaugh, "Programming in Visual Basic 6.0", Tata McGraw-Hill Edition
4. Michael Halvorson, "Step by Step Microsoft Visual Basic 6.0 Professional", PHI
5. "Visual basic 6 Complete", BPB Publications.
6. Scott Warner, "Teach Yourself Visual basic 6", Tata McGraw-Hill Edition
7. Brian Siler and Jeff Spotts, "Using Visual Basic 6", Special Edition, PHI.

BCA-305 : E-Commerce

External Marks: 80

Internal Marks: 20

Time: 3 hours

Note: Examiner will be required to set NINE questions in all. Question Number 1 is compulsory and will consist of total 8 questions (short answer type questions) covering the entire syllabus. Examiner will set two questions from each Unit of the syllabus. Student will be required to attempt FIVE questions in all selecting one question from each Unit. All questions will carry equal marks.

UNIT – I

Electronic Commerce: Overview of Electronic Commerce, Scope of Electronic Commerce, Traditional Commerce vs. Electronic Commerce, Impact of E-Commerce, Electronic Markets, Internet Commerce, e-commerce in perspective, Application of E Commerce in Direct Marketing and Selling, Obstacles in adopting E-Commerce Applications; Future of E- Commerce.

UNIT-II

Value Chains in electronic Commerce, Supply chain, Porter's value chain Model, Inter Organizational value chains, Strategic Business unit chains, Industry value chains. Security Threats to E-commerce: Security Overview, Computer Security Classification, Copyright and Intellectual Property, security Policy and Integrated Security, Intellectual Property Threats, electronic Commerce Threats, Clients Threats, Communication Channel Threats, server Threats.

UNIT-III

Implementing security for E-Commerce: Protecting E-Commerce Assets, Protecting Intellectual Property, Protecting Client Computers, Protecting E-commerce Channels, Insuring Transaction Integrity, Protecting the Commerce Server. Electronic Payment System: Electronic Cash, Electronic Wallets, Smart Card, Credit and Change Card.

UNIT – IV

Business to Business E-Commerce: Inter-organizational Transitions, Credit Transaction Trade Cycle, a variety of transactions. Electronic Data Interchange (EDI): Introduction to EDI, Benefits of EDI, EDI Technology, EDI standards, EDI Communication, EDI Implementation, EDI agreement, EDI security.

SUGGESTED READINGS

1. R.Kalakota and A.B.Whinston,Readings in Electronic Commerce, Addison Wesley,
2. David Kosiur. Understanding E- Commerce, Microsoft Press, 1997.
3. Soka, From EDI to Electronic Commerce , McGraw Hill, 1995.
4. David whitely, E-commerce Strategy, Technology and application, Tata McGraw Hill.
5. Gary P. Schneider and Jame Perry, Electronic Commerce Thomson Publication.
6. Doing Business on the Internet E-COMMERCE S. Jaiswal;Galgotia Publications.
7. E-Commerce An Indian Perspective; P.T.Joseph; S.J.; PHI.
8. E-Commerce; S.Jaiswal – Glgotia.
9. E-Commerce; Efrain Turbon; Jae Lee; David King; H.Michael Chang.

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BCA-306: Computer Graphics Lab

External Marks: 80

Internal Marks: 20

Time: 2 hours

List of Programs

1. Write a program for 2D line drawing as Raster Graphics Display.
2. Write a program for circle drawing as Raster Graphics Display.
3. Write a program for polygon filling as Raster Graphics Display
4. Write a program for line clipping.
5. Write a program for polygon clipping.
6. Write a program for displaying 3D objects as 2D display using perspective transformation.
7. Write a program for rotation of a 3D object about arbitrary axis.
8. Write a program for Hidden surface removal from a 3D object.

Note: At least 5 to 10 more exercises to be given by the teacher concerned.

BCA-307: Visual Basic Lab

External Marks: 80

Internal Marks: 20

Time: 2 hours

List of Programs

1. Study window's API's. Find out their relationship with MFC classes. Appreciate how they are helpful in finding complexities of window's programming.
2. Get familiar with the essential classes in a typical (document view architecture) VC program and their relationships with each other.
3. Write a program to handle the mouse event right click on client area and display a message box as "Right Button Click".
4. Create a simple model dialog box to read the information about a student i.e. name, roll no. Class using appropriate fields.
5. Write a simple console application to create archive class object from file class that reads and stores a simple structure (record).
6. Create a simple database in MS access and connect it to Visual Basic using ADO or DAO.
7. Write a program that reads a text and changes its font, font size as selected by the user from different fonts contained in a list box.
8. With the help of Visual Basic, created an object of excel application and implement any function of it.
9. Write a simple program that displays an appropriate message when an illegal operation is performed, using error handling technique in VB.
10. Make an active X control of your own using Visual Basic.

You may use : Visual Basic 6.0 NET /

OR

IBM Websphere Studio Application Server

Note: At least 3 to 5 more exercises to be given by the teacher concerned.

BCA-308 : Multimedia Technologies

External Marks: 80

Internal Marks: 20

Time: 3 hours

Note: Examiner will be required to set NINE questions in all. Question Number 1 is compulsory and will consist of total 8 questions (short-answer type questions) covering the entire syllabus. Examiner will set two questions from each Unit of the syllabus. Student will be required to attempt FIVE questions in all selecting one question from each Unit. All questions will carry equal marks.

UNIT – I

Introduction to Multimedia: Components of Multimedia; Hypermedia and Multimedia; Overview of Multimedia Software Tools; Multimedia Hardware and Software; Basic Software Tools; Making Instant Multimedia; Presentation Tools; Multimedia Authoring; Types of Authoring Tools; Card- and Page-Based Authoring Tools; Icon-Based Authoring Tools; Time-Based Authoring Tools; Object-Oriented Authoring Tools; VRML;

UNIT – II

Graphics and Image Data Representation: Graphics/Image Data Types, Popular File Formats; Color Models in Images and Video; Types of Video Signals; Analog and Digital Video: Broadcast Video Standards: NTSC, PAL, SECAM, HDTV; Chroma Subsampling; CCIR Standards for Digital Video;

UNIT – III

Digital Audio: Digitization of Sound; MIDI Versus Digital Audio; Quantization and Transmission of Audio: Coding of Audio; Pulse Code Modulation; Differential Coding of Audio; Lossless Predictive Coding; DPCM; DM; ADPCM;

UNIT – IV

Multimedia Data Compression: Run-Length Coding; Variable-Length Coding; Dictionary-Based Coding; Transform Coding; Image Compression Standards – JPEG standard; Video Compression Techniques: H.261, H.263, MPEG;

SUGGESTED READINGS

1. Ze-Nian Li, Mark S. Drew, "Fundamentals of Multimedia", Pearson Education.
2. Tay Vaughan, "Multimedia Making It Work", Tata McGraw- Hill.
3. Ramesh Bangia, "Multimedia and Web Technology", Firewall Media.
4. John F. Koegel Buford, " Multimedia Systems", Addison Wesley, Pearson Education.
5. Ana Weston Solomon, "Introduction to Multimedia", Tata McGraw-Hill.

BCA-309 : Programming in Java

External Marks: 80

Internal Marks: 20

Time: 3 hours

Note: Examiner will be required to set NINE questions in all. Question Number 1 is compulsory and will consist of total 8 questions (short-answer type questions) covering the entire syllabus. Examiner will set two questions from each Unit of the syllabus. Student will be required to attempt FIVE questions in all selecting one question from each Unit. All questions will carry equal marks.

UNIT-I

Object Oriented Methodology-1: Paradigms of Programming Languages, Evolution of OO Methodology, Basic Concepts of OO Approach, Comparison of Object Oriented and Procedure Oriented Approaches, Benefits of OOPs, Introduction to Common OO Language, Applications of OOPs . Object Oriented Methodology-2: Classes and Objects, Abstraction and Encapsulation, Inheritance, Method Overriding and Polymorphism.

UNIT-II

Java Language Basics: Introduction To Java, Basic Features, Java Virtual Machine Concepts, Primitive Data Type And Variables, Java Operators, Expressions, Statements and Arrays. Object Oriented Concepts: Class and Objects-- Class Fundamentals, Creating objects , Assigning object reference variables; Introducing Methods, Static methods, Constructors , Overloading constructors; This Keyword; Using Objects as Parameters, Argument passing, Returning objects , Method overloading. Garbage Collection, The Finalize ( ) Method. Inheritance and Polymorphism: Inheritance Basics, Access Control, Multilevel Inheritance, Method Overriding, Abstract Classes, Polymorphism, Final Keyword.

UNIT-III

Packages : Defining Package, CLASSPATH, Package naming, Accessibility of Packages , using Package Members. Interfaces: Implementing Interfaces, Interface and Abstract Classes, Extends and Implements together . Exceptions Handling : Exception , Handling of Exception, Using try-catch , Catching Multiple Exceptions , Using finally clause , Types of Exceptions, Throwing Exceptions, Writing Exception Subclasses.

UNIT-IV

Multithreading : Introduction , The Main Thread, Java Thread Model, Thread Priorities, Synchronization in Java, Inter thread Communication. I/O in Java : I/O Basics, Streams and Stream Classes ,The Predefined Streams, Reading from, and Writing to, Console, Reading and Writing Files . The Transient and Volatile Modifiers , Using Instance of Native Methods. Strings and Characters : Fundamentals of Characters and Strings, The String Class , String Operations , Data Conversion using Value Of ( ) Methods , String Buffer Class and Methods

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SUGGESTED READINGS

1. Programming in Java, E Balagurusamy .
2. The Complete Reference JAVA, TMH Publication.
3. Begining JAVA, Ivor Horton, WROX Public.
4. JAVA 2 UNLEASHED, Tech Media Publications.
5. Patrick Naughton and Herbertz Schildt, "Java-2 The Complete Reference", 1999,TMH.

BCA-310: Artificial Intelligence

External Marks: 80
Internal Marks: 20

Time: 3 hours

Note: Examiner will be required to set NINE questions in all. Question Number 1 is compulsory and will consist of total 8 questions (short-answer type questions) covering the entire syllabus. Examiner will set two questions from each Unit of the syllabus. Student will be required to attempt FIVE questions in all selecting one question from each Unit. All questions will carry equal marks.

UNIT – I

Overview of A.I: Introduction to AI, Importance of AI, AI and its related field, AI techniques, Criteria for success. Problems, problem space and search: Defining the problem as a state space search, Production system and its characteristics, Issues in the design of the search problem Heuristic search techniques : Generate and test, hill climbing, best first search technique, problem reduction, constraint satisfaction

UNIT – II

Knowledge Representation: Definition and importance of knowledge, Knowledge representation, Various approaches used in knowledge representation, Issues in knowledge representation. Using Predicate Logic : Representing Simple Facts in logic, Representing instances and is_a relationship, Computable function and predicate.

UNIT – III

Natural language processing : Introduction syntactic processing, Semantic processing, Discourse and pragmatic processing. Learning: Introduction learning, Rote learning, Learning by taking advice, Learning in problem solving, Learning from example-induction, Explanation based learning.

UNIT - IV

Expert System : Introduction, Representing using domain specific knowledge, Expert system shells.

SUGGESTED READINGS

1. David W. Patterson : Principles of Artificial Intelligence and Expert System Development, McGraw Hill Book Company.
2. Elaine Rich, Kevin Knight : Artificial Intelligence, Tata McGraw Hill.
3. D.W. Patterson, "Introduction to AI and Expert Systems", PHI, 1999
4. Nils J Nilsson ."Artificial Intelligence -A new Synthesis" 2nd Edition (2000), Harcourt Asia Ltd.

BCA-311 : Mobile Computing

External Marks: 80

Internal Marks: 20

Time: 3 hours

Note: Examiner will be required to set NINE questions in all. Question Number 1 is compulsory and will consist of total 8 questions (short-answer type questions) covering the entire syllabus. Examiner will set two questions from each Unit of the syllabus. Student will be required to attempt FIVE questions in all selecting one question from each Unit. All questions will carry equal marks.

UNIT-I

Introduction to wireless communications: Applications, Short History of Wireless Communications, Market of Mobile Communications. Elementary Knowledge on Wireless Transmission: Frequency of Radio Transmission, Signals, Antennas, Signal Propagation: Path Loss of Radio Signals, Additional Signal Propagation Effects, Multipath Propagation, Multiplexing: Space Division Multiplexing, Frequency Division Multiplexing, Time Division Multiplexing, Code Division Multiplexing, Modulation: Amplitude Shift Keying, Frequency Shift Keying, Phase Shift Keying. Advanced Frequency Shift Keying, Advanced Phase Shift Keying, Multicarrier Modulation. Spread Spectrum: Direct Sequence Spread Spectrum, Frequency Hopping Spread Spectrum, Cellular Systems.

UNIT–II

Elementary Knowledge on Medium Access Control: Motivation for a specialized MAC, Hidden and exposed terminals, Near and far terminals, Introduction to SDMA, FDMA, TDMA: Fixed TDM, Classical Aloha, Slotted Aloha, Carrier sense multiple access, Demand assigned multiple access, PRMA packet reservation multiple access, Reservation TDMA, Multiple access with collision avoidance, Polling, Inhibit sense multiple access, CDMA, Spread Aloha multiple access, Mobile communications, Comparison of S/T/F/CDMA. Elementary Knowledge on Telecommunications Systems: GSM: Mobile services, System architecture, Radio interface, Protocols, Localization and calling, Handover, Security, New data services, DECT: System architecture, Protocol architectureElementary Knowledge on Satellite systems: History, Applications, Basics: GEO, LEO, MEO, Routing, Localization, Handover

UNIT–III

Mobile Internet: Introducing the Mobile Internet, Services for the mobile Internet, Business opportunities, Implementing WAP Services: WML: WML Variables and Contexts: Variable Substitution, Setting Variables, Browser Contexts, WML Tasks and Events, WML User Interaction: Problems with Web Interaction, Interaction in WAP, Elements: <input> , <select> ,<option> , <optgroup> , <do> , <anchor> , <a> , The tabindex Attribute, WML Timers, WML Decks, Templates and Cards: Elements: <wml>, <head>, <access>, <meta> , <card> , <template>, WML Text and Text Formatting, Elements <p>, <br>, Character Formatting, Tables, WML Images: <img> Element, The WBMP Image Format.

UNIT–IV

WAP: the Mobile Internet Standard, Making the Internet Mobile: Challenges and Pitfalls, Overview of the Wireless Application Protocol Implementing WAP Services: WML Script: Datatypes, Variables, and Conversions, Operators and Expressions: Operand Conversions, Assignment Operators. Arithmetic Operators, Bitwise Operators, Shift Operators, Logical Operators, Increment and Decrement Operators, Comparison Operators, Type Operators, The Conditional Operator, The Comma Operator,- Precedence and Associativity, WMLScript Statements: Expressions as Statements, Blocks of Statements, Conditions, Loops, Returning from a Function, Other Statements. WMLScript Functions: Function Declarations, Function Calls, Calls to Other Script Units, Calling WMLScript from WML, Standard Libraries, WMLScript Pragmas: The access Pragma. The meta Pragma, Elementry Knowledge on Libraries: Lang , Float , String ,URL , WMLBrowser , Dialogs

SUGGESTED READINGS

1. Jochen Schiller, "Mobile Communications", PHI/Pearson Education, Second Edition, 2003.
2. Sandeep Singhal, "The Wireless Application Protocol, Writing Applications for Mobile Internet", Pearson Education, 2000
3. Learning WML, and WMLScript, Programming the Wireless Web, Martin Frost, Publisher: O'Reilly
4. William Stallings, "Wireless Communications and Networks", PHI/Pearson Education, 2002
5. Theodore Rappaport, "Wireless Communication Principles and Practice", 2nd Ed, Pearson Education, 2002
6. C. Y. Lee, William, "Mobile Cellular Telecommunications", 2nd Ed, McGraw Hill. 2001

BCA-314: Multimedia Lab

External Marks: 80

Internal Marks: 20

Time: [illegible] Hours

At least ten experiments are to be performed that are set by the concerned teacher as per the scope of the syllabus.

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ANNEXURE- 8

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DEPARTMENT OF COMMERCE

Bhagat Phool Singh Mahila Vishwavidyalaya Khanpur Kalan
(Sonepat) Haryana-131305

Ref. No. BPSMV/DoC/18/3714
Date: 30/01/18

To

Supdt. –Incharge
Academic Branch
BPSMV Khanpur Kalan, Sonepat

Acad-46
30/1/18

Subject: Information regarding supply of Syllabus of B.Com. Course.

Madam,

With reference to your office letter No. BPSMV/Acad/18/397 dated 17-01-2018 on the subject cited above. In this regard, the required information is attached with this letter from the Department of Commerce. This is for your kind information and further necessary action please.

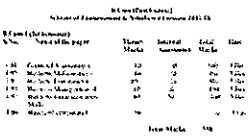
Incharge
Deptt. of Commerce
Bhagat Phool Singh Mahila Vishwavidyalaya
Khanpur Kalan (Sonepat)

syllabus of B.com pass course

Seema Malik
to Bhavna, me

Dear all
Please find enclosed the syllabus of B.com pass course. Mr. Rajat is requested to have
Regards

Dr. Seema Malik
Assistant Professor
Department of Commerce,
Bhagat Phool Singh Mahila Vishwavidyalaya
Khanpur Kalan, Sonipat, Haryana.



bcom (pass) 2017.

Office Assistant
30/1/18

B.Com (Pass Course)

Scheme of Examinations & Syllabi w.e.f session 2017-18

B.Com-I (Ist Semester)

S.No.	Name of the paper	Theory Marks	Internal Assessment	Total Marks	Time
1.01	Financial Accounting-I	80	20	100	3 Hrs.
1.02	Business Mathematics-I	80	20	100	3 Hrs.
1.03	Business Economics-I	80	20	100	3 Hrs.
1.04	Business Management –I	80	20	100	3 Hrs.
1.05	Business Communication Skills	80	20	100	3 Hrs
1.06	Basics of computers-I	50	--	50	3 Hrs
			Total Marks	550	

B.Com-I (IInd Semester)

S.No.	Name of the paper	Theory Marks	Internal Assessment	Total Marks	Time
2.01	Financial Accounting -II	80	20	100	3 Hrs.
2.02.	Business Mathematics-II	80	20	100	3 Hrs.
2.03.	Business Economics-II	80	20	100	3 Hrs..
2.04	Business Management –II	80	20	100	3 Hrs.
2.05	Business Environment	80	20	100	3 Hrs.
2.06	Basics of computers-II Theory	50	--	50	3 Hrs.
	Practical (Covering the Syllabi of Ist & IInd Semesters)	100	--	100	
			Total	650	

Environmental Studies (Qualifying Paper)

Total marks of 1st and 2nd semester = 550 + 650 =1200

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Khanpur Kalan (Sonipat)

B.Com-II (Pass Course)

Scheme of Examinations & Syllabi w.e.f session 2017-18

B.Com-II -IIIrd Semester

Paper No.	Nomenclature of the Paper	Theory Marks	Internal Assessment	Total Marks	Time
3.01.	Corporate Accounting-I	80	20	100	3 Hrs.
3.02	Business Statistics-I	80	20	100	3 Hrs.
3.03	Business Regulatory Framework-I	80	20	100	3 Hrs.
3.04	Corporate Law-I	80	20	100	3 Hrs.
3.05	Macro Economics	80	20	100	3 Hrs.
3.06	Optional (Any one from the followings)	80	20	100	3 Hrs.
	i. Fundamental of Insurance ii. Human Resource Management iii. Production Management iv. Computer: Application of Information Technology and Business -I				
			Total Marks	600	

B.Com-II (IVth Semester)

Paper No.	Nomenclature of the Paper	Theory Marks	Internal Assessment	Total Marks	Time
4.01	Corporate Accounting-II	80	20	100	3 Hrs.
4.02	Business Statistics-II	80	20	100	3 Hrs.
4.03	Business Regulatory Framework-II	80	20	100	3 Hrs.
4.04	Corporate Law-II	80	20	100	3 Hrs.
4.05	Marketing Management	80	20	100	3 Hrs.
4.06.	Optional:(Any one from the followings)	80	20	100	3 Hrs.
	i. Business Ethics ii. Banking and Banking Law iii. Basics of Retailing iv. Computer: Application of Information Technology and Business -II				
			Total Marks	600	

Total Marks of 3rd and 4th semester 600 + 600 = 1200

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Khanpur Kalan (Sonipat)

B.Com-III (Pass Course)

Scheme of Examinations & Syllabi w.e.f session 2017-18

B.Com-III -Vth Semester

Paper No.	Nomenclature of the Paper	Theory Marks	Internal Assessment	Total Marks	Time
5.01.	Taxation Law-I	80	20	100	3 Hrs.
5.02.	Cost Accounting -I	80	20	100	3 Hrs.
5.03.	Accounting for Management	80	20	100	3 Hrs.
5.04	Financial Market Operations	80	20	100	3 Hrs.
5.05	Entrepreneurship and Small Scale Business 80	80	20	100	3 Hrs.
5.06	**Optional (Any one out of followings)**	80	20	100	3 Hrs.
	i. Secretarial Practices ii. Statistical Analysis with MS Excel 50 Marks for Theory (3 Hrs) + 50 Marks for Practical iii. Investment Management iv. Computer: Essentials of E-Commerce-I v. International Business Environment				
			Total Marks	**600**	

B.Com-III –VIth Semester

Paper No.	Nomenclature of the Paper	Theory Marks	Internal Assessment	Total Marks	Time
6.01.	Taxation Law-II	80	20	100	3 Hrs.
6.02.	Cost Accounting -II	80	20	100	3 Hrs.
6.03	Financial Management	80	20	100	3 Hrs.
6.04	Auditing	80	20	100	3 Hrs.
6.05	Indirect Taxes	80	20	100	3Hrs.
6.06.	Optional (any one out of the followings)	80	20	100	3 hrs
	i. International Trade ii. International Marketing iii. Fundamentals of Operations Research iv. Computer: Essentials of E-Commerce-II v. Tax Planning and Management				
			Total Marks	**600**	

Total Marks of 5th and 6th semester 600 + 600 = 1200

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B.Com I First Semester w.e.f session 2017-18

Financial Accounting –I

1.01

Internal Assesment-20 Marks

Time: 3Hrs. **Theory Paper Max Marks-80**

Note: The Examiner shall set nine questions in all covering the whole syllabus. Question No.1 will be compulsory covering all the units and shall carry 8 small questions of 2 marks each. The rest of the eight questions will be set from all the four units. The examiner will set two questions from each unit out of which the candidate shall attempt four questions selecting one question from each unit. All the questions shall carry 16 marks each.

Important: *The Examiner will set at least THREE numerical and THREE theoretical questions in the question paper. .*

Unit-I

Introduction: meaning, objectives, process, limitations and basic terms of Accounting; Generally accepted Accounting Principles; Journalizing, Posting and Preparation of trial balance.

Unit-II

Capital and revenue items; Reserves and Provisions; Depreciation: Meaning, causes, accounting procedure, methods of computing depreciation – straight line method and diminishing balance method, change of method.

Unit-III

Final Accounts with adjustments; Rectification of errors

Unit-IV

Accounting for non-profit organizations; Consignment accounts.

Suggested Readings:

1.Gupta R.L. and Radha Swami M., Financial Accounting, Sultan Chand and Sons., New Delhi.
2.Monga J.R., Ahuja Girish and Sehgal Ashok: Financial Accounting, Mayur Paper Back, Noida.
3.Shukla M.C., Grewal T.S. and Gupta S.C.: Advanced Accounts, S. Chand and Company, New Delhi. 4. Goel, D.K., Financial Accounting, Arya Publications, New Delhi

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B.Com I First Semester w.e.f session 2017-18
Business Mathematics-I
1.02

Internal Assesment-20 Marks

Time: 3Hrs. Theory Paper Max Marks-80

Note:- The Examiner shall set nine questions in all covering the whole syllabus. Question No.1 will be compulsory covering all the units and shall carry 8 small questions of 2 marks each. The rest of the eight questions will be set from all the four units. The examiner will set two questions from each unit out of which the candidate shall attempt four questions selecting one question from each unit. All the questions shall carry 16 marks each.

Important: *The Examiner will set at least THREE numerical and THREE theoretical questions in the question paper. .*

Unit-I

Indices and Logarithms; Theory of Sets: Meaning, elements, types, presentation and equality of Sets, Union, Intersection, Complement and Difference of Sets, Venn Diagram, Cartesian Product of two Sets, Applications of Set Theory.

Unit-II

Elementary idea of Permutations and Combinations.

Unit-III

Sequence and Series, A.P, G.P.

Unit-IV

Data interpretation- Introduction, approaches to data interpretation, tabulation, Bar graphs, Pie charts, Line graphs, Mix graphs

Suggested Readings:

Allen B.G.D: Basic Mathematics; Mcmillan, New Delhi.
Volra. N. D. Quantitative Techniques in Management, Tata McGraw Hill, New Delhi. Kapoor V.K. Business Mathematics: Sultan chand and sons, Delhi.

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Khanpur Kalan (Sonipat)

B.Com I First Semester w.e.f session 2017-18
Business Economics-I
1.03

Internal Assesment-20 Marks
Time: 3Hrs. Theory Paper Max Marks-80

Note:- The Examiner shall set nine questions in all covering the whole syllabus. Question No.1 will be compulsory covering all the units and shall carry 8 small questions of 2 marks each. The rest of the eight questions will be set from all the four units. The examiner will set two questions from each unit out of which the candidate shall attempt four questions selecting one question from each unit. All the questions shall carry 16 marks each.

Unit-I

Introduction: Basic problem of an economy: working of price mechanism, concept of Elasticity of demand; measurement, **importance, determinants of elasticity of demand,** Average revenue; marginal revenue and elasticity of demand and **elasticity of supply**

Unit-II

Production Function: Law of variable proportions; Isoquants; Economic regions and optimum factor combination; expansion path; returns to scale; Internal and external economies and diseconomies; Ridge lines; Theory of costs: concepts of cost; Short run and Long run cost curves- Traditional and Modern approaches.

Unit- III

Theory of consumer behaviour, utility and indifference curve analysis

Unit-IV

Market, classification and structure.

Suggested Readings:

1. Dr. Raj Kumar, Prof. Kuldeep Gupta, Business Economics, UDH Publishing and Distributors P(Ltd.), New Delhi.
2. R.K Lekhi, Business Economics, Kalyani Publishers.
3. V.G.Mankar, Business Economics, Himalaya Publishing House.
4.H.L.Ahuja, Business Economics, S. Chand and Company Ltd.

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B.Com I First Semester w.e.f session 2017-18
Business Management-I
1.04

Internal Assesment-20

Marks Time: 3Hrs Theory Paper Max Marks-80

Note:- The Examiner shall set nine questions in all covering the whole syllabus. Question No.1 will be compulsory covering all the units and shall carry 8 small questions of 2 marks each. The rest of the eight questions will be set from all the four units. The examiner will set two questions from each unit out of which the candidate shall attempt four questions selecting one question from each unit. All the questions shall carry 16 marks each.

Unit-I

Business: concept, nature and spectrum of business activities, business system, business objectives.

Unit-II

Management: Introduction, concept, nature, process and significance; Development of Management Thought; Classical and Neo-Classical systems, Contingency approaches.

Unit-III

Planning: concept, types and process, Decision Making: concept and process, Management by Objectives, Corporate Planning and Strategic Formulation.

Unit-IV

Organizing: concept, nature, process and significance; Authority and Responsibility relationship; Centralization and Decentralization; Departmentation; Firms of Organizing structure.

Suggested Readings:

1. *Druker. Peter F. Management Challenges for the 21st century; Butter worth Heinemann Oxford.*
2. *Weihrich and Koontz, O. Donnel: Essential of Management Tata Mc Graw Hill, New-Delhi.*
3. *Parsad L. M., Principles and Practice of Management.: Sultan Chand and Sons.*

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B.Com I First Semester w.e.f session 2017-18
Business Communication Skills
1.05

Internal Assesment-20

Marks Time: 3Hrs Theory Paper Max Marks-80

Note:- The Examiner shall set nine questions in all covering the whole syllabus. Question No.1 will be compulsory covering all the units and shall carry 8 small questions of 2 marks each. The rest of the eight questions will be set from all the four units. The examiner will set two questions from each unit out of which the candidate shall attempt four questions selecting one question from each unit. All the questions shall carry 16 marks each.

Unit-I

Introduction: Basics of communication, Seven C's of effective communication, barriers to communication, ethical context of communication.

Unit-II

Business Communication at workplace: Letter writing- component, layout and process, E-mail communication, bad news messages, persuasive written communication, memos, notice, agenda and minutes of meeting.

Unit-III

Report Writing: Types of business reports, structure of reports, short reports, long reports, abstracts and summaries, proposals.

Unit-IV

Communication Skills: Reading skills, listening skills, note making, persuasive speaking. Body language, Gestures.

Suggested Readings:

1.Murphy, Herta A., Herbert W. Hildebrandj and Jane P. Thomas, Effective Business Communication, Tata McGraw Hill, New Delhi.
2. Konera Arun, Professional Communication, Tata McGraw Hill, New Delhi.
3. McGrath, E. H., Basic Managerial Skills for All,PHI, New Delhi.
4. Meenakshi Raman and Parkash Singh, Business Communication, Oxford University Press, New Delhi.

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B.Com I First Semester w.e.f session 2017-18
Basics of Computer-I
1.06

Time : 3 Hrs **Theory Paper Max Marks-50 Marks**

Note:- The Examiner shall set nine questions in all covering the whole syllabus. Question No.1 will be compulsory covering all the units and shall carry 5 small questions of two marks each. The rest of the eight questions will be set from all the four units. The examiner will set two questions from each unit out of which the candidate shall attempt four questions selecting one question from each unit. All the questions shall carry 10 marks each.

Unit-1

Introduction to Computers: Definition of Computer; Components of Computer; Characteristics of Computers; History evolution of Computers; Generation of computers; Classification of Computers- According to Purpose, According to Technology , According to Size and Storage Capacity : Human being VS Computer; Difference between-Computer and Calculator.

Unit-2

Input Devices: Mouse, Keyboard, Light pen, Track Ball, Joystick, MICR, Optical Mark reader and Optical Character Reader Scanners, Voice system, Web Camera.

Output Devices: Hard Copy Output Devices; Line Printers, Character Printers, Chain Printers, Dot-matrix Printers, Daisy Wheel Printer, Laser Printers, Ink Jet Printers; Plotters, Soft Copy device –Monitor, Sound Cards and speakers.

Unit-3

Memory and Mass Storage Devices: Characteristics of Memory Systems; Memory Hierarchy; Types of Primary Memory; RAM and ROM; Secondary and Back-up; Magnetic Disks, Characteristics and classification of Magnetic Disks; Optical Disks; Magnetic Taps.

Unit-4

MS- Word: Fundamentals of MS-Word, Features of MS-Word, Menus, Formatting and Standard Toolbars, Ruler, Scroll Bar, Creating, Editing, Saving, export and import files, inserting and copying the files, Working with frames, Paragraph formatting, Columns, Pictures, Tables, Macros and Mail Merge.

Practical (Examination will be held in 2nd semester)

MS-Word: Practical knowledge of MS-Word package.

Suggested Readings:

1. *Introduction of Information System ALEXISLEON,*
2. *Computer Fundamentals-Nasib Singh Gill.*

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B.Com I Second Semester w.e.f session 2017-18

Financial Accounting-II

2.01

Internal Assesment-20 Marks

Time: 3Hrs. **Theory Paper Max Marks-80 Marks**

Note:- The Examiner shall set nine questions in all covering the whole syllabus. Question No.1 will be compulsory covering all the units and shall carry 8 small questions of 2 marks each. The rest of the eight questions will be set from all the four units. The examiner will set two questions from each unit out of which the candidate shall attempt four questions selecting one question from each unit. All the questions shall carry 16 marks each.

Important: *The Examiner will set at least THREE numerical and THREE theoretical questions in the question paper. .*

Unit-I

Hire Purchase System and Installment Payment Systems.

Unit-II

Branch Accounts (including foreign branch) and Departmental Accounts.

Unit-III

Amalgamation and sale of partnership firms, Dissolution of Partnership Firm- Insolvency of Partners (including Garner v/s Murrey Rule), Gradual Realisation and Piecemeal Distribution.

Unit-IV

Joint-Venture Account; Royalty Account.

Suggested Readings:

1.Gupta R.L. and Radha Swami M., Financial Accounting, Sultan Chand and Sons., New Delhi.
2.Monga J.R., Ahuja Girish and Sehgal Ashok: Financial Accounting, Mayur Paper Back, Noida.
3.Shukla M.C., Grewal T.S. and Gupta S.C.; Advanced Accounts, S. Chand and Company, New Delhi.
4. Goel, D.K., Financial Accounting, Arya Publications, New Delhi

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B.Com-I Second Semester w.e.f session 2017-18
Business Mathematics-II
2.02

Internal Assesment-20 Marks

Time: 3Hrs. Theory Paper Max Marks-80

Note:- The Examiner shall set nine questions in all covering the whole syllabus. Question No.1 will be compulsory covering all the units and shall carry 8 small questions of 2 marks each. The rest of the eight questions will be set from all the four units. The examiner will set two questions from each unit out of which the candidate shall attempt four questions selecting one question from each unit. All the questions shall carry 16 marks each.

Important: The Examiner will set at least THREE numerical and theoritical questions in the question paper.

Unit-I

Matrices and Determinants: Definition of a Matrix ; Types of Matrices, Algebra of Matrices; Calculation of values of Determinants up to third order; adjoint of a Matrix, elementary row and column operations; Finding inverse matrix through adjoint and elementary row or column operations; Solution of a system of Linear equations having unique Solution and involving not more than three variables

Unit-II

Differentiation (only algebraic problem) ; Application of differentiation

Unit-III

Compound Interest and Annuities: Certain different types of interest rate; Concept of present value and amount of a sum; Types of annuities; Present value and amount of an annuity, including the case of continuous compounding

Unit-IV

Ratio, Proportion and Percentage; Profit and Loss

Suggested Readings:

1. *Allen B.G.D: Basic Mathematics; Mcmillan, New Delhi.*
2. *Vohra. N. D. Quantitative Techniques in Management, Tata McGraw Hill, New Delhi.*
3. *Kapoor V.K. Business Mathematics: Sultan chand and sons, Delhi.*

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B.Com I Second Semester w.e.f session 2017-18

Business Economics-II

2.03

Internal Assesment-20 Marks

Time: 3Hrs. **Theory Paper Max Marks-80 Marks**

Note:- The Examiner shall set nine questions in all covering the whole syllabus. Question No.1 will be compulsory covering all the units and shall carry 8 small questions of 2 marks each. The rest of the eight questions will be set from all the four units. The examiner will set two questions from each unit out of which the candidate shall attempt four questions selecting one question from each unit. All the questions shall carry 16 marks each.

Unit-I

Perfect Competition: Profit Maximization and equilibrium of firm and industry; Short run and Long run Supply Curves; Price and output determination, Practical Applications. **Monopoly**: Determination of price under Monopoly; Equilibrium of a firm; comparison between Monopoly and Perfect Competition; Price Discrimination; Multi-Plant Monopoly, Practical Applications.

Unit-II

Monopolistic Competition: Meaning and Characteristics; price and output determination under monopolistic Competition; Product differentiation; Selling cost; comparison with Perfect Competition; Excess capacity under Monopolistic Competition, **Oligopoly : features, price rigidity model, duopoly model, price leadership.**

Unit-III

Marginal Productivity Theory and demand for factors; nature of supply of factor inputs, Determination of wage rates under perfect competition and monopoly. Exploitation of labour; Rent- Concept, Recardian concept and Modern Theories of rent; Quasi Rent.

Unit-IV

Interest- concept and Theories of interest; Profit- nature, concept and theories of profit, **break-even point analysis.**

Suggested Readings:

1. Dr. Raj Kumar, Prof. Kuldeep Gupta, Business Economics, UDH publishing and distributors p (Ltd.), New Delhi.
2. R.K Lekhi, Business Economics, Kalyani Publishers.
3. V.G.Mankar, Business Economics, Himalaya Publishing House.
4. H.L.Ahuja, Business Economics, S. Chand and Company Ltd.

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B.Com I Second Semester w.e.f session 2017-18

Business Management-II

2.04

Internal Assesment-20 Marks

Time: 3Hrs. Theory Paper Max Marks-80-Marks

Note:- The Examiner shall set nine questions in all covering the whole syllabus. Question No.1 will be compulsory covering all the units and shall carry 8 small questions of 2 marks each. The rest of the eight questions will be set from all the four units. The examiner will set two questions from each unit out of which the candidate shall attempt four questions selecting one question from each unit. All the questions shall carry 16 marks each.

Unit-I

Staffing: concept, nature and scope, Matching job and people; Recruitment; Selection and Training of employees.

Unit-II

Motivation and Leadership: Motivation-concept, Theories-Maslow, Herzberg, Megregor and Quchi; Financial and Non-Financial Incentives.
Leadership: concept and Leadership styles, Leadership Theories.

Unit-III

Communication and Control: Communication Concept, Nature, Types and Process, Barriers and Remedies.

Control: Concept, Process and Techniques. Effective Control System.

Unit-IV

Management of Change: Concept, Nature and Process of Planned Change: Resistance to Change; Emerging Horizons of management in a changing environment.

Suggested Readings:

1. *Druker. Peter F. Management challenges for the 21st century; Butter worth Heinemann Oxford.*
2. *Weihrich and Koontz, O. Donnel: Essential of Management. Tata McGraw Hill, New Delhi.*
3. *Parsad L. M., Principles and Practice of Management.: Sultan Chand and Sons.*

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Business Environment

2.05

Internal Assesment-20 Marks

Time: 3Hrs. Theory Paper Max Marks-80 Marks

Note:- The Examiner shall set nine questions in all covering the whole syllabus. Question No.1 will be compulsory covering all the units and shall carry 8 small questions of 2 marks each. The rest of the eight questions will be set from all the four units. The examiner will set two questions from each unit out of which the candidate shall attempt four questions selecting one question from each unit. All the questions shall carry 16 marks each.

Unit-I

Business Environment: concept; components and importance; SWOT Analysis.

Unit-II

Economic Trends (overview): income; savings and investment; industry; Trade and balance of payments.

Unit-III

Problems of Growth: Unemployment, regional imbalances, inflation, parallel economy and industrial sickness.

Unit-IV

Role of Govt. in Indian Economy: Monetary and Fiscal Policy; Industrial Policy; Privatization.

Suggested Readings:

1. Agarwal A.N., Indian Economy, Vikas Publishing House, New Delhi.

1. *Mirsra and Puri; Indian Economy; Himalaya Publishing House, New Delhi.*
2. *Hedge Lanl, Environmental Economics; McMillan Hampshire.*

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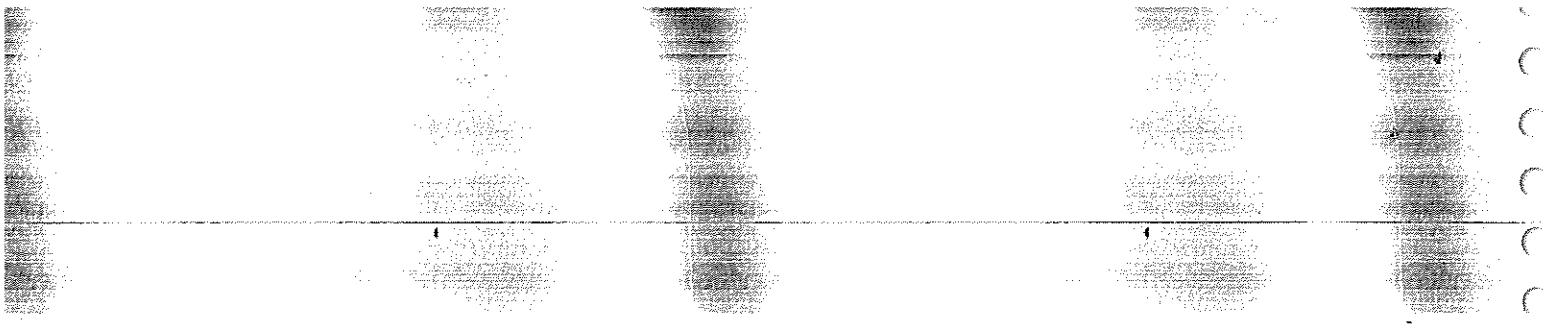

B.Com I Second Semesterw.e.f session 2017-18
Basics of Computer-II
2.06

Time: 3Hrs.

Theory Paper Max Marks-50 Marks
Practical Paper Max Marks-100 Marks

Note:- The Examiner shall set nine questions in all covering the whole syllabus. Question No.1 will be compulsory covering all the units and shall carry 5 small questions of two marks each. The rest of the eight questions will be set from all the four units. The examiner will set two questions from each unit out of which the candidate shall attempt four questions selecting one question from each unit. All the questions shall carry 10 marks each.

Unit-1

Fundamental of computers: Model of a digital computer; Functioning of a digital computer; Types of a digital computer; Advantages of computers. Difference between digital computer and analog computer, Applications of computers: Computers in Commerce, Marketing, Education and Management.

Unit-2

Software concepts: Types of Software and their role, Different System Software types- Operating systems, Translators, System Utilities; Concept of Application Packages; Types of an Operating system- Multi-user O.S., Multi-tasking O.S., Multi-Processing O.S; Time – sharing O.S., Multi-Programming O.S.Operating System as a resource Manager, concept of GUI and CUI.

Unit-3

Introduction to Windows: Components of a Application Window; Types of Windows, Windows as an Operating System, Windows explorer, Using Paintbrush, Control Panel, Installing a printer. User interfaces- CUI and GUI; Concept of a Desktop and Taskbar, My Computer, Recycle Bin, My Documents and Internet Explorer icons.

Unit-4

MS-Excel: Applications of a Spreadsheet; Advantages of an Spreadsheet; Features of Excel; Rows, Columns, Cell, Menus, Creating worksheet, Formatting, Printing, establishing worksheet links, Table creating and printing graphs, Macros, Using Built-in-functions.

Practical Examination will be held on the syllabi of 1st and 2nd Semesters taken together.

Suggested Readings:

1. *Introduction of Information System ALEXISLEON*
2. *Introduction to essential tools. Sushila Madan*

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B.Com-II (Pass Course)

Scheme of Examinations & Syllabi w.e.f. session 2017-18

B.Com-II -IIIrd Semester

Paper No.	Nomenclature of the Paper	Theory Marks	Int. Ass.	Total Marks	Time
3.01.	Corporate Accounting-I	80	20	100	3 Hrs.
3.02	Business Statistics-I	80	20	100	3 Hrs.
3.03	Business Regulatory Framework-I	80	20	100	3 Hrs.
3.04	Corporate Law-I	80	20	100	3 Hrs.
3.05	Macro Economics	80	20	100	3 Hrs.
3.06	Optional (Any one from the followings)	80	20	100	3 Hrs.

i. Fundamental of Insurance
ii. Human Resource Management
iii. Production Management
iv. Computer: Application of Information Technology in Business -I

Total 600

B.Com-II –IVth Semester

Paper No.	Nomenclature of the Paper	Theory Marks	Int. Ass.	Total Marks	Time
4.01	Corporate Accounting-II	80	20	100	3 Hrs.
4.02	Business Statistics-II	80	20	100	3 Hrs.
4.03	Business Regulatory Framework-II	80	20	100	3 Hrs.
4.04	Corporate Law-II	80	20	100	3 Hrs.
4.05	Marketing Management	80	20	100	3 Hrs.
4.06.	Optional:(Any one from the followings)	80	20	100	3 Hrs.

i. Business Ethics
ii. Banking and Banking Law
iii. Basics of Retailing
iv. Computer: Application of Information Technology and Business -II

Total 600

Total Marks of 3rd and 4th semester 600 + 600 = 1200

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B.Com II -IIIrd Semester w.e.f. session 2017-18
Paper: Corporate Accounting-I
Code: 3.01

Time: 3 Hours

Theory Marks: 80
Internal Marks: 20

Note: - The Examiner shall set nine questions in all covering the whole syllabus. Question No.1 will be compulsory covering all the units and shall carry 8 small questions of 2 marks each. The rest of the eight questions will be set from all the four units. The examiner will set two questions from each unit out of which the candidate shall attempt four questions selecting one question from each unit. All the questions shall carry 16 marks each.

Important: The Examiner will set at least THREE numerical and THREE theoretical questions in the question paper.

Unit- I

Share Capital: Meaning, types, Accounting Treatment of issue, forfeiture and reissue of Share; Buy-back of equity shares & Sweat shares; Redemption of preference share; Issue of Bonus Share.

Unit- II

Debenture: Meaning, Types. Issue and Redemption of Debentures.

Unit-III

Valuation of Goodwill: Meaning, objectives, determinates and main methods.
Valuation of Shares: Meaning, objectives, determinates and main methods.

Unit- IV

Profit or loss before and after incorporation.
Final accounts of companies.

Suggested Readings:

1. *Shukla M.C, Grewal T.S and Gupta S.C. Advance Accounts: S.Chand & comp., New Delhi.*
2. *Gupta R.L & Radha Swami M. Company Account: Sultan Chand, New Delhi.*
3. *Monga J.R ,.Ahuja Girish and sehgal Ashok Financial Accounting: Mayur paper backs, Noida*
4. *Goel, D.K., Corporate Accounting. Arya Publications, New Delhi*

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B.Com II - IIIrd Semester w.e.f. session 2017-18

Paper: Business Statistics- I

Code 3.02

Time: 3 Hours **Max Marks: 80**

Internal Marks: 20

Note: - The Examiner shall set nine questions in all covering the whole syllabus. Question No.1 will be compulsory covering all the units and shall carry 8 small questions of 2 marks each. The rest of the eight questions will be set from all the four units. The examiner will set two questions from each unit out of which the candidate shall attempt four questions selecting one question from each unit. All the questions shall carry 16 marks each.

Important: The Examiner will set at least THREE numerical and THREE theoretical questions in the question paper.

Unit- I

Introduction of Statistics: Origin, Development, Definition, Scope, Uses and Limitations. Statistical Data: Types of Measurement scales- normal, Ordinal, Interval and Ratio level measurement; Collection, Classification and Tabulation of Primary and Secondary data.

Presentation of data: Diagrammatic and Graphical presentation of Data-Bar, Squares, rectangular and Circular diagrams; Histogram, frequency polygon, Ogives, Stem and Leaf displays box plots.

Unit- II

Central Tendency and Partition values: Concept and Measures of Central tendency, Quartiles, Deciles, Percentiles.

Dispersion: Concept and Its absolute as well as relative measures.

Unit- III

Moments, Skewness and Kurtosis: Moments about any point and about mean and the relationship between them.

Sheppard's Corrections for Moments. Concept of symmetrical distribution and skewness, measures and Co- efficient of skewness, Concept of Kurtosis and its measures.

Unit- IV

Analysis of Bivariate data:

Correlation-concept, scatter diagram, Karl Pearson's co-efficient of Correlation and its properties Spearman's rank Correlation, Concurrent deviation method

Regression: Meaning and Definition, Difference between Correlation and Regression, Principle of least squares and fitting of a line of best fit to the given data, Regression lines, Properties of regression Co-efficient and Regression lines, standard error of estimate, Co-efficient of determination.

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Suggested Readings:

1. *Dr.S.P.Gupta, Statistical methods, S.Chand & Co., New Delhi.*
2. *D.N.Elhance, Veena Elhance, B.M.Aggarwal, Fundamentals of Statistics, Kitab Mahal*
3. *N.P.Aggarwal, Quantitative Techniques, Ramesh Book Depot., Jaipur.*
4. *R.P.Hooda, Statistics for Business and Economics, Mcmillan India Ltd., New Delhi.*

B.Com II - IIIrd Semester w.e.f. session 2017-18

Paper: Business Regulatory Framework- I

Code: 3.03

Time: 3 Hours

Max Marks: 80
Internal Marks: 20

Note: - The Examiner shall set nine questions in all covering the whole syllabus. Question No.1 will be compulsory covering all the units and shall carry 8 small questions of 2 marks each. The rest of the eight questions will be set from all the four units. The examiner will set two questions from each unit out of which the candidate shall attempt four questions selecting one question from each unit. All the questions shall carry 16 marks each.

Unit- I

Indian Contract Act: - Valid contract and its elements; Void and void able agreements; Void and illegal agreements; Offer and acceptance; Contractual capacity of parties; Free consent of parties; Lawful consideration and object; Agreements expressly declared as void.

Unit- II

Contingent Contracts: - Quasi contracts; Discharge of contracts: - methods of discharge of contracts; Consequences of Breach of contracts.

Contract of Indemnity and guarantee: - Elements of contract of Indemnity; Rights of Indemnity Holder and indemnifier Guarantee: - features of contract of guarantee; Rights and Liabilities of surely; Discharge of surety; Difference between contract of indemnity and Guarantee.

Unit- III

Contract of Bailment and Pledge: - Meaning; types of bailment, Termination of bailment, Duties and rights of bailor and bailee. Essentials of pledge, who nay pledge, Rights and Duties of Pawnor and Pawnee.

Unit- IV

Consumer protection Act 1986: - Salient features of consumer Protection Act; Rights of consumers; consumer Protection councils; consumer disputes redressal machinery.

Suggested Readings:

1. *M.C.Kuchhal, Business Laws, Sultan Chand & Co., New Delhi.*
2. *N.D.Kapoor, Merchantile Law. Sultan Chand & Co., New Delhi.*
3. *Texman*
4. *Resai T.R. Partnership Act, S.C.Sarkar and Sons, kolkata.*

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B.Com II - IIIrd Semester w.e.f. session 2017-18

Paper: Corporate Law- I

Code: 3.04

Time: 3 Hours

Max Marks: 80
Internal Marks: 20

Note: - The Examiner shall set nine questions in all covering the whole syllabus. Question No.1 will be compulsory covering all the units and shall carry 8 small questions of 2 marks each. The rest of the eight questions will be set from all the four units. The examiner will set two questions from each unit out of which the candidate shall attempt four questions selecting one question from each unit. All the questions shall carry 16 marks each.

Unit- I

Company- Meaning and Characteristics; Features of company; Types of companies, advantages and disadvantages of incorporation; Lifting of corporate veil;

Unit- II

Formation of Company: - Promotion of company; Functions of promoter; importance of promoter; Promoter's remuneration; legal status of Promoter; Rights of promoters; Duties of promoters; Liabilities of promoters; Pre- incorporation contracts, Incorporation and commencement of Business.

Prospectus: - definition: Public offer. contents; misleading prospectus and its consequences.

Unit- III

Memorandum of Association: - Meaning; importance; clauses of memorandum of association and their Alteration; doctrine of ultra- virus.

Articles of Association: - Meaning; contents; alteration of articles of association; constructive notice and doctrine of indoor management.

Unit- IV

Borrowing Powers; Debentures and Charges.

Suggested Readings:

1. Kuchal M.C. Modern Indian Company Law Shri Mahavir Books, Noida. 2. Kapoor N.D. Company Law Incorporating the provisions of the companies Amendment Act.

3. Singh Avtar Company Law Eastern Book Company, Lucknow.

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B.Com II- IIIrd Semester w.e.f. session 2017-18
Paper: Macro Economics
Code: 3.05

Time: 3 Hours

Max Marks: 80
Internal Marks: 20

Note: - The Examiner shall set nine questions in all covering the whole syllabus. Question No.1 will be compulsory covering all the units and shall carry 8 small questions of 2 marks each. The rest of the eight questions will be set from all the four units. The examiner will set two questions from each unit out of which the candidate shall attempt four questions selecting one question from each unit. All the questions shall carry 16 marks each.

Unit-I
National Income: - Concepts and Measurement; Classical and Keynesian Theory of Employment

Unit-II
Consumption function and its determinants; theories of consumption-Absolute, Relative and permanent; Investment determinants & Marginal efficiency of capital.

Unit-III
Investment multiplier, investment Theory of Accelerator, trade cycle theories:- Samuelson and Hicks, control of trade cycles.

Unit-IV
Economic growth and Development, Determinants, Measurement and obstacles of development; Vicious circle of poverty.

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B.Com II - IIIrd Semester w.e.f. session 2017-18 Optional Paper: Fundamentals of Insurance
3.06 (i)

Time: 3 Hours

Max Marks: 80
Internal marks: 20

Note: - The Examiner shall set nine questions in all covering the whole syllabus. Question No.1 will be compulsory covering all the units and shall carry 8 small questions of 2 marks each. The rest of the eight questions will be set from all the four units. The examiner will set two questions from each unit out of which the candidate shall attempt four questions selecting one question from each unit. All the questions shall carry 16 marks each.

Unit- I

Insurance- History and Development; Meaning; Importance; Nature; Main principles- Principles of Cooperation, Probability, at most good faith, Proximate cause, Insurable interest, Indemnity, Subrogation, Warranty.

Unit-II

Life Insurance: - Main Elements, Importance, Important life Insurance Policies, Annuities, Premium Determination under life Insurance.

Unit- III

General Insurance, Marine Insurance- Main Elements, Marine Losses, Types of Marine Insurance policies.
Agriculture Insurance: History, Meaning, Main problems, Policies.

Unit-IV

Fire Insurance- Elements, Premium Determination, Types of Policies. Important Provisions of Moter Insurance, Aircraft Insurance

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B.Com II - IIIrd Semester w.e.f. session 2017-18
Optional Paper: Human Resource Management
Code 3.06 (ii)

Time: 3 Hours | **Max Marks: 80**
Internal Marks: 20

Note: - The Examiner shall set nine questions in all covering the whole syllabus. Question No.1 will be compulsory covering all the units and shall carry 8 small questions of 2 marks each. The rest of the eight questions will be set from all the four units. The examiner will set two questions from each unit out of which the candidate shall attempt four questions selecting one question from each unit. All the questions shall carry 16 marks each.

Unit-I

An Introduction to Human Resource Management

Definition, Importance objectives and scope of Human Resource Management (HRM). Function of Human Resource Management: - Managerial and Operative Functions.Qualifiction and Qualities of Human Resource manager in our organization. Evolution and Growth of Human Recourse Management (HRM) India.

Unit-II

Recruitment Selection and Training

Recruitment: - Meaning, Steps in recruitment policy, sources and modes of recruitment, Factors affecting recruitment.

Selection: - Meaning, Essentials of Selection Procedure, Stages in Selection Procedure.

Training: - Concept, Need and importance of Training.

Methods of Training: - On the job Training + off the job Training, Principles of training, Evaluation of training Programme in India.

Unit-III

Wage and Wage Incentives

Wages: - Meaning, Objective and Theories of wages,

Methods of wage Programme: - Time wages and Piece wages methods

Concept of wages: - Fair, Minimum and Living wage, Factors determining wage Structure of an organization, essentials of satisfactory wage policy.

Wage Incentives: - Concept, Need and Importance of Incentives. Special Incentives Prefect sharing and Labour Co. Partnership and Essentials of Ideal Incentives system.

Unit- IV

Industrial Relations and Industrial Unrest

Industrial Relations: - Concept, Importance and Objectives of industrial relations, Contents of industrial relations. Participants of Industrial relation and Recruitment of good Industrial relation Programme.

Industrial Unrest: - Meaning, Forms and Causes of industrial disputes, Impact of Industrial unrest on the Economy, preventive and curative methods and Agencies for Reconciliation of Industrial unrest.

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Suggested Readings:

1. *Human Resource Management: Concepts and Issues, by T.N. Chhabra, Dhanpat Rai & Co. New Delhi.*
2. *Human Resource Management by R. Wayne Mondy, Pearson Publications, Delhi.*
3. *Human Resource Management by C.B. Gupta.*

B.Com II -IIIrd Semester w.e.f. session 2017-18
Optional Paper: Production Management
3.06 (iii)

Time: 3 hours | Max. Marks: 80
Internal marks: 20

Note: - The Examiner shall set nine questions in all covering the whole syllabus. Question No.1 will be compulsory covering all the units and shall carry 8 small questions of 2 marks each. The rest of the eight questions will be set from all the four units. The examiner will set two questions from each unit out of which the candidate shall attempt four questions selecting one question from each unit. All the questions shall carry 16 marks each.

Unit-I:

Introduction: Concept, nature and scope of Production Management; Evolution of production function; Production Process, Organization of production function; Relationship between production and other functions.

Unit-II:

Location and Layout:

Location: nature, objectives and significance, Theories of location; factors influencing location.

Layout: Meaning, objectives and types; principles of layout; factors affecting layout.

Unit-III:

Production Planning and Control:

Production Planning: Concept, need and Types of Production planning; Production planning techniques. Factors influencing Production Planning.

Production Control: - Meaning, objectives and elements; Control techniques, Production Control in different Production Systems; Benefits & limitations.

Unit-IV:

Quality Control and Plan Maintenance.

Quality control: Meaning, scope, objectives and organization; Quality Control Techniques.

Plant Maintenance: Meaning, scope, objectives, types; Maintenance programme techniques & Organization.

Suggested Reading

1. *Chaturvedi, M: New Product Development, Wheeler Publications, New Delhi.*
2. *Majumdar, ramanuj: Product Management in India, Prentice Hall, New Delhi.*
3. *Moise, S: Successful Product Management, Kogan page, New York.*
4. *Moore, W.I: Product Planning Management, McGraw Hill, Boston.*
5. *Quelch, J.A: Cases in Product Management, Irwin, London.*
6. *Urban, Glen L., John R. Hagnser and Nikilesh Dholakia: Essentials of New Product Management, Prentice Hall, Englewood Cliff, New York.*

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B.Com II - IIIrd Semester w.e.f. session 2017-18 Optional
Paper: Application of Information Technology in Business
3.06 (iv)

Time: 3 Hours | Max Marks: 80
Internal marks: 20

Note: - The Examiner shall set nine questions in all covering the whole syllabus. Question No.1 will be compulsory covering all the units and shall carry 8 small questions of 2 marks each. The rest of the eight questions will be set from all the four units. The examiner will set two questions from each unit out of which the candidate shall attempt four questions selecting one question from each unit. All the questions shall carry 16 marks each.

Unit-I

Information Technology Basics: Introduction, Types of Information , Quality of Information, Levels of Information, Information processing life cycle, Components of IT, Role of Information technology; Information Technology and Internet services, Multimedia: Definition, Multimedia Systems, Multimedia Applications.

Electronic Data Interchange: - Basics of EDI, Financial EDI, Advantages and Applications of EDI

Unit-II

Data Communication and Computer Networks: Introduction , Modes of Data Communication, Forms of Data Transmission, Data Transmission measurement, Synchronous and Asynchronous Communication, Data Transmission Media: Wire-Cable, Fiber- Optics, Microwave , Communication Satellite, Switching Techniques:- Circuit switching, Message and Packet Switching.

Computer Networks: Introduction, Types of Network, LAN, MAN, WAN, Wireless Network, Network Topologies, Public and Private Networks, Communication Protocol-OSI Model.

Unit-III

Internet Concept and Technologies: Concept and evolution of Internet, Benefit of Internet, Hardware and Software requirement for the Internet, Intranet and Extranet Uses of the Internet, ISPs, Ways to Access the Internet, Internet Accounts, Internet Addressing, Internetworking Tools: Bridges, Routers, Gateways, Basic Internet Services: E-Mail, FTP, Mailing List, , IRC, Telnet, Usenet News group, WWW, Internet Phone, Uploading and Downloading Information from the Internet, Web Search Engines.

Unit-IV

Applications Software Packages:- Features of word Processing Packages, Spreadsheet Packages, Graphics Packages and Personal Assistance Packages, Database Software (MS Access); Creating data tables, Editing a database, Performing Queries, Generating Reports, Creating and Customizing a Form, Features of MS Access.

Suggested Books:

(1) Introduction to IT, ITL education (Pearson), Published by Dorling Kindersley (India) Pvt.Ltd., Office:14 Local Shopping Centre, Panchsheel Park, New Delhi-110017, India

2) Information Technology and Computer Fundamental, Dr. Nasib Singh Gill.

(3)Computer Networks and Internets: Douglcas E.Comer,MS.Narayanan, Published by Dorlling Kindersley.

(4)) Introduction to Information System:Alexis Leon,McGraw-Hill Education(India)pvt.Ltd. B-4, Sector-63, Dist.Gautam Budh Nagar, Noida, Uttar Pardesh,-201301.

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B.Com – II- IVth Semester w.e.f. session 2017-18
Paper: Corporate Accounting-II
4.01

Time: 3 Hours

Max Marks: 80
Internal Marks: 20

Note: - The Examiner shall set nine questions in all covering the whole syllabus. Question No.1 will be compulsory covering all the units and shall carry 8 small questions of 2 marks each. The rest of the eight questions will be set from all the four units. The examiner will set two questions from each unit out of which the candidate shall attempt four questions selecting one question from each unit. All the questions shall carry 16 marks each.

Important: The Examiner will set at least THREE numerical and THREE theoretical questions in the question paper.

Unit- I
Internal Reconstruction; External Reconstruction in the nature of merger and purchase.

Unit- II
Liquidation of a company ; Financial reporting for financial institutions.

Unit- III
Final Accounts of Banking Companies.

Unit- IV
Accounts of Holding Companies.

Suggested Readings:

Shukla M.C. Grewal T.S and Gupta S.C Advance Accounts: S.Chand and Comp., New Delhi.
Gupta R.L & Radha Swami M. Company Accounts: Sultan Chand and sons, New Delhi.
Monga J.R. ,Ahuja Girish and Sehgal Ashok Financial Accounting: Mayur Paper Bags, Noida.
Goel, D.K., Corporate Accounting. Arya Publications, New Delhi

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B.Com II - IVth Semester w.e.f. session 2017-18
Paper: Business Statistics- II
4.02

Time: 3 Hours

Max Marks: 80
Internal Marks: 20

Note: - The Examiner shall set nine questions in all covering the whole syllabus. Question No.1 will be compulsory covering all the units and shall carry 8 small questions of 2 marks each. The rest of the eight questions will be set from all the four units. The examiner will set two questions from each unit out of which the candidate shall attempt four questions selecting one question from each unit. All the questions shall carry 16 marks each.

Important: The Examiner will set at least THREE numerical and THREE theoretical questions in the question paper.

Unit – I

Index Numbers:- Meaning, Types and Uses; Methods of Constructing price and Quantity indices (Simple and Aggregate); Tests of adequacy; Chain-base Index numbers, Base shifting, Splicing and Deflating; Problems in constructing index numbers; Consumer price index.

Unit- II

Analysis of Time Series: - Causes of Variations in time series data; Components of a time series.

Decomposition- Additive and Multiplicative models; determination of trend. Moving averages method and method of least squares (Including linear second degree, Parabolic and Exponential trend); Computation of seasonal indices by simple averages, Ratio to Trend, Ratio to moving average and link relative methods.

Unit- III

Theory of Probability: - Probability as a Concept; Approaches to defining probability, Addition and Multiplication laws of probability; Conditional probability, Baye's Theorem.

Unit- IV

Probability Distribution : - Probability distribution as a concept; Binomial, Poisson and Normal Distribution- Their Properties and Parameters.

Suggested Readings:

1. *Dr. S.P. Gupta, Statistical methods, S.Chand & Co., New Delhi.*
2. *D.N. Elhance, Veena Elhance, B.M. Aggarwal, Fundamentals of Statistics, Kitab Mahal.*
3. *N.P. Aggarwal, Quantitative Techniques, Ramesh Book Depot., Jaipur.*
4. *R.P. Hooda, Statistics for Business and Economics, Mcmillan India Ltd., New Delhi.*

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B.Com II - IVth Semester w.e.f. session 2017-18
Paper: Business Regulatory Framework – II
4.03

Time: 3 Hours

Max Marks: 80
Internal Marks: 20

Note: - The Examiner shall set nine questions in all covering the whole syllabus. Question No.1 will be compulsory covering all the units and shall carry 8 small questions of 2 marks each. The rest of the eight questions will be set from all the four units. The examiner will set two questions from each unit out of which the candidate shall attempt four questions selecting one question from each unit. All the questions shall carry 16 marks each.

Unit- I

Indian Partnership Act – Nature of Partnership firm; test of partnership; Duties and Rights of partners; Relations of partners to third parties; position of minor in partnership; Reconstitution of a partnership firm; Registration of firm.

Dissolution of firm: - Modes of dissolution; consequences of dissolution of firm; settlement of accounts after dissolution.

Unit- II

Negotiable Instruments Act: - Negotiable Instrument an introduction Promissory notes; Bills of Exchange; cheques. Parties to negotiable Instruments; Discharge of parties from Liability; Dishonour of Negotiable Instruments. Instruments; Presentment of Negotiable Instrument: Negotiation.

Unit- III

Sales of Goods Act: - Introduction; Formation of contract of sale of Goods; conditions and warranties; Transfer of property or ownership; Performance of contract- Delivery and Payment; Rights of unpaid seller; suits of Breach of contract.

Unit- IV

RTI Act : features, rights and importance.

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Suggested Readings:

1. *M.C.Kuchhal, Business Laws, Sultan Chand & Co., New Delhi.*
2. *N.D.Kapoor, Merchantile Law, Sultan Chand & Co., New Delhi.*
3. *Texman*
4. *Resai T.R. Partnership Act, S.C.Sarkar and Sons, kolkata.*

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B.Com II - IVth Semester w.e.f. session 2017-18
Paper: Corporate Law- II
4.04

Time: 3 Hours

Max Marks: 80
Internal Marks: 20

Note: - The Examiner shall set nine questions in all covering the whole syllabus. Question No.1 will be compulsory covering all the units and shall carry 8 small questions of 2 marks each. The rest of the eight questions will be set from all the four units. The examiner will set two questions from each unit out of which the candidate shall attempt four questions selecting one question from each unit. All the questions shall carry 16 marks each.

Unit- I

Depository System –meaning and importance; Shares: -; Types of shares; Allotment of Shares;; Transfer and Transmission of shares; Paperless Trading – Benefits and Procedure; Need for educating investors

Unit- II

Share capital: - Meaning and forms of capital; Alteration of share capital; Reduction of share capital; Further issue of share capital; Rights of pre-emption of shares.
Shareholders and Members: - Difference between Shareholders and members; Modes of acquiring membership; termination of membership; who may be members? Rights and Liabilities of members.

Unit- III

Meeting of Company: - Essentials of valid meeting; meetings of Shareholders: - Statutory meeting; Annual general; meeting; Extra-ordinary general meeting; meetings of board of directors; Proxy; Voting, Notice, Agenda and Minutes of meetings.
Directors: - Duties, Powers, Liabilities, Appointment and removal of directors.

Unit- IV

Winding Up: - Meaning; Winding up by the Tribunal-Petition for winding up; Voluntary winding up; Powers and Duties of company Liquidator, consequences of winding up..

Suggested Readings:

1. *Kuchal M.C. Modern Indian Company Law Shri Mahavir Books, Noida.*
2. *Kapoor N.D. Company Law: Incorporating the provisions of the companies Amendment Act.*
3. *Singh Avtar Company Law, Eastern Book Company, Lucknow*

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B.Com II - IVth Semester w.e.f. session 2017-18
Paper: Marketing Management
4.05

Time: 3 Hours

Max Marks: 80
Internal Marks: 20

Note: - The Examiner shall set nine questions in all covering the whole syllabus. Question No.1 will be compulsory covering all the units and shall carry 8 small questions of 2 marks each. The rest of the eight questions will be set from all the four units. The examiner will set two questions from each unit out of which the candidate shall attempt four questions selecting one question from each unit. All the questions shall carry 16 marks each.

Unit- I

Introduction: - Nature, Scope, Importance of marketing; Marketing concepts- Traditional and Modern.
Market Segmentation: - Concept, Importance and basis of market segmentation.

Unit- II

Consumer Behavior: - Nature, Scope, Importance, Factors affecting buyer behavior.
Product Planning and Development: - Importance and scope of product Planning in marketing; Stages of New product development.
Product Lifecycle: - Stages of Product life cycle; factors affecting product life cycle.

Unit- III

Branding and Trademark: - Difference between brand and trademark; advantages and criticism of branding; types of branding; Brand Polices and Strategies.

Pricing: - Meaning; Importance, Factors affecting pricing, pricing objectives, Types of price policy and pricing strategies.

Unit- IV

Advertising: - Concept; Importance and criticism of advertising; Media of advertising; Evaluating advertising effectiveness.
Sales Promotion: - Importance, Methods, Functions and Publicity.

Suggested reading:

1. *Kotler Philip Marketing Management Prentice Hall of India New Delhi.1986*
2. *Pride Willian M and Ferrel O.C. Marketting Houghton-Mifflin Boston*
3. *Stanton W.J., Etzel Michael J. and Walker Bruce J. Fundamentals of Marketing MC Graw Hill,New York.*

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B.Com II - IVth Semester w.e.f. session 2017-18
Optional Paper: Business Ethics
4.06 (i)

Time: 3 Hours | **Max Marks: 80**
Internal Marks: 20

Note: - The Examiner shall set nine questions in all covering the whole syllabus. Question No.1 will be compulsory covering all the units and shall carry 8 small questions of 2 marks each. The rest of the eight questions will be set from all the four units. The examiner will set two questions from each unit out of which the candidate shall attempt four questions selecting one question from each unit. All the questions shall carry 16 marks each.

Unit-I

Thinking conceptually about Politics: Liberty, Equality, Justice, Rights and Recognition, The idea of a good society. Concept of Business Ethics and Corporate Social Responsibility.

Unit-II

Domain of Politics and ethics: Democracy and Welfare State, Market and Globalization. Approaches to Moral Reasoning: Consequentalism, Deontologism, Teleological reasoning.

Unit-III

Politics and Ethics in Business: Corporate Code of Ethics.

a) Environment
b) Accountability
c) Responsibility
d) Leadership
e) Diversity

Corporate Social Responsibility. Arguments For and Against; Strategic Planning and corporate social Responsibility; Corporate Philanthropy.

Unit-IV

Cases of corruption, corporate Scandals, Whistle Blowing, Insider Trading, Discrimination, Advertising, Consumer Rights etc.

Suggested Readings:

1. *Dr. F.C.Sharma, Business Values & Ethics – Shree Mahavir Book Depot, Wai Sarak, New Delhi.*
2. *C.S.V Murthy – Business Ethics, Himalya Publishing House.*
3. *Shina Parkashan – Managerial Ethics – Rajat Publications.*
4. *C.L.Dave – Social Accounting – Renuka Publishers, Jodhpur.*

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B.Com II - IVth Semester w.e.f. session 2017-18
Optional Paper: Banking and Banking Law
4.06 (ii)

Time: 3 Hours | Max Marks: 80
Internal Marks: 20

Note: - The Examiner shall set nine questions in all covering the whole syllabus. Question No.1 will be compulsory covering all the units and shall carry 8 small questions of 2 marks each. The rest of the eight questions will be set from all the four units. The examiner will set two questions from each unit out of which the candidate shall attempt four questions selecting one question from each unit. All the questions shall carry 16 marks each.

Unit-I

Definition of Bank, Commercial Banks-importance, functions and problems of Non-performing Assets, structure of Commercial Banking system in India.
Credit Creation: Process of Credit Creation and its Limitations.

Unit-II

Regional Rural Banks, Cooperative Banking in India.
Reserve bank of India: Functions, regulation and control of credit, monetary policy.

Unit-III

Determination and Regulation of Interest Rates in India.

Relationship between banker and Customer, Definition of Customer, General Relationship between banker and customer, obligation of banker, Garnishee order, banker's rights.

Special types of Bankers Customers Minor, Married Women, Illiterate persons, Lunatics, Trustees, Executors and Administrators, Customer's attorney, Joint Account, Joint Hindu family, partnership Firm, Joint stock companies, Clubs, Societies and Charitable Institutions.

Unit-IV

Negotiable Instruments:

Definition of Negotiable instruments, Essential features of Negotiable instruments, holder and Holder in Due course.

Rights and Liabilities of parties for Negotiable instruments:

Capacity of parties: Minor's position, legal representative, Liability of parties, Drawer of Bill or Cheque, Liability of Maker of note & Acceptor of Bill, Liability of endorsed Negotiable Instruments without Consideration, Instrument obtained by Unlawful means.

Endorsements:

Meaning of Negotiation, Definition of Endorsement, Legal provisions regarding Endorsement, General rules regarding forms of endorsement, forms of Endorsement, Kinds of Endorsement.

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B.Com II - IVth Semester w.e.f. session 2017-18
Optional Paper: Basics of Retailing
4.06 (iii)

Time- 3 Hrs

Max Marks- 80
Internal Marks- 20

Note: - The Examiner shall set nine questions in all covering the whole syllabus. Question No.1 will be compulsory covering all the units and shall carry 8 small questions of 2 marks each. The rest of the eight questions will be set from all the four units. The examiner will set two questions from each unit out of which the candidate shall attempt four questions selecting one question from each unit. All the questions shall carry 16 marks each.

Unit-I

Introduction: Meaning, nature, scope, importance, growth and present size. Career option in retailing; Technology induction in retailing; Future of retailing in India.

Unit-II

Types of Retailing: Stores classified by owners; Stores classified by merchandising categories; Wheel of retailing; Traditional retail formats *vs.* modern retail formats in India; Store and non-store based formats; Cash and carry business - Meaning, nature and scope; Retailing models – Franchiser franchisee, directly owned; Wheel of retailing and retailing life cycle; Co-operation and conflict with other retailers.

Unit-III

Management of Retailing Operations: Retailing management and "the total performance model; Functions of retail management; Strategic retail management process.

Unit-IV

Retail planning - importance and process; Developing retailing strategies, objectives, action plans, pricing strategies and location strategies.

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B.Com II - IVth Semester w.e.f. session 2017-18

Optional Paper: Application of Information Technology in Business-II

4.06

Time: 3 Hours

Max Marks: 80

Internal marks:20

Note: - The Examiner shall set nine questions in all covering the whole syllabus. Question No.1 will be compulsory covering all the units and shall carry 8 small questions of 2 marks each. The rest of the eight questions will be set from all the four units. The examiner will set two questions from each unit out of which the candidate shall attempt four questions selecting one question from each unit. All the questions shall carry 16 marks each.

Unit-I

Information System: Information, Information Processing Life Cycle, Methods of data processing, Application of Electronic Data Processing. Need of an efficient Information System, Types of an Information system, Information requirement for Planning, Coordination, and Control for various levels in Business, Industry.

Computer Fundaments: Types of Computer, Hardware option-CPU, Input and Output devices, Storage devices, Configuration of Hardware Devices and their applications

Unit-II

Database Fundamentals: Database: Definition, Main Component of Database, DBMS: Architecture of DBMS, Benefits of DBMS, Data Models: Hierarchical, Network and Relational Model, Client-Server Concept.

Business Data Processing: Data Storage Hierarchy, File Management System: File Types, File Organization Techniques: Direct File, Sequential File and Index Sequential File: DBMS, Role of DBA, Main components of a DBMS: DDL, DML, Query Language and Report Generator, Creating and Using a Database.

Unit-III

Emerging Trends in IT: Introduction, E-Commerce and E-Business, Types of Electronic Commerce(E-Commerce), Processes in E-commerce, Types of an Electronic Payment System, E-Case, E-Cheque, Credit Card, Advt. and Disadvantages of E-Commerce, Security Schemes of an Electronic Payment Systems, Electronic Fund Transfer, Electronic Data Interchange(EDI), Mobile Communication, Infrared Communication, Smart Card.

Unit-IV

Computer Software: Definition, Categories of Software: System Software, Operating System Software, Application Software, Operating System:- Characteristics, Functions of an O.S., Types of an Operating System, System Utilities Programs: Editor, Loader, Linker, File Manager, Operating System as a Resource Manager, Concept of CUI and GUI.

Computer Languages: Definition, Machine Language, Assembly Language, High-Level Language, Compiler, Interpreter, Assembler.

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Suggested Books: (1) Introduction to IT, ITL Education Solutions Limited, Pearson education, 482, F.I.EmPatnarganj, Delhi, India.

(2) Inf. Technology and Computer fundamental, Dr. Nasib Singh Gill,

(3) Introduction to Information System:Alexis Leon,McGraw-Hill Education(India) pvt.Ltd. B-4, Sector-63, Dist.Gautam Budh Nagar, Noida, Uttar Pardesh,-201301.

(4)Computer Networks and Internets: Douglas E.Comer, Pearson Education.

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B.Com (Pass Course)

Scheme of Examinations w.e.f session 2017-18

B.Com-III –Vth Semester

Paper No.	Nomenclature of the Paper	Theory Marks	Int. Ass.	Total Marks	Time
5.01.	Taxation Law-I	80	20	100	3 Hrs.
5.0 2.	Cost Accounting -I	80	20	100	3 Hrs.
5.03.	Accounting for Management	80	20	100	3 Hrs.
5.04	Financial Market Operations	80	20	100	3 Hrs.
5.05	Entrepreneurship and Small Scale Business	80	20	100	3Hrs.
5.06	Optional (Any one out of followings)	80	20	100	3 Hrs.

i. Secretarial Practices
ii. Statistical Analysis with MS. Excel 50 Marks for Theory (3 Hrs) + 50 Marks for Practical
iii. Investment Management
iv. Essentials of E-Commerce-I
v. International Business Environment

Total Marks 600

B.Com-III –VIth Semester

Paper No.	Nomenclature of the Paper	Theory Marks	Int. Ass.	Total Marks	Time
6.01.	Taxation Law-II	80	20	100	3 Hrs.
6.02.	Cost Accounting -II	80	20	100	3 Hrs.
6.03	Financial Management	80	20	100	3 Hrs.
6.04	Auditing	80	20	100	3 Hrs.
6.05	Indirect Taxes	80	20	100	3Hrs.
6.06.	Optional (any one out of the followings)	80	20	100	3 hrs

i. International Trade
ii. International Marketing
iii. Fundamentals of Operations Research
iv. Essentials of E-Commerce-II
v. Tax Planning and Management

Total Marks 600

Total Marks of 5th & 6th semesters 600 + 600 = 1200

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B.Com.III Pass-Vth Sem w.e.f. from 2017-18
Paper: Taxation Law-I
Code 5.01

Time: 3 Hours

Theory Marks: 80
Internal Marks: 20

Note:- The Examiner shall set nine questions in all covering the whole syllabus. Question No.1 will be compulsory covering all the units and shall carry 8 small questions of 2 marks each. The rest of the eight questions will be set from all the four units. The examiner will set two questions from each unit out of which the candidate shall attempt four questions selecting one question from each unit. All the questions shall carry 16 marks each.

Important: The Examiner will set at least THREE numerical and THREE theoretical questions in the question paper.

Unit-I

Income Tax: An introduction and Important Definitions, Agriculture Income, Residential status and incidence of Tax Liability, Exempted incomes.

Unit-II

Income from Salaries (including retirement benefits); Income from House property.

Unit-III

Profits and Gains from Business or Profession; Depreciation; Capital Gains.

Unit IV

Income from other sources, clubbing of incomes & aggregation of incomes, set off and carry forward of losses, Deductions to be made in computing total income.

Suggested Readings:

1. *Direct Taxes law & Practice – Dr. H.C.Mehrotra & Dr. S.P. Goyal, Sahitya Bhawan Publications, Agra.*
2. *Direct Taxes law & Practice – Dr. Bhagwati Prasad - Wishwa Prakashan, N.Delhi.*
3. *Simplified Approach to income Tax: Dr. Girish ahuja & Dr. Ravi Gupta – Sahitya Bhawan Publishes & Distributors, Agra.*

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B.Com.III Pass Vth Sem w.e.f. from 2017-18
Paper: Cost Accounting – I
Code: 5.02

Time: 3 Hours

Theory Marks: 80
Internal Marks: 20

Note: The Examiner shall set nine questions in all covering the whole syllabus. Question No.1 will be compulsory covering all the units and shall carry 8 small questions of 2 marks each. The rest of the eight questions will be set from all the four units. The examiner will set two questions from each unit out of which the candidate shall attempt four questions selecting one question from each unit. All the questions shall carry 16 marks each.

Important: The Examiner will set at least THREE numerical and THREE theoretical questions in the question paper.

Unit-I

Cost Accounting : Meaning, Features, Scope, Techniques, Methods, Objectives, Importance and Limitations. Costing; cost accountancy; cost centres and profit centres, Difference and similarities of cost accounting system with financial accounting system. Cost: main elements and types.

Material Control: Meaning and objectives of material control, material purchase procedure, fixation of inventory levels- reorder level, Minimum level, Maximum level, Danger level. EOQ analysis. Methods of Valuing Material Issues. Wastage of material – main types.

Unit – II

Labour Cost Control : Importance, methods of time keeping and Time Booking; Treatment and control of Labour Turnover, Idle Time, Overtime, Systems of Wage Payment-Time Wage System, Piece Wage System. Incentive Wage plans – Individual plans and group plans.

Unit – III

Overheads : Meaning and Types. Collection, Classification; Allocation, Apportionment and Absorption of Overheads – Main methods.

Unit – IV

Unit and output costing : meaning and objectives; cost sheet – meaning, Performa, types preparation of cost sheet; determination of tender price; production account – types.
Reconciliation of cost and financial accounts : Meaning, Objectives and procedure.

Suggested Readings:-

1. *S.P. Iyengar – Cost Accounting, Sultan Chand & Sons, Educational Publishers, New Delhi.*
2. *Jain & Narang – Cost Accounting – Principles and Practice Kalyani Publishers, Ludhiana.*
3. *Maheshwari and Mittal – Cost Accounting – Sh. Mahavir Book Depot, Delhi.*

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B.Com.III Pass Vth Sem w.e.f. from 2017-18
Paper: Accounting For Management
Code : 5.03

Time: 3 Hours

Theory Marks: 80
Internal Marks: 20

Note:- The Examiner shall set nine questions in all covering the whole syllabus. Question No.1 will be compulsory covering all the units and shall carry 8 small questions of 2 marks each. The rest of the eight questions will be set from all the four units. The examiner will set two questions from each unit out of which the candidate shall attempt four questions selecting one question from each unit. All the questions shall carry 16 marks each.

Important: The Examiner will set at least THREE numerical and THREE theoretical questions in the question paper.

Unit – I

Management Accounting: Nature and Scope of Management Accounting: Meaning, functions, Scope of Management Accounting, The Management Accountant, The Controller, The Treasurer, Management Accounting Principles, Management Accounting vs Financial Accounting vs. Cost-Accounting, Utility of management Accounting, Limitations of Management Accounting, Tools of Management Accounting.

Unit – II

Analysis and Interpretation of Financial Statements: meaning and types of financial statements, analysis and interpretation of financial statements, Types of financial analysis, steps involved in financial analysis, techniques of financial analysis. Ratio Analysis : meaning of ratios, classification of ratios, profitability ratios, balance sheet ratios and turnover rations, advantages and limitations of ratio analysis.

Unit – III

Cash Flow Statement : Meaning, objectives, limitations and accounting procedure; Financial planning

Unit – IV

Capital Budgeting : Meaning, nature, need, importance, appraisal methods, capital rationing.

Suggested Readings

1.J.K.Aggarwal, R.K.Aggarwal, M.L.Sharma – Accounting for Managerial Decisions – Ramesh Book Depot., Jaipur.

2.R.Kishore – Advance Management Accounting – Taxmn allied Services Pvt. Ltd.

3.M.Y.Khan, P.K.Jain – Management Account – Tata Megraw Hill.

4.Morngren, Sundem, Stratton – Introduction to Management Accounting - Pearson Accounting

5.S.N.Mittal – Accounting & Financial Management – Shree Mahavir Book Depot, Nai Sarak, New Delhi.

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B.Com.III Pass Vth Sem w.e.f. from 2017-18
Paper: Financial Market Operations
Code : 5.04

Time: 3 Hours

Theory Marks: 80
Internal Marks: 20

Note:- The Examiner shall set nine questions in all covering the whole syllabus. Question No.1 will be compulsory covering all the units and shall carry 8 small questions of 2 marks each. The rest of the eight questions will be set from all the four units. The examiner will set two questions from each unit out of which the candidate shall attempt four questions selecting one question from each unit. All the questions shall carry 16 marks each.

Unit – I

Money Market: Indian Money Markets Composition Composition and Structure; (a) Acceptance houses (b) Discount houses and (c) Call money market; Recent trends in Indian money market.

Capital Market : Security market- (a) New Issue Market (b) Secondary market; functions and role of stock exchange listing, procedure and legal requirements Public issue pricing and marketing, Stock exchange – National Stock Exchange and over the Counter exchangers.

Unit – II

SEBI – Introduction, Role, Its powers, Objectives, Scope & Functions.

Investors Protection:- Grievances concerning stock exchange and dealings and their removal; grievance cell in stock exchange SEBI: Company law Board: Press remedy through courts.

Unit - III

Functionaries on stock exchanges:- Brokers, Sub brokers, Market makers, Jobbers, Portfolio Consultants, Institutional Investors, Depository.

Financial Services:- Merchant Banking – Functions and Roles; SEBI guidelines; credit rating – concept, functions, and types.

Unit – IV

Role, Policy measures relating to Development Financial Institution in India. Products & Services offered by IFCI, IDBI,IIBI, SIDBI, IDFCL, EXIM, NABARD & ICICI.

Meaning and benefits of mutual funds, types, SEBI guidelines.

Suggested Readings:

1. *Chandler M.V. and Goldfield S.M.: Economics of Money and Banking & Harper & Row Newyork.*
2. *Gupta Sural b: Monetary Planning in India: Oxford, Delhi.*
3. *Gupta Sural b: Monetary Economics: S.Chand & Co. New Delhi.*
4. *Bhole L.M.: Financial Market Institutions, Tata Mc Graw-Hill, New Delhi.*
5. *Hooda, R.P.: Indian Securities Markets- Investors View Point; Excell Books, New Delhi.*

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Khanpur Kalan (Sonipat)

B.Com.III Pass Vth Sem w.e.f. from 2017-18

Paper: Entrepreneurship and Small Scale Business
Code : 5.05

Time: 3 Hours

Theory Marks: 80
Internal Marks: 20

Note:- The Examiner shall set nine questions in all covering the whole syllabus. Question No.1 will be compulsory covering all the units and shall carry 8 small questions of 2 marks each. The rest of the eight questions will be set from all the four units. The examiner will set two questions from each unit out of which the candidate shall attempt four questions selecting one question from each unit. All the questions shall carry 16 marks each.

Unit – I

Entrepreneur-Entrepreneurship-Enterprise: Conceptual issues. Entrepreneurship vs. Management. Roles and functions of entrepreneurs in relation to the enterprise and in relation to the economy. Entrepreneurship as a interactive process between the individual and the environment. Small business as the seedbed of entrepreneurship. (The teachers should emphasize to students the desirability as well as feasibility of a career in entrepreneurship in the Indian scenario.) Entrepreneurial competencies. Entrepreneurial motivation, performance and rewards. (The teachers may make use of Entrepreneurship Development Institute of India's Inventory of Entrepreneurial Competencies and National Institute of Entrepreneurship and Small Business Development's training kit for arousing entrepreneurial motivation and capacity and capability building).

Unit – II

Opportunity scouting and idea generation: role of creativity & innovation and business research. Sources of business ideas. Entrepreneurial opportunities in contemporary business environment, for example opportunities in network-marketing, franchising, business process outsourcing in the early 21st century. (The students be advised to visit various product/service franchisees, BPO concerns and meet up/down links in the Network Marketing.) The process of setting up a small business: preliminary screening and aspects of the detailed study of the feasibility of the business idea and financing/non-financing support agencies to familiarize themselves with the policies/programmes and procedures and the available schemes.) Preparation of Project Report and Report on Experiential Learning of successful/unsuccessful entrepreneurs. (The students may be advised to develop a structured instrument (questionnaire) for conducting survey of the various aspects of entrepreneurs/enterprise. They may also be advised to prepare a comprehensive business plan. The desirability and feasibility of liaison with relevant funding/non-funding agencies may also be explored.)

Unit – III

Managerial roles and functions in a small business. Designing and redesigning business processes, location, layout, operations planning & control. Basic awareness of the issues impinging on quality, productivity and environment. Managing business growth. The pros and cons of alternative growth options: internal expansion, acquisitions & mergers, integration & diversification. Crises in business growth.

Unit – IV

Issues in small business marketing. The concept and application of product life cycle (ptc), advertising & publicity, sales & distribution management. The idea of consortium marketing, competitive bidding/tender marketing, negotiation with principal customers. The contemporary perspectives on Infrastructure Development, Product and Procurement Reservation, Marketing Assistance, Subsidies and other Fiscal &

Department of Commerce

Monetary Incentives. National, state level and grass-root level financial and nonfinancial institutions in support of small business development.

Suggested Readings:

Suggested Readings Books:

1. Brandt, Steven C., The 10 Commandments for Building a Growth Company, Third Edition, Macmillan Business Books, Delhi, 1977

2. Bhide, Amar V., The Origin and Evolution of New Businesses, Oxford University Press, New York, 2000.

3. Desai, Vasant, Small Scale Enterprises Vols. 1-12, Mumbai, Himalaya Publishing House. (Latest edition).

4. Dollinger, Marc J., Entrepreneurship: Strategies and Resources, Illinois, Irwin, 1955.

5. Holt, David H., Entrepreneurship: New Venture Creation, Prentice-Hall of India, New Delhi, latest Edition.

6. Panda, Shiba Charan, Entrepreneurship Development, New Delhi, Anmol Publications. (Latest Editions)

8. SIDBI Report on Small Scale Industries Sector (Latest Editions)

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Khanpur Kalan (Sonipat)

B.Com.III Pass Vth Sem w.e.f. from 2017-18

Optional Paper : Secretarial Practices
Code : 5.06 (i)

Time: 3 Hours

Theory Marks: 80
Internal Marks: 20

Note: The Examiner shall set nine questions in all covering the whole syllabus. Question No.1 will be compulsory covering all the units and shall carry 8 small questions of 2 marks each. The rest of the eight questions will be set from all the four units. The examiner will set two questions from each unit out of which the candidate shall attempt four questions selecting one question from each unit. All the questions shall carry 16 marks each.

Unit – I

Secretary : Meaning, definitions, functions, duties, responsibilities, powers, appointment, procedure; qualifications and disqualifications; position and removal of secretary.

Unit – II

Promotion of Company and Secretary: Duties of Secretary regarding formation of M/A and A/A and their alterations. Duties of secretary regarding issue of share certificate, share warrant and share stock, calls-in-arrear, forfeiture and re-issue of shares, transfer and transmission of shares.

Unit – III

Company Meeting & Secretary: Duties of Secretary regarding meetings, requisites of a valid meeting, secretarial duties regarding meetings of shareholders, meetings of Board of directors.

Unit - IV

Company Secretary and motion and Resolution, voting and proxy.

Suggested Readings:-

1. *Company Secretarial Practice – N.D.Kapoor*
2. *Text Book of Company Secretarial Practice – P.K.Ghosh*
3. *Company Law & Secretarial Practice – Dr. M.R.Sreenivasan.*
4. *Company Law Secretarial Practice Manual by – K.R. Chandratre.*

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B.Com.III Pass Vth Sem w.e.f. from 2017-18
Optional Paper : Statistical Analysis with MS Excel
Code: 5.06 (ii)

Time: 3 Hours

Theory Marks: 50
Practical Marks: 50

Note:- The Examiner shall set nine questions in all covering the whole syllabus. Question No.1 will be compulsory covering all the units and shall carry 5 small questions of 2 marks each. The rest of the eight questions will be set from all the four units. The examiner will set two questions from each unit out of which the candidate shall attempt four questions selecting one question from each unit. All the questions shall carry 10 marks each.

Unit – I

Data collection- Meaning, Experiments and Surveys, Collection of Primary data, Questionnaires, schedules, collection of secondary data, selection of appropriate methods of data collection. Data preparation process, missing values and outliers

Unit – II

Descriptive statistics and steps involved in calculation of descriptive statistics in MS Excel.Mean, Median, mode, range, Standard deviation, skewness, kurtosis. Sampling and statistical inference – parameter and statistic, sampling and non-sampling errors, sampling distribution of mean and proportion, degree of freedom, standard error, central limit theorem.

Unit – III

Testing of Hypothesis with the help of MS Excel; hypothesis testing – meaning, types, type 1 and type 2 errors, level of significance, two tailed and one tailed tests. Procedure for hypothesis testing for mean, proportion and variance, limitations of the test of hypothesis.

Unit –IV

Chi-square test and analysis of variance.

Practical:

Preparing a data file i.e.entering data and saving file in MS Excel, calculating descriptive statistics, T-Test and ANOVA with the help of MS Excel.

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B.Com.III Pass Vth Sem w.e.f. from 2017-18
Optional Paper : Investment Management
Code : 5.06 (iii)

Time: 3 Hours

Theory Marks: 80
Internal Marks: 20

Note:- The Examiner shall set nine questions in all covering the whole syllabus. Question No.1 will be compulsory covering all the units and shall carry 8 small questions of 2 marks each. The rest of the eight questions will be set from all the four units. The examiner will set two questions from each unit out of which the candidate shall attempt four questions selecting one question from each unit. All the questions shall carry 16 marks each.

Unit-I

Investment: Meaning, nature and process. Investment avenues and alternations, concept and Measurement of Investment risk and return; Identification of Investment Opportunities; Speculation, Gambling and Investment activities.

Unit-II

Efficient Market theory or Hypothesis. Technical Analysis: Dow theory, Charting techniques, volume indicators.

Unit-III

Fundamental Analysis: Company Analysis, Industry Analysis and Economy Analysis, Technical v/s Fundamental analysis.

Unit-IV

Secondary Market : Stock Exchanges, Online Trading.

Trading mechanism in Bombay Stock Exchange. Derivatives: Meaning, uses, Types, Derivatives in Indian capital market.

Option Contracts: Meaning uses, Types (Elementary Introduction).

Suggested Readings:-

1. *P. Pandian- "Security Analysis & Portfolio Management" Vikas Publishing house, New Delhi.*
2. *V.K.Bhalla -" Investment Management" S. Chand & Sons, New Delhi.*
3. *Fisher & Jordon – " Security Analysis & Portfolio Management)*
4. *Prasanna Chandra- "Investment Analysis & Portfolio Management.*

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B.Com.III Pass Vth Sem w.e.f. from 2017-18
Optional Paper : Essentials of E-Commerce -I
Code 5.06 (iv)

Time: 3 Hours | Theory Marks: 80
Internal Marks: 20

Note:- The Examiner shall set nine questions in all covering the whole syllabus. Question No.1 will be compulsory covering all the units and shall carry 8 small questions of 2 marks each. The rest of the eight questions will be set from all the four units. The examiner will set two questions from each unit out of which the candidate shall attempt four questions selecting one question from each unit. All the questions shall carry 16 marks each.

Unit – I

Introduction of E-Commerce:- Definition, Main activities of E-Commerce Benefits of E-Commerce, E-Commerce Applications, E-Commerce systems, Advantages and disadvantages of E-Commerce, E-Commerce Technologies, Types of E-Commerce: B2B, B2C, C2B, B2G,G2C, Mobile commerce, E-Commerce and the Trade cycle, E-Markets, Future of E-Commerce Introduction to Portals: Functions of Portals, Advantages of Portals, Market place for E-Commerce, E-Commerce Portals, Types of Portals.

Unit – II

Business to Business Electronic Commerce: Inter organization Transactions, Introduction to Electronic Market, Online Shopping, Online Purchasing, Models of Electronic Market, Markets Category, E-Business, B2B E-Commerce, B2B application, B2B Electronic Commerce requirements, Virtual Supply Technologies, Electronic Applications Categories, Electronic Tailing, E-Tailing in India, Auctions and the Emerging Electronic market place, Essential Elements of an Electronic Business, Differentiation in Catalogs for B2B as opposed to B2C, Instant Messaging. Electronic Date interchange (EDI): Definition, Benefits of EDI, Applications of EDI.

Unit –III

Business to Commerce electronic commerce: Definition, e-shop, Internet Shopping and the Trade cycle. Advantages and disadvantages of consumer e-Commerce. **Electronic Payment Systems:** Introduction, Traditional Payment Systems, Modern Payment system: PC Banking, Credit cards, Electronic Cheque, Micro payments, Smarts cards, E-cash, EFT. **Security Schemes:** Encryptions, Digital Signatures, Security Certificates, Protocols used in Internet Security; Secure Socket Layer (SSL), Secure Hypertext Transfer Protocal (SHTP), Secure Electronic Transaction (SET), e-Commerce, I.T.Act. 12

Unit – IV

E-Banking/ Online Banking: Introduction, Advantages of Online Banking, issues in Internet Banking, Tools of Financial Banking, E-Banking Risks, e-Commerce and Internet: Definition, e-Commerce Technical components: Web resources, ISP, Cookies; Evolution of the Internet, Internet for Business, TCP/IP and OSI Model protocol, Broad Band Technology. Supply chain management; Definition, Different categories of supply chain, Functions of SCM, Benefits of SCM;

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Books suggested

1. e-Commerce, CSV. Murthy, Himalaya Publishing House.
2. e-Commerce, Kenuth. L. Landon, Pearson Education.
3. e-Commerce, Renu Gupta, Mahavir Publications.
4. e-Commerce, David Whiteley, Tata Mco-raw-Hill.

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B.Com.III Pass Vth Sem w.e.f. from 2017-18
Paper: International Business Environment
Code : 5.06 (v)

Time: 3 Hours

Theory Marks: 80
Internal Marks: 20

Note:- The Examiner shall set nine questions in all covering the whole syllabus. Question No.1 will be compulsory covering all the units and shall carry 8 small questions of 2 marks each. The rest of the eight questions will be set from all the four units. The examiner will set two questions from each unit out of which the candidate shall attempt four questions selecting one question from each unit. All the questions shall carry 16 marks each.

Unit – I

Recent global trends in international trade and finance; dimensions and modes of IB; structure of IB environment; risk in IB; motives for internationalization of firms; organizational structure for IB; world trading system and impact of WTO; exchange rate systems; global financial system; barriers to IB; international business information and communication.

Unit – II

Foreign market entry strategies; country evaluation and selection; factors affecting foreign investment decisions; impact of FDI on home and host countries; types and motives for foreign collaboration; control mechanisms in IB.

Unit – III

Decisions concerning global manufacturing and material management; outsourcing factors; managing global supply chains; product and branding decisions; managing distribution channels; international promotion mix and pricing decisions; counter trade practices; mechanism of international trade transactions.

Unit – IV

Harmonizing accounting difference across countries; currency translation methods for consolidating financial statements; the LESSARD-LORANGE Model; cross cultural challenges in IB; international staffing decisions; compensation and performance appraisal of expatriate staff; ethical dilemmas and social responsibility issues.

Suggested Readings:

1. Daniels, J.D. and H. LEE Radesbaugh, International Business-Environment and Operation (New Delhi; Pearson Education).

2. Hill, Charles W.L., International Business – competency in the Global marketplace (New Delhi: Tata McGraw Hill).

3. Sundram, Anant K and steward J Black, The International Business environment: Text and Cases (New Delhi: Prentice Hall of India).

4. Sharan, V., Internatinal Business: Concept, Environment and strategy (New Delhi: Person Education)

5. Beth V. Yarbrough and Robert H.Yarbrough, The World Economy – Trade and Finance, Thomson Leaning, Singapore

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B.Com.III Pass (Pass Course) VIth Sem w.e.f. from 2017-18

Paper: Taxation Law – II
Code: 6.01

Time: 3 Hours

Theory Marks: 80
Internal Marks: 20

Note:- The Examiner shall set nine questions in all covering the whole syllabus. Question No.1 will be compulsory covering all the units and shall carry 8 small questions of 2 marks each. The rest of the eight questions will be set from all the four units. The examiner will set two questions from each unit out of which the candidate shall attempt four questions selecting one question from each unit. All the questions shall carry 16 marks each.

Important: The Examiner will set at least Two numerical questions in the question paper.

Unit – I

Rebate & Relief of Tax, computation of Total income and Tax liability of individuals. Filling and Filing of return (ITR – I and II)

Unit – II

Assessment of Hindu Undivided Families, Assessment of Firms & Association of Persons.

Unit – III

Income Tax authorities & their powers; procedure for assessment; Deduction of Tax at Source (TDS); advance payment of tax.

Unit – IV

Recovery & refund of tax; appeals & revision; penalties, offences & prosecutions.

Suggested Readings:

1. *Direct Taxes Law & Practice : Dr. H C Mehrotra & Dr. S P Goyal, Sahitya Bhawan Publications, Agra.*
2. *Direct Taxes & Practice : Dr. V K Singhania, Taxman Publications.*
3. *Direct Taxes Law & Practice : Dr. Bhagwati Prasad, Wishva Prakashan, New Delhi*
4. *Simplified Approach to Income Tax : Dr. Girish Ahuja & Dr. Ravi Gupta – Sahitya Bhawan Publishes & Distributors, Agra*

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B.Com.III Pass (Pass Course) VIth Sem w.e.f. from 2017-18
Paper: Cost Accounting -II
Code: 6.02

Time: 3 Hours

Theory Marks: 80
Internal Marks: 20

Note:- The Examiner shall set nine questions in all covering the whole syllabus. Question No.1 will be compulsory covering all the units and shall carry 8 small questions of 2 marks each. The rest of the eight questions will be set from all the four units. The examiner will set two questions from each unit out of which the candidate shall attempt four questions selecting one question from each unit. All the questions shall carry 16 marks each.

Important: The Examiner will set at least THREE numerical and THREE theoretical questions in the question paper.

Unit – I

Process Costing : Meaning; Uses; Preparation of process account, Treatment of Normal Wastage, Abnormal Wastage, Abnormal Effectiveness; Treatment of opening and closing stock (Excluding Work in Progress): Joint - Product and By - Product: Main methods of apportionment of Joint cost. Inter process profits.

Unit – II

Contract Costing – meaning, main features, preparation of contract account, Escalation clause; contract near completion; cost plus contract. Job and batch costing.

Unit- III

Budgetary control – meaning of budget and budgetary control, budgetary control as a management tool, limitations of budgetary control, forecasts and budgets, installation of budgetary control system, classification of budgets, fixed and flexible budgeting, performance budgeting, zero based budgeting and responsibility accounting.

Standard Costing : meaning, limitations, standard costs and budgeted costs, determination of standard cost, cost variances, direct material and direct labour only.

Unit – IV

Marginal Costing and Profit planning: Marginal costing, Absorption costing, Marginal cost, Cost volume Profit analysis, BEP Analysis, Key factor, BE chart, angle of incidence, concept of decision- making and steps involved, determination of sales mix, make or buy Decisions.

Suggested Readings:-

1. *S.P. Iyengar – Cost Accounting, Sultan Chand & Sons, Educational Publishers, New Delhi., Jain & Narang – Cost Accounting – Principles and Practice Kalyani Publishers, Ludhiana., Maheshwari and Mittal – Cost Accounting – Sh. Mahavir Book Depot, Delhi.*

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B.Com.III Pass (Pass Course) VIth Sem w.e.f. from 2017-18

Paper : Financial Management
Code: 6.03

Time: 3 Hours

Theory Marks: 80
Internal Marks: 20

Note:- The Examiner shall set nine questions in all covering the whole syllabus. Question No.1 will be compulsory covering all the units and shall carry 8 small questions of 2 marks each. The rest of the eight questions will be set from all the four units. The examiner will set two questions from each unit out of which the candidate shall attempt four questions selecting one question from each unit. All the questions shall carry 16 marks each.

Important: The Examiner will set at least THREE numerical and THREE theoretical questions in the question paper.

Unit – I

Nature of Financial Management : Scope of Finance, Finance functions, Financial Manager's role, Financial goal; Profit maximization Vs Wealth maximization, Objective of financial Management, Finance and related disciples, Financial planning

Unit – II

Working Capital Management : Meaning, nature and planning of Working Capital. Permanent and variable Working Capital. Balanced working position, determinates of working Capital, Issues of working Capital Management. Management of cash and Marketable Securities and Receivables Management.

Unit –III

Cost of capital : Significance and determination, capitalisation;
leverage analysis: operating, financial and composite leverage: EBIT-EPS Analysis.

Units – IV

Capital structure theory and policy: Relevance of capital structure; Net income and traditional views. Irrelevance of capital structure; NOI Approach and the MM Hypothesis without taxes, capital structure planning and policy.

Dividend Theory and Policy : Issues in dividend policy, Walter's and Golden's model of dividend relevance objections of dividend policy, considerations in dividend policy, stability of dividends, forms of dividend.

Suggested Readings:-

1. *Financial Management Accounting by : I.M.Pandey, Vikas Publications House New Delhi.*
2. *Financial Management Accounting by Khan & Jain, Tata Mc Graw Hill, Publications New Delhi.*

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B.Com.III Pass (Pass Course) VIth Sem w.e.f. from 2017-18
Paper: Auditing
Code: 6.04

Time: 3 Hours

Theory Marks: 80
Internal Marks: 20

Note:- The Examiner shall set nine questions in all covering the whole syllabus. Question No.1 will be compulsory covering all the units and shall carry 8 small questions of 2 marks each. The rest of the eight questions will be set from all the four units. The examiner will set two questions from each unit out of which the candidate shall attempt four questions selecting one question from each unit. All the questions shall carry 16 marks each.

Unit – I

Auditing : Meaning, objectives, importance and types of Auditing.

Audit Process: internal control, internal check & internal audit, audit programmer.

Unit – II

Audit Procedure : Routine checking, vouching, verification & valuation of assets & liabilities. Unit – III

Audit of Public Company : Qualification, Appointment of company Auditors, their powers, duties and liabilities, Audit of depreciation and reserves, Divisible profits & dividends

Unit – IV

Audit Report and Investigation

Audit Report : Meaning, objectives, contents and types.

Investigation : Meaning, Nature and objectives.

Suggested Readings:

1. *Sharma T.R. Principles of Auditing Sahitya Bhawan, Agra.*
2. *Tondon B.N. Principles of Auditing, S. Chand and Co., New Delhi.*
3. *Gupta Kamal contemporary Auditing Tata Mc Graw hill, New Delhi.*

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B.Com.III Pass (Pass Course) VIth Sem w.e.f. from 2017-18
Paper: Indirect Taxes
Code: 6.05

Time: 3 Hours

Theory Marks: 80
Internal Marks: 20

Note:- The Examiner shall set nine questions in all covering the whole syllabus. Question No.1 will be compulsory covering all the units and shall carry 8 small questions of 2 marks each. The rest of the eight questions will be set from all the four units. The examiner will set two questions from each unit out of which the candidate shall attempt four questions selecting one question from each unit. All the questions shall carry 16 marks each.

Unit – I

Indirect Taxes: Introduction, meaning, features, merits and demerits.

Central Excise Duty Act 1944: Central Excise: meaning, features, nature, kinds, important definitions, general procedure for excisable goods and obtaining registration. Valuation of Central Excise Duty, exemptions to small scale industries.

Unit – II

Customs Act 1962 : Customs duty : Important definitions, types, importance, documents required for import and export procedure : Export Promotion Scheme.

Unit – III

Central Sale Tax Act 1956 : Meaning, growth, objects and important definitions; principles for determining different categories of sales, collection of tax. Registration of Dealers : Procedure for obtaining registration certificate; Amendment in Certificate of Registration, cancellation of Certificate of Registration

Unit – IV

Service Tax 2007: Service Tax; Historical development, features, scope, taxable services and exempted services, service tax credit; procedure regarding valuation of taxable services, compensation of tax of different services, provisions regarding registration and furnishing the returns of service tax.

Suggested Readings:-

1. *V.S.Datey, Indirect Taxes, Taxmann's Publications Pvt. Ltd. New Rohtak Road, New Delhi – 110005.*
2. *Dr. H.C.Mehrota, Indirect Taxes Law and Practice, Sahitya Bhawan Publications, Hospital Road, Agra -282003.*
3. *Dr. Girish Ahuja and Dr. Ravi Gupta, Systamatic Approach to Income Tax, Bharat Law House Pvt. Ltd., New Delhi – 10083.*
4. *Dr. V.K. Singhania and Dr. Monika Singhania, Students' Guide to Income Tax, Taxmann's Publication Pvt. Ltd, New Rohtak Road, New Delhi- 110005.*
5. *Dr. Girish Ahuja and Dr. Ravi Gupta, Simplified Approach to Corporate Tax Planning and Management, Bharat Law House Pvt. Ltd., New Delhi – 110083.*

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B.Com.III Pass (Pass Course) VIth Sem w.e.f. from 2017-18
Optional Paper : International Trade
Code: 6.06 (i)

Time: 3 Hours

Theory Marks: 80
Internal Marks: 20

Note:- The Examiner shall set nine questions in all covering the whole syllabus. Question No.1 will be compulsory covering all the units and shall carry 8 small questions of 2 marks each. The rest of the eight questions will be set from all the four units. The examiner will set two questions from each unit out of which the candidate shall attempt four questions selecting one question from each unit. All the questions shall carry 16 marks each.

Unit – I

International Business:- An overview; Domestic business; International Business; Major risks and challenges of International Business; International Business Environment – Components and determinants; stages of internationalization of business; international business approaches, concept of globalization.

Unit – II

Modes of entering into international business; nature of multinational enterprise and international direct investment; foreign exchange; determination of exchange rate; Balance of payments.

Unit – III

Theories of International Trade : Absolute advantage theory; comparative advantage theory; factor proportions theory; product life cycle theory of trade; government influence on trade; rationale for government intervention, instruments of trade control; role of WTO, IMF and World Bank in International trade.

Unit – IV

Assessing International markets; designing products for foreign markets branding decisions; International promotions policy; international pricing; international logistics and distribution

Suggested Readings:

1. *International Business : Francis Cherunilam (Himalaya Publishing House)*
2. *International Trade and Export Management: Francis Cherunilam (Himalaya Publishing House)*
3. *International Business: Dr. P. SubbaRao (Himalaya Publishing House)*
4. *International Trade: Raj Aggarwal (Excel Publication)*

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B.Com.III Pass (Pass Course) VIth Sem w.e.f. from 2017-18
Optional Paper: International Marketing
Code: 6.06 (ii)

Time: 3 Hours

Theory Marks: 80
Internal Marks: 20

Note:- The Examiner shall set nine questions in all covering the whole syllabus. Question No.1 will be compulsory covering all the units and shall carry 8 small questions of 2 marks each. The rest of the eight questions will be set from all the four units. The examiner will set two questions from each unit out of which the candidate shall attempt four questions selecting one question from each unit. All the questions shall carry 16 marks each.

Unit – I

International Marketing:

Nature and Concept; Domestic Vs International Marketing; Opportunities and Challenges for marketing in International Environment ; Foreign market selection and entry modes.

Unit – II

Product Planning and Pricing:

International product life cycle research and informations; Product designing and packaging; Pricing process and methods; International price quotations and payment terms.

Unit – III

International Distribution:

Channel structure and selection decisions; Managing channel conflicts; Selection and appointment of foreign sales agents; Basic export procedure and documentation.

Unit – IV

Product Promotion:

Methods of International product Promotion; challenges in International advertising and media strategy; Web marketing; Organising trade fairs and exhibitions.

Suggested Readings:

1. *Bhattacharya R.L and Varshney B: International Marketing Management: Sultan Chand, New Delhi.*
2. *Keegan W.J, Multinational Marketing Management, Prentice Hall, New Delhi.*
3. *Kotler Phillip: Moder Mott M.C: The Essence of International Business, Prentice Hall, New Delhi.*
4. *Caterora P.M. and Keaveney S.M: Marketing and International Perspective, Ervind Homewood Illinois.*

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B.Com.III (Pass Course) VIth Sem w.e.f. from 2017-18
Optional Paper : Fundamentals of Operations Research
Code: 6.06 (iii)

Time: 3 Hours | Theory Marks: 80
Internal Marks: 20

Note:- The Examiner shall set nine questions in all covering the whole syllabus. Question No.1 will be compulsory covering all the units and shall carry 8 small questions of 2 marks each. The rest of the eight questions will be set from all the four units. The examiner will set two questions from each unit out of which the candidate shall attempt four questions selecting one question from each unit. All the questions shall carry 16 marks each.

Unit – I

Basics of Operational Research – Development, Definition Charactertics, Necessity, Scope, Limitation.

Linear Programming - Introduction, Application, Formulation of Linear Programming Problem, General Linear Programming Problem, Graphical Method of Solution. Theory of Simplex method, Big-M Method, Integer Programming.

Unit – II

Transportation Model - Assumption, Formulation and Solution of transportation Models, Trans-Shipment Problems, Definition of Assignment Model, Hungarian Method for solution of Assignment Problems. Travelling Salesman problem.

Unit – III

Queuing Models – Application, Introduction, Elements, operating Characteristics, Waiting Time and Idle Time Costs, Model I – Single Channel poison Arrivals with Exponential Service Times. Infinite _ Population; Assumption & Limitation Poisson of Queuing Model.

Game Theory – Theory of Games, Charactertics of Games, Rules – Look for a pure Strategy, Reduce Game by Dominance, Mixed Strategies (2 x 2 Games, 2 x n Games or m x 2 Games).

Unit – IV

Simulation : Introduction- Meaning, Advantage, Limitation, Application, When to use Simulation? Monte Carlo Simulation, Generation of Random numbers.

Net Work Analysis in Project Planning: Project, Project Planning scheduling, CPM, PERT, Cost Analysis and Crashing the Network Exercises.

Suggested Readings:

1. Hien, L.W.: Quantitative approach to Managerial decisions, Prentice hall, New Jesercy. India, Delhi.
2. Lawrence B. Morse: Statistics for Business & Economics, Harper Collins.
3. Levin, Richard I and David S Rubin: Statistics for management, Prentice hall of India, Delhi.
4. Watsnam Terry J. and Keith Parramor: Quantitative Methods in Finance, International Thompson Business Press.
5. Ackaff, R.L. and Sasieni, M.W., Fundamentals of Operations Research, John Wiley and Sons Inc., New york 1986.

Incharge 20/11/18
Department of Commerce
Bhagat Phool Singh Mahila Vishwavidyalaya
Khanpur Kalan (Sonipat)

-12-

B.Com.III (Pass Course) VIth Sem w.e.f. from 2017-18
Optional Paper : Essentials of E-Commerce –II
Code : 6.06 (iv)

Time: 3 Hours **Theory Marks: 80**
Internal Marks: 20

Note:- The Examiner shall set nine questions in all covering the whole syllabus. Question No.1 will be compulsory covering all the units and shall carry 8 small questions of 2 marks each. The rest of the eight questions will be set from all the four units. The examiner will set two questions from each unit out of which the candidate shall attempt four questions selecting one question from each unit. All the questions shall carry 16 marks each.

Unit – I

E-Commerce : History of E-Commerce, Types of E-Commerce; B2B Business Models, B2 C Business models, M-Commerce; Business Models in Emerging E-Commerce Areas; Applications in E-Commerce, E-Commerce in Service Industry, Retail E-Commerce, E-Commerce in Financial Services, E-Commerce and shopping, E-Commerce Travel and Tourism, Internet Shopping, Future of E-Commerce.

Unit – II

Technology Infrastructure for E-Commerce: Internet key Technology Concepts, Switching Techniques,TCP / IP, IP Address, Domain names Service, URL, Client / Server Computing; Internet Protocal- HTTP, E-Mail Protocals, FTP, and SSL, WWW, Internet and the Web features; Internets and extranets: Role of Internets in B2B Applications, Access to Internets and Extranets , Application Extranet, Virtual Private Network (VPN), Firewall, Web Browser, Elements of Networking.

Unit – III

The Elements of e-Commerce: elements, e-visibility, e-shop, online payments, Delivering the goods, After-sales service, Internet e-Commerce security, A Website Evaluation Model. e-Business; Introduction, Internet Bookshops, Grocery Supplies, Software Supplies and Support Electronic, Newspaper Internet Banking, Virtual Auctions, Online share dealing, e-Diversity, Benefits of Auctions, Types and Examples of on-line Auctions.

Unit – IV

Customer Relationship Management: Introduction need of an electronic CRM, CRM's Goal, E-CRM Applications, CRM in Indian Banking, Technology use in CRM; E-Commerce marketing Communications; Online advertising, Display Ads, Search engine Advertising, Sponsorships, E-Mail marketing, Online Catelogs, Social Network, Offline adverting, Website as a marketing Communication Toll, Retail Sector; Advantages and Challenges to online Retail.

Books suggested :

1. e-Commerce, CSV, Murthy, Himalaya Publishing House.
1 e-Commerce, Keunth. L. Landon, Pearson Education.
2 e-Commerce, David Whiteley, Tata Mco-raw-Hill.

Incharge 30/1/18
Department of Commerce
Bhagat Phool Singh Mahila Visi...avidyalaya
Khanpur Kalan (Sonip...)

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B.Com.III Pass Vth Sem w.e.f. from 2017-18
Paper : Tax Planning and Management
Code: 5.06 (v)

Time: 3 Hours

Theory Marks: 80
Internal Marks: 20

Note:- The Examiner shall set nine questions in all covering the whole syllabus. Question No.1 will be compulsory covering all the units and shall carry 8 small questions of 2 marks each. The rest of the eight questions will be set from all the four units. The examiner will set two questions from each unit out of which the candidate shall attempt four questions selecting one question from each unit. All the questions shall carry 16 marks each.

Unit – I

Concepts of Tax Planning, Tax Evasion, Tax Avoidance, Tax Management Feature of Tax Planning, Need for Tax planning, Precautions in Tax planning, Limitations of Tax planning, Difference between Tax planning, Tax evasion, Tax avoidance, Tax Management.

Unit – II

Tax planning in relation to residential status and non-residents Tax-planning in relation to Employees remuneration: Tax planning for employer, Tax planning for employees. Tax Planning in relation to income from House Property Tax planning in relation to income from Business & profession.

Unit – III

Tax planning in relations to income from capital gains and other sources. Tax planning in relation to individuals and H.U.Fs.

Unit –IV

Tax planning in relation to partnership firms, Body of Individuals or Associations of Persons. Tax planning in relation to setting up of a new business: Nature and Size of Business. location of Business.

Suggested Readings:

1. Direct Taxes Law & Practice – Dr.H.C.Mehrotra & Dr.S.P.Goyal Sahitya Bhawan Publications, Agra.
2. Corporate Tax Planning & management – Dr.H.C.Mehrota and Dr.S.P.Goyal – Sahitya Bhawan Publications, Agra.
3. Direct Taxes & Practice – Dr.V.K.Singhania Taxman's Pulications.

Incharge 29/1/18
Department of Commerce
...l Singh Mahila Vishwavidyalaya
...alan (Sonipat)

FACULTY OF EDUCATION
B.P.S.MAHILA VISHWAVIDYALAYA,
KHANPUR KALAN, SONEPAT-131305
(A State University Established under the Legislative Act No. 31/2006)

☎ 01263-283627 *Fax:* 01263-283627

MINUTES OF FACULTY OF EDUCATION MEETING HELD ON 05.03.2018

A meeting of Faculty of Education held on 05.03.2018 at 4.00 p.m. in the office of the Chairperson, BPS Institute of Teacher Training And Research, BPS Mahila Vishwavidyalaya, Khanpur Kalan under the Chairpersonship of Dr. Sumitra Devi, Dean, Faculty of Education.

The following were present in the meeting.

1.	Dr. Sumitra Devi, Dean, Faculty of Education, BPSMV	-	Chairperson
2.	Dr. Suman Dalal, Chairperson, BPSITTR, BPSMV	-	Member
3.	Dr. Renuka Sharma, Associate Professor, BPSITTR, BPSMV	-	Member
4.	Dr. Veena Rani, Principal, Institute of Higher Learning, BPSMV	-	Member
5.	Dr. Anu Balhara, Assistant Professor, BPSITTR, BPSMV	-	Member
6.	Registrar's Nominee	-	Secretary

The following was considered in the meeting:

At the outset Chairperson of the meeting Dr. Sumitra Devi extended a warm and cordial welcome to all the members of the Faculty of Education and apprised them about the agenda of the meeting. After exchange of pleasantries the following agenda was taken:

Agenda No. 1: **Consideration and approval of minor changes in the syllabus of paper Contemporary Issues in Indian Education Code MPE-2106 SEM 2 of M.Phil. Class.**

- Approved.

The meeting ended with the vote of thanks.

(Dr. Sumitra Devi) 5/3/18 (Dr. Suman Dalal) 5.3.18 (Dr. Renuka Sharma)

(Dr. Veena Rani) 5/3/18 (Dr. Anu Balhara) 05/03/18 (Sh. Kuldeep Singh)
Registrar's Nominee

Gmail Suman Dalal <sumand149@gmail.com>

PGBOS through circulation

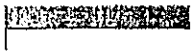
5 messages

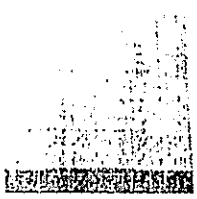
Suman Dalal <sumand149@gmail.com> Thu, Feb 1, 2018 at 1:37 PM
To: monika3014 <monika3014@yahoo.com>, "Dr. Yogesh Chander Thakur" <yogeshvolley@gmail.com>, "spmalhotra.2008" <spmalhotra.2008@gmail.com>, vjoshi <vjoshi@ignou.ac.in>, Sumitra Jatain <sumitradevi2212@gmail.com>, Renuka Sharma <renukasingh55@gmail.com>

Respected sir/mam
As per the request made by Dr. Renuka Sharma, Associate Professor regarding minor changes in the syllabus of paper Contemporary Issues in Indian Education code MPE- 2106 SEM 2 of MPhil class. The original syllabus and changed syllabus is attached herewith for your reference and approval please,You are requested to send your consent as early as possible so that it can be implemented

Regards
Dr. Suman Dalal

3 attachments





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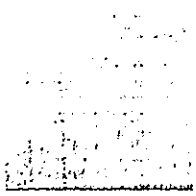

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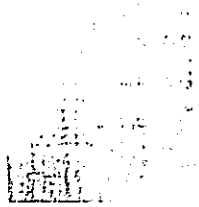

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Malhotra suraj prakash <spmalhotra.2008@gmail.com> Fri, Feb 2, 2018 at 10:28 AM
To: Suman Dalal <sumand149@gmail.com>

Dear Prof. Suman Dalal

Reference your mail regarding Dr. Renuka Sharma, suggested minor changes in the syllabus of paper ... Issues in Indian Education code MPE- 2106 SEM 2 of MPhil class.
The proposed changes in the syllabus are approved and endorsed
with regards

--
Prof.S.P.Malhotra
MHRD New Delhi

Renuka Sharma <renukasingh55@gmail.com> Fri, Feb 2, 2018 at 11:03 AM
To: Suman Dalal <sumand149@gmail.com>
Cc: monika3014 <monika3014@yahoo.com>, "Dr. Yogesh Chander Thakur" <yogeshvolley@gmail.com>, "spmalhotra.2008" <spmalhotra.2008@gmail.com>, vjoshi <vjoshi@ignou.ac.in>, Sumitra Jatain <sumitradevi2212@gmail.com>

Approved.

Dr. Yogesh Chander Thakur <yogeshvolley@gmail.com> Fri, Feb 2, 2018 at 11:05 AM
To: Suman Dalal <sumand149@gmail.com>

Approved

monika Kundu <monika3014@yahoo.com> Sat, Feb 3, 2018 at 12:52 PM
To: "Dr. Yogesh Chander Thakur" <yogeshvolley@gmail.com> "spmalhotra.2008" <spmalhotra.2008@gmail.com>, vjoshi <vjoshi@ignou.ac.in>, Sumitra Jatain <sumitradevi2212@gmail.com>, Renuka Sharma <renukasingh55@gmail.com>, Suman Dalal <sumand149@gmail.com>

Approved.

ANNEXURE-10

Faculty of Education
B.P.S. Mahila Vishwavidyalaya, Khanpur Kalan

Master of Philosophy (edu.)

Contemporary Issues in Indian Education

(MPE-2106)

MAX. MARKS =100
External Marks = 80
Internal Marks = 20

Total inst. Hours per week = 5+1
Exam Hours : 3Hrs.
Credit per week = 6

Objectives:

This paper will enable the student to:

1. Get the Knowledge of the contemporary issues in Indian Education in a global perspective.
2. Have a critical understanding of the development of Education as a distinct discipline.
3. Understand the nature of education as an area of study with interdisciplinary knowledge base;
4. Understand the emerging nature of educational theories by making linkages between the theoretical understanding and practices and/ or field experiences.
5. Appreciate that research would help to enhance efficiency, effectiveness, quality and excellence in the system of school education

UNIT-I Contemporary Issues in Education

- Educational policies
- Well being education
- Comparative education
- Development education
- Citizenship education
- Economics of education

UNIT- II New Trends in Education

- Inclusive Education
- I.C.T in Education
- Life Skill Education
- Multicultural Education
- Social Constructivism
- Education of the disadvantage

16/3/18.

Chairperson,
B.P.S. Instt. of Teacher Training & Research
BPS Mahila Vishwavidyalaya
Khanpur Kalan (Sonepat)

UNIT III Learning, Cognition and Development

- Prospective of Human Development : Piaget, Vygotsky and Constructivism Prospectives
- Concept of Holystic Development
- Knowledge about the students: Cognition and Adolescent Development
- Individual Differences
- Cultural Functions of Education - Diffusion,acculturation
- Learning Environment

UNIT IV Contemporary Issues in Indian Education in a Global Perspective

- Concept of Universalization of Elementary Education
- Related Issues of Universalization : Provision, Enrolment and Retention/Completion rates in elementary education
- Programmes for achieving the Objectives of Universalization of Elementary Education
- District Primary Education Projection (DPEP)
- Sarva Shiksha Abhiyan
- National Programme of Nutritional support to Primary Education (NPNSPE) or Mid-Day Meals
- National Programme of Education of Girls at Elementary stage scheme

Suggested Reading :

- Bruner, J.C. (1997). The Culture and Education. London: Harvard University Press
- Edqerton, Susan Huddleston (1997). Translating the Curriculum: multiculteulism into the cultural studies. Routledge.
- Etta, r.hollins (1996) : Transforming Curriculum For A Culturally Diverse Society. Lawrence erlbaum associates publishers. mahwah. new jersey.
- Government of india (2001): National Human Development Report 2001. New delhi: planning commission
- Hergenhahn, b.r. & matthew h. Olson (2007). An Introduction To Theories Of Learning (7^{th} edition). Prentice hall of india
- Slattory (1995): Curriculum Development In Postmodern Era. (Critical Education & practice)
- Smith, Edward e. & Kosslyn, Stephen m. (2007). Cognitive Psychology: Mind And Brain Prentice Hall Of India

16/3/18.

Chairperson
B.P.S. Instt. of Teacher Training & Research
BPS Mahila Vishwavidyalaya
Khanpur Kalan (Sonepat)

MPE-2106

Contemporary Issues in Indian Education

Max. Marks: 100 | Total Inst. Hours per week: 05+01

External Marks: 80 | Exam Hours: 3Hrs.

Internal Marks: 20 | Credit per week: 6

Objectives:

The paper will enable the student to:

- Get the Knowledge of the contemporary issues in Indian Education in a global perspective.
- Have a critical understanding of the development of Education as a distinct discipline.
- Understand the nature of education as an area of study with interdisciplinary knowledge base;
- Understand the emerging nature of educational theories by making linkages between the theoretical understanding and practices and/or field experiences.
- Appreciate that research would help to enhance efficiency, effectiveness, quality and excellence in the system of school education.

UNIT-I: Basic Theoretical Understanding about Education as a Field of Study

1.1 Educational paradigms - empirical, interpretive and critical perspectives.

1.2 Critical appraisal of education as a discipline.

1.3 Epistemological and axiological issues in education.

1.4 Procedures of linking theoretical and conceptual understanding about education drawn from various disciplines cognate to the education like Philosophy, Sociology, Psychology, Management, different social and behavioral sciences with school and classroom practices and/or field experiences.

1.5 Methodology of linking school subjects with pedagogy.

1.6 Challenges of theorizing education.

1.7 Formulating Aim of Education in the context changing socio-economic and cultural perspectives.

UNIT-II: Contemporary Issues in Education

2.1 Globalization and education

2.2 Equal opportunities in education, access and reservation in education.

2.3 Quality concerns in education- national and international perspectives in India.

2.4 Language and medium of instructions

2.5 Education for health and well being

Chairperson

3.1 Process of education and learning

3.2 Pedagogy

3.3 Andragogy

3.4 Forms of learners engagement in the process of knowledge construction.

3.5 Understanding the changing profile of the teachers/teacher educators.

3.6 Activities for development of critical perspectives.

3.7 Teacher's reflection on his own practices.

UNIT-IV: Contemporary Issues in Indian Education in a Global Perspective

4.1 Concept of Universalization of Elementary Education

4.2 Related Issues of Universalization: Provision, Enrolment and Retention/completion rates in elementary education

4.3 Programmes for achieving the objectives of Universalisation of Elementary Education.

4.4 District Primary Education Projection (DPEP)

4.5 Sarva Shiksha Abhiyan

4.6 National Programme of Nutritional Support to Primary Education (NPNSPE) or Midday Meals

4.7 National Programme of Education of Girls at Elementary Stage Scheme (NPEGESS)

Suggested Readings:

- Bruner, J.C. (1997). *The Culture and Education*. London: Harvard University Press.
- Edgerton, Susan Huddleston (1997). *Translating the Curriculum: Multiculturalism into the Cultural Studies*. Routledge.
- Etta, R. Hollins (1996): *Transforming Curriculum for a Culturally Diverse Society*. Lawrence Erlbaum Associates Publishers. Mahwah, New Jersey.
- Government of India (2001). National Human Development Report 2001. New Delhi: Planning Commission.
- Hergenhahn, B.R. & Matthew H. Olson (2007). *An Introduction to Theories of Learning*. (7th edition). Prentice Hall of India.
- Slattory (1995): *Curriculum Development in Postmodern Era*. (Critical Education & Practice).
- Smith, Edward E. & Kosslyn, Stephen M. (2007). *Cognitive Psychology: Mind and Brain*. Prentice Hall of India.

Chairperson

Annexure - II

Minutes of the meeting for proper implementation of subject of Environmental Studies in various teaching Departments/ Institutes/ Constituent and Affiliated Colleges/ Regional Centers of the University held on 06.04.2018 at 2.00 p.m. in the office of the Dean Academic Affairs, BPSMV, Khanpur Kalan.

The following were present:-

1.	Prof. Ipshita Bansal, Dean Academic Affairs	Convener
2.	Prof. Vimal Joshi, Dean, Faculty of Laws,	Member
3.	Prof. Vijay Nehra, Dean, Faculty of Engineering &Sciences	Member
4.	Dr. Sushma Joshi Nominee of Dean Faculty of Sciences	Member
5.	Dr. Suman.Dalal, Dean, Faculty of Physical Education	Member
6.	Dr. Sumitra Devi, Dean, Faculty of Education	Member
7.	Dr. Bhupinder Singh, Asstt. Professor, BAS	Special Invitee

All the members reviewed the syllabus prepared by Dr. Bhupinder Singh, Assistant Professor and the semester scheme of study and examination was also reviewed. Suggestions were given. Dean Academic Affairs was of the view that components of field work should be included in the paper. The committee finalized the syllabus. It was also suggested that an ECO club be constituted, of which, every student will become a member to take part in various activities related to environmental protection and sustainability.

Prof. Ipshita Bansal

Prof. Vimal Joshi

Prof. Vijay Nehra

Dr. Sushma Joshi

Dr. Suman Dalal

Dr. Sumitra Devi

Dr. Bhupinder Singh

S172/03/2018-4594

BAS/18/82
26/03/18

To
The Dean Academic Affairs
BPSMV, Khanpur Kalan, Sonipat.

Subject: Submission of copy of moderated syllabus and schedule for the teaching of subject of Environmental Studies across the university teaching departments (w.e.f. session 2018).

Respected Madam,

This is with reference to properly implementation of subject of Environmental Studies in various teaching Departments/Institutes/Constituents and Affiliated Colleges/Regional Centers of the Bhagat Phool Singh Mahila Vishwavidyalaya, Khanpur Kalan from session July, 2018. In this regard meeting was held on 15th March, 2018 at DAA office and undersigned was assigned the duty to moderate syllabus and to prepare schedule for the teaching of Environmental Studies in odd and even semester across the university. The needful has been done by consulting with various departments.

Hence, please find enclosed herewith bilingual copy of moderated syllabus in English and Hindi along with proposed schedule for teaching of Environmental Studies in odd and even semester across the university.

Thanking you.

Dr. Bhupinder Singh
Ass. Prof. (Env. Sc.)
Department of BAS
BPSMV, Khanpur Kalan.

Enclosures: A total of 16 pages, as detailed below-

1. Reply w.r.t. to subject cited above (page no. 1-2)
2. Minutes of meeting w.r.t. subject under reference (page no. 3-4).
3. UGC module curriculum for Environmental Studies (page no. 5-6).
4. Moderated copies of syllabus for Environmental Studies (page no. 7-11).
5. Notification by GJUS&T regarding subject of Environmental Studies (12-16).

Discussed, meeting may be fixed on 6/4/18 at 2.0 in view of DAA & PI issue of

-123-

This is with reference to the Minutes of the meeting for proper implementation of subject of Environmental Studies in various teaching Departments/Institutes/Constituents and Affiliated Colleges/Regional Centers of the University held on 15th March, 2018 at 11.00 a.m. in the office of the Dean Academic Affairs, BPSMV, Khanpur Kalan (copy enclosed at flag A).

In this context, the action taken report/reply by Dr. Bhupinder Singh is as follows:

1. University Grants Commission has framed eight units module syllabus for Ability Enhancement Compulsory Course (AECC- Environment Studies) for teaching Environmental Studies. The module is available on the website of University Grants Commission and the copy of the same is enclosed herewith for ready reference (flag B). The same is synchronized in to four units to meet the needs of students and examination branch of BPSMV, Khanpur Kalan. The moderated copy of the syllabus in both languages i.e. in Hindi and English and other detail is attached at flag 'C'.

Regarding point no. 02 (two) of minutes on inclusion of marks Environmental Studies in detailed marks card of each student and allotment of four credits to this subject in the syllabi of different courses, it is submitted that:

1. Marks in the subject of 'Environmental Studies' be added to the aggregate marks so that students take this paper seriously and the objectives and vision envisaged by Hon'ble Supreme Court and AICTE/UGC etc. for introducing this subject should be realized in letter and spirit. It is pertinent to mention here that earlier in B. Tech courses this subject was offered as a credit course and the marks were included in the DMC (till May, 2012) but latter on (after July, 2012) this subject was converted to non credit subject without assigning any reason. In fact, assigning credits to 'Environmental Studies' will increase its seriousness among the students. Recently Guru Jambheshwar University of Science & Technology, Hisar (GJUS&T) has also notified addition of marks in the DMC of students to create seriousness among the students regarding this important subject (see flag D).
2. The paper on Environmental studies will carry of 100 marks with further break up of 80 marks as external (theory) and 20 marks as internal assessment/field work. The internal assessment will be done on the basis of university scheme/field work (flag C).
3. It is suggested that at least 4 periods per week per semester per course be allotted to teach "Environmental Studies" in the undergraduate courses to cover the syllabus as per UGC guidelines and practiced by other sister universities.

With reference to point no. 03 (three) of minutes regarding equal distribution of teaching load across the university teaching departments in odd and even semester it is submitted that:

1. To justify the teaching load of faculty in the subject of 'Environmental Studies' this subject must be taught in all the UTDs in such a way that teaching load of this subject be distributed equally in even and odd semesters as practiced in other sister universities namely MDU, KUK, YMCAUS&T and GJUS&T etc. The subject of Environmental Studies should be offered in half of the teaching departments in odd semester and in half of the teaching departments in even semester across the UTDs. This practice not only facilitates to engage the faculty throughout the year but also fulfill the condition of UGC norms of minimum 16 hours/week of teaching load for a faculty as practiced in other sister universities. Moreover, in this regard detail is given in tabular form on next page.

Teaching schedule for the subject of Environmental Studies in odd and even semester across different teaching departments of university, BPSMV, Khanpur Kalan (w.e.f. session 2018)

Faculty/Institutions	Course offered at undergraduate level	Paper Title	Lect./ week	Proposed schedule
Faculty of Arts and Languages	M.A. (int.) in Eng.	Environmental Studies	04	*Odd semester*
Faculty of Laws*	L.L.B.	Follow Bar Council of India guideline	-	-
Faculty of Commerce and Management	BBA BHM B.Com	Environmental Studies	04/ branch -	Even semester
Faculty of Engineering and Technology (FET)	B. Tech (CSE/IT/ECE/FT)	Environmental Studies	04/ branch	*3rd semester (Due to LEET students)*
Faculty of Social Sciences	M.A. (int.) Eco.	Environmental Studies	04	*Odd semester*
Faculty of Pharmaceutical Sciences*	B. Pharmacy	Environmental Studies	04	-
Faculty of Physical Education	B.P.E.S.	Environmental Studies	04	Even semester
Faculty of Education***	D.Ed.	Environmental Studies	04	Even semester
Faculty of Ayurvedic Medicines*	B.A.M.S.	Follow guidelines of CCIM	-	-
BPSIHL**/Affiliated Colleges/Regional Centers***	B.A., B.A. (Hon), B.Com. B.Com (Hon), B.Sc. (Comp. Sc., Home Sc., Med. & Non Med.)	Environmental Studies	04/ branch -	B.A. in odd semester & B.Sc./B.Com in even sem.

* As scheme is governed by respective apex bodies so, concerned Department/Authority may look in to the matter.

** BPSIHL is having 4 sections of BA and 4 sections in case of B.Sc. (Comp. Sc., Home Sc., Med. & Non Med.) i.e. 8 classes. According to 04 credits, the teaching load would be of 32 hours (8*4=32). Hence, one TA in the subject of Environmental Studies may be recruited for teaching a load of 16 hours/week in odd and even semester respectively.

*** Respective Head/Principals/Directors may look in to the matter on the basis of different sections and student strength.

Minutes of the meeting for proper implementation of subject of Environmental Studies in various teaching Departments/ Institutes/ Constituent and Affiliated Colleges/ Regional Centers of the University held on 15.3.2018 at 11.00 a.m. in the office of the Dean Academic Affairs, BPSMV, Khanpur Kalan.

The following were present:-

1.	Prof. Ipshita Bansal, Dean Academic Affairs	Convener
2.	Prof. Vimal Joshi, Dean, Faculty of Laws,	Member
3.	Prof. Vijay Nehra, Dean, Faculty of Engineering &Sciences	Member
4.	Prof. Amrita, Dean, Faculty of Arts and Languages	Member
5.	Dr. Veena, Dean, Faculty of Sciences	Member
6.	Dr. Sarla Duhan, Dean, Faculty of Ayurvedic Medicine	Member
7.	Dr. Suman Dalal, Dean, Faculty of Physical Education	Member
8.	Dr. Sumitra Devi, Dean, Faculty of Education	Member
9.	Dr. Bhupinder Singh, Asstt. Professor, BAS	Special Invitee

Prof. Surender Mor could not attend the meeting.

Dr. Krishan Kumar (FMS) attended the meeting in lieu of Prof. Sanjiv Ali.

1. It was decided in the meeting that model curriculum of the course of Environmental Studies will be adopted by all the teaching Departments (except Faculty of Law and MSM Institute of Ayurveda. The UGC model curriculum will be moderated to suit needs of the university undergraduate students. Dr. Bhupinder Singh, Asstt Professor BAS will prepare draft syllabus keeping in view the model curriculum and submit the draft to the Convener of the committee on 26.3.2018, which will be bilingual in Hindi and English.

2. The committee members of the view that since this subject is very important and needs to be studied by the students seriously so it should be credit base (4 credits) as per analogy of the other sister university of the State. The marks of this subject be added in the total marks and mentioned in DMC.

3. Since there is one teacher of Environmental Studies in the university, it is necessary that the course of Environmental Studies is equally distributed in different Departments in odd and even semesters to balance the teaching load across the university. Dr. Bhupinder Singh will equitability divides the course of different Departments in odd and even semesters in consultation with the Deans if required and submit the table of odd and even semester to the convener by 26.3.2018.

(Prof. Ipshita Bansal) (Prof. Vimal Joshi) (Prof. Vijay Nehra)

(Prof. Amrita) (Dr. Veena) (Dr. Sarla Duhan)

(Dr. Suman Dalal) (Dr. Sumitra Devi) (Dr. Bhupinder Singh)

(Dr. Krishan Kumar)

UNIVERSITY GRANTS COMMISSION

Ability Enhancement Compulsory Course (AECC – Environment Studies)

Unit 1 : Introduction to environmental studies

- Multidisciplinary nature of environmental studies;
- Scope and importance; Concept of sustainability and sustainable development.

(2 lectures)

Unit 2 : Ecosystems

- What is an ecosystem? Structure and function of ecosystem; Energy flow in an ecosystem: food chains, food webs and ecological succession. Case studies of the following ecosystems :
  a) Forest ecosystem
  b) Grassland ecosystem
  c) Desert ecosystem
  d) Aquatic ecosystems (ponds, streams, lakes, rivers, oceans, estuaries)

(6 lectures)

Unit 3 : Natural Resources : Renewable and Non-renewable Resources

- Land resources and landuse change; Land degradation, soil erosion and desertification.
- Deforestation: Causes and impacts due to mining, dam building on environment, forests, biodiversity and tribal populations.
- Water : Use and over-exploitation of surface and ground water, floods, droughts, conflicts over water (international & inter-state).
- Energy resources : Renewable and non renewable energy sources, use of alternate energy sources, growing energy needs, case studies.

(8 lectures)

Unit 4 : Biodiversity and Conservation

- Levels of biological diversity : genetic, species and ecosystem diversity; Biogeographic zones of India; Biodiversity patterns and global biodiversity hot spots
- India as a mega-biodiversity nation; Endangered and endemic species of India
- Threats to biodiversity : Habitat loss, poaching of wildlife, man-wildlife conflicts, biological invasions; Conservation of biodiversity : In-situ and Ex-situ conservation of biodiversity.
- Ecosystem and biodiversity services: Ecological, economic, social, ethical, aesthetic and Informational value.

(8 lectures)

Unit 5 : Environmental Pollution

- Environmental pollution : types, causes, effects and controls; Air, water, soil and noise pollution
- Nuclear hazards and human health risks
- Solid waste management : Control measures of urban and industrial waste.
- Pollution case studies.

(8 lectures)

Unit 6 : Enviro nmental Policies & Practices

- Climate change, global warming, ozone layer depletion, acid rain and impacts on human communities and agriculture

- Environment Laws: Environment Protection Act; Air (Prevention & Control of Pollution) Act; Water (Prevention and control of Pollution) Act; Wildlife Protection Act; Forest Conservation Act. International agreements: Montreal and Kyoto protocols and Convention on Biological Diversity (CBD).
- Nature reserves, tribal populations and rights, and human wildlife conflicts in Indian context.

(7 lectures)

Unit 7 : Human Communities and the Environment

- Human population growth: Impacts on environment, human health and welfare.
- Resettlement and rehabilitation of project affected persons; case studies.
- Disaster management : floods, earthquake, cyclones and landslides.
- Environmental movements : Chipko, Silent valley, Bishnois of Rajasthan.
- Environmental ethics: Role of Indian and other religions and cultures in environmental conservation.
- Environmental communication and public awareness, case studies (e.g., CNG vehicles in Delhi).

(6 lectures)

Unit 8 : Field work

- Visit to an area to document environmental assets: river/ forest/ flora/fauna, etc.
- Visit to a local polluted site-Urban/Rural/Industrial/Agricultural.
- Study of common plants, insects, birds and basic principles of identification.
- Study of simple ecosystems-pond, river, Delhi Ridge, etc.

(Equal to 5 lectures)

Suggested Readings:

1. Carson, R. 2002. Silent Spring. Houghton Mifflin Harcourt.
2. Gadgil, M., & Guha, R. 1993. This Fissured Land: An Ecological History of India. Univ. of California Press.
3. Gleeson, B. and Low, N. (eds.) 1999. Global Ethics and Environment, London, Routledge.
4. Gleick, P. H. 1993. Water in Crisis. Pacific Institute for Studies in Dev., Environment & Security. Stockholm Env. Institute, Oxford Univ. Press.
5. Groom, Martha J., Gary K. Meffe, and Carl Ronald Carroll. Principles of Conservation Biology. Sunderland: Sinauer Associates, 2006.
6. Grumbine, R. Edward, and Pandit, M.K. 2013. Threats from India's Himalaya dams. Science, 339: 36-37.
7. McCully, P. 1996. Rivers no more: the environmental effects of dams (pp. 29-64). Zed Books.
8. McNeill, John R. 2000. Something New Under the Sun: An Environmental History of the Twentieth Century.
9. Odum, E.P., Odum, H.T. & Andrews, J. 1971. Fundamentals of Ecology. Philadelphia: Saunders.
10. Pepper, I.L., Gerba, C.P. & Brusseau, M.L. 2011. Environmental and Pollution Science. Academic Press.
11. Rao, M.N. & Datta, A.K. 1987. Waste Water Treatment. Oxford and IBH Publishing Co. Pvt. Ltd.
12. Raven, P.H., Hassenzahl, D.M. & Berg, L.R. 2012. Environment. 8th edition. John Wiley & Sons.
13. Rosencranz, A., Divan, S., & Noble, M. L. 2001. Environmental law and policy in India. Tripathi 1992.
14. Sengupta, R. 2003. Ecology and economics: An approach to sustainable development. OUP.
15. Singh, J.S., Singh, S.P. and Gupta, S.R. 2014. Ecology, Environmental Science and Conservation. S. Chand Publishing, New Delhi.
16. Sodhi, N.S., Gibson, L. & Raven, P.H. (eds). 2013. Conservation Biology: Voices from the Tropics. John Wiley & Sons.
17. Thapar, V. 1998. Land of the Tiger: A Natural History of the Indian Subcontinent.
18. Warren, C. E. 1971. Biology and Water Pollution Control. WB Saunders.
19. Wilson, E. O. 2006. The Creation: An appeal to save life on earth. New York: Norton.
20. World Commission on Environment and Development. 1987. Our Common Future. Oxford University Press.

Annexure-12

B. P. S. Mahila Vishwavidyalaya, Khanpur Kalan, Sonepat

Syllabus (w.e.f. academic Session 2018 & onward)

For All Undergraduate Courses

Environmental Studies

ENVIRONMENTAL STUDIES

Maximum Marks: 100
Time: 03 Hours
Credits: 04

External Marks: 80
Internal Marks: 20
Code: EVS 201

Course Objectives: To sensitize the students about environmental concerns and issues, to create a clean and green consciousness among students through various activities e.g. tree plantation, water conservation, energy conservation and green & clean campus drive etc. Moreover, constitution of Eco-Club at departmental and university level would be planned i.e. one of the most important objective .Through which different environmental awareness campaigns would be initiated. Every student will become a member of Eco-Club.

Unit 1

Introduction to Environmental Studies - Nature of environmental studies; scope and importance; concept of sustainable development.

Natural Resources - Land resources: land degradation; soil erosion and desertification .Forest resources: deforestation: causes and impacts of mining and dam building on forests and tribal people. Water: use and over-exploitation of surface and ground water; conflicts over water. Energy resources: renewable and non renewable, use of alternate energy sources, case studies.

Unit 2

Ecosystems - Definition; structure and function of an ecosystem; energy flow, food chains, food webs and ecological succession; types of ecosystems: case studies.

Biodiversity Conservation - Definition; value; genetic, species and ecosystem diversity; Biogeographic zones of India; hot spots of biodiversity; India as a mega---biodiversity nation; endangered and endemic species of India; threats and conservation of biodiversity.

Unit 3

Environmental Pollution - Type, causes, effects and controls measures of; air, water, soil and noise pollution. Nuclear hazards. Solid waste and its management, global warming, ozone layer depletion, acid rain and their impacts, pollution case studies.

Disaster management: Droughts, floods, earthquake, cyclones, tsunami and landslides.

Unit 4

Environmental Policies and Practices - Environment Protection Act (1986); Air (Prevention & Control of Pollution) Act (1981); Water (Prevention and control of Pollution) Act (1974); Wildlife Protection Act (1972); Forest Conservation Act (1980).

Human Communities and the Environment – Human population growth; impacts and control. Drug abuse: drugs and their effects. Environmental movements; Chipko and Silent valley movements. Environmental ethics; role of Indian and other religions in environmental conservation.

Field Work – (write report on any two activities for internal assessment only)

1. To explain environmental issues of your area and suggest some solution for them.
2. Visit to a local polluted site-urban/rural/industrial/agricultural/sewage treatment plant.
3. Visit to an area to document environmental assets: river/ forest/ flora/fauna/herbal park.
4. Segregation of biodegradable and non biodegradable domestic solid waste to prepare its compost.

+ The rally, quiz, essay and slogan writing and painting competitions etc. would be organized to aware the students about environmental issues. The campaigns like: paper, water and electricity conservation, polyethylene free campus and polyethylene free environment, one student one plant campaign etc. would be initiated. Moreover, students would also be provoked to contribute in Swachh Bharat Mission.

Instruction for Examiner

The examiner is requested to set nine questions in all taking two questions from each unit and one compulsory question. The compulsory question will consist of four parts and will be distributed over the whole syllabus. The candidate is required to attempt five questions in all by selecting at least one question from each unit along with one compulsory question.

पर्यावरण अध्ययन

Maximum Marks: 100
Time: 03 Hours
Credits: 04

External Marks: 80
Internal Marks: 20
Code: EVS 201

पाठ्यक्रम का उद्देश्य: पर्यावरण सम्बंधित विषयों के प्रति विद्यार्थियों को संवेदनशील बनाना।विभिन्न गतिविधियों के द्वारा विद्यार्थियों में स्वच्छ और हरित चेतना जगाना जैसे पौधारोपण, जल व् बिजली संरक्षण और हरे व् स्वच्छ परिसर इत्यादि । इसके अलावा विभाग व् विश्विद्यालय स्तर पर ईको-क्लब गठन करने की योजना बनाई जाएगी जो कि एक सबसे महत्वपूर्ण उद्देश्य है। जिसके द्वारा पर्यावरण के प्रति जागरूकता फैलाने की विभिन्न गुहीम शुरू की जाएँगी । प्रत्येक विद्यार्थी बी.पी.एड.में.वि इको-क्लब का सदस्य बनेगा ।

इकाई 1

पर्यावरण अध्ययन का परिचय - पर्यावरण अध्ययन की प्रकृति: क्षेत्र और महत्व: सतत विकास अवधारणा ।

प्राकृतिक संसाधन - भूमि संसाधन :भूमि का ह्रास: मृदा अपरदन और मरुस्थलीकरण:वन संसाधन: वनों की कटाई: कारण और खनन एवं बांध निर्माण के वन और वनजातियों पर प्रभाव । जल: सतही जल और भूजल का उपयोग और शोषण ,पानी वाद से वाद टकराव । ऊर्जा का संसाधन: नवीकरणीय और अनवीकरणीय: वैकल्पिक ऊर्जा के संसाधनों का उपयोग, प्रकरण अध्ययन ।

इकाई 2

पारितंत्र - पारितंत्र की परिभाषा: पारितंत्र की संरचना और कार्य: ऊर्जा का प्रवाह: खाद्य श्रृंखला , खाद्य जाल और पारिस्थितिक पिरामिड: पारितंत्र के प्रकार: प्रकरण अध्ययन ।

जैव-विविधता और संरक्षण - जैव-विविधता का संरक्षण: परिभाषा: मूल्य: अनुवांशिक प्रजातियां और पारितंत्र विविधता: भारत का जैव- भौगोलिक क्षेत्र: विश्व में जैव-विविधता के अति सक्रिय क्षेत्र: भारत एक महा जैव-विविधता राष्ट्र के रूप में: भारत की विलुप्तप्राय और स्थानिक प्रजातियाँ, जैव-विविधता को खतरा व उसका संरक्षण।

इकाई 3

पर्यावरण प्रदूषण - पर्यावरण प्रदूषण: प्रकार ,कारण ,प्रभाव और नियंत्रण :वायु ,जल ,मृदा और ध्वनि प्रदूषण, भौगिलीय खतरे, ठोस अपशिष्ट और उसका प्रबंधन : भूमंडलीय तापमान में वृद्धि ,ओजोन परत का क्षरण, अम्लीय वर्षा व् उनका प्रभाव, प्रदूषण प्रकरण अध्ययन।

आपदा प्रबंधन – सूखा, बाढ़, भूकंप, चक्रवात, सुनामी और भूस्खलन।

इकाई 4

पर्यावरण नीतियाँ और प्रश्नाएँ - पर्यावरण हेतु कानून: पर्यावरण सुरक्षा अधिनियम(1986): वायु (प्रदूषण निवारण और नियन्त्रण) अधिनियम(1981): जल (प्रदूषण निवारण और नियन्त्रण) अधिनियम(1974): वन्यजीव (संरक्षण) अधिनियम(1972): वन संरक्षण अधिनियम(1980) ।

मानव सम्मुदाय और पर्यावरण - मानव जनसंख्या वृद्धि: प्रभाव व नियंत्रण, औषधि व्यसन: खतरनाक पदार्थ व उनके प्रभाव, पर्यावरण आन्दोलन। चिपको, मूक घाटी (साइलंट वेली) , पर्यावरण नैतिकता: भारतीय एवं अन्य धर्मो का पर्यावरण संरक्षण में योगदान।

क्षेत्र कार्य – (किन्ही दो गतिविधियों पर केवल आन्तरिक मूल्यांकन के लिए रिपोर्ट लिखें)

1. अपने इलाके की पर्यावर्णीय समस्याओं का वर्णन करना और उनके निदान के बारे में सुझाव देना।
2. एक स्थानीय प्रदूषित क्षेत्र भ्रमण - शहरी/ ग्रामीण/ औद्योगिक/ कृषि क्षेत्र/ दूषित जल उपचार संयंत्र।
3. पर्यावरणीरण सम्पदाओं के प्रलेखन के लिए एक क्षेत्र का भ्रमण: नदी/ वन/ वनस्पति/ जीव/ औषधिय उद्यान।
4. घरेलू अपशिस्ट पदार्थों में से जैव निम्नीकृत व् अजैव निम्नीकृत घटकों का अलग अलग करना: उपयोगी खाद बनाना।

• विद्यार्थियों को पर्यावरणीरण मुद्दों के बारे में जागरूक करने के लिए रेली प्रस्तावित, निबंध व भाषण लिखना और विभिन्न प्रतियोगिता आदि आयोजित की जाएंगी। कागज, पानी, व बिजली संरक्षण, पॉलिथीन मुक्त परिसर व पॉलिथीन मुक्त पर्यावरण, एक विद्यार्थी एक पेड़ अभियान आदि की शुरुआत की जाएगी। इसके अलावा विद्यार्थियों का एक्टिव भारत लक्ष्य में योगदान देने के लिए प्रोत्साहित किया जाएगा ।

परीक्षक के लिए निर्देश

The examiner is requested to set nine questions in all taking two questions from each unit and one compulsory question. The compulsory question will consist of four parts and will be distributed over the whole syllabus. The candidate is required to attempt five questions in all by selecting at least one question from each unit along with one compulsory question.

B.P.S. MAHILA VISHWAVIDYALAYA, KHANPUR KALAN (SONEPAT)

COURSE CURRICUMUM AND SCHEME OF EXAMINATION FOR ALL UNDERGRADUATE COURSES IN THE SUBJECT OF ENVIRONMENTAL STUDIES

Course Structure

Course Title	Code	Hours per Week				Total Credits	Max. Marks		
		L	T	P	Total		Field Work Marks	External Marks	Total marks
Environmental Studies	EVS 200	3	0	1*	4	4	20	80	100

*Practical lecture would be used for field work as per the suitability to students and availability of resources for field visit etc.

Distribution of marks

- External Theory Paper – 80 marks
- Internal Assessment/ Field Work- 20 marks
- Total Marks would be: 100

(14)

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1/10/17

GURU JAMBHESHWAR UNIVERSITY OF SCIENCE & TECHNOLOGY, HISAR
(Established by State Legislature Act 17 of 1995)
'A' Grade NAAC Accredited State Govt. University

NOTIFICATION

In pursuance of the directives from the Secretary, University Grants [illegible] June [illegible] Environmental Studies [illegible] compulsory module syllabus at undergraduate courses level of all branches of higher education in universities and colleges as per directives of the Hon'ble Supreme Court of India, the University Grants Commission with the help of an Expert Committee [illegible] syllabus for Ability Enhancement Compulsory Course (AECC-Environmental Studies) under CBCS.

The Vice-Chancellor on the recommendations of the Academic Council vide resolution no 34 in its meeting held on 06.03.2017 has constituted a Committee to [illegible] the guidelines of apex court regarding introduction of [illegible] compulsory course [illegible] courses. The recommendation of the Committee are as under:

1. The University Grants Commission in pursuant to Hon'ble Supreme Court order dated 06.12.[illegible] in CWP No. [illegible] has [illegible] syllabus on Environmental Studies for undergraduate courses. Therefore the said subject will be taught in the first semester in B.[illegible] B.com / BBA/ BCA courses and in second semester in BA [illegible] and [illegible] undergraduate courses [illegible] in the first year. The [illegible] subject will also be taught [illegible] courses [illegible] by the University. The examination of the [illegible] course will be conducted at the end of that semester. The medium of the examination will be same as opted by students for their respective main courses.

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P.T.O.

Endst. No. [illegible] Dated: [illegible]

A copy of the above is forwarded to the following for information and [illegible]:

1. All Deans of Faculties, GJUS&T, Hisar
2. Controller of Examinations, GJUS&T, Hisar
3. All Chairpersons, University Teaching Departments, GJUS&T, Hisar
4. [illegible] Directors/Principals of the affiliated institutes/colleges, GJUS&T, Hisar (except the colleges there is no UG program run)
5. All above members of the Committee:
   (i) Prof. Rajesh Malhotra, Dean Academic Affairs
   (ii) Prof. Harsh Ram Bishnoi, Dean of Colleges
   (iii) [illegible] Gupta, Chairperson, Department of Environmental [illegible] Engineering)
6. [illegible] [illegible] [illegible] [illegible] [illegible] Hindi Translation, GJUS&T, Hisar
7. Superintendent O/o the Registrar (for kind information of the Registrar) [illegible]

Deputy Registrar (Academic)
For Registrar

BPSMV Khanpur Kalan, Sonipat

Minutes of the meeting of the committee constituted by the Vice-Chancellor to Review the Ph. D. Ordinance, held on 15/02/2018 , 23/02/2018 and 13/03/2018 at 11.00 a.m. in the office of Dean Academic Affairs:-

Following members were present:-

1.	Prof. Ipshita Bansal, Dean Academic Affairs,	Convener
2.	Prof. Amrita Dean Faculty of Arts & Languages,	Member
3.	Prof. Sanket Vij, Dean Faculty of Commerce & Management	Member
4.	Dr. J.S. Malik, C.O.E.	Special Invitee
5.	Sh. Kuldeep Singh, Supdt I/c Academics	Member Secretary

Proceedings

The committee after considering the Ph.D. Ordinance and having detailed deliberations gave the following recommendations:-

1. The members were of the view that there is a need to design the Proforma of Evaluation. Besides Summary Report and Ph.D, Scholar Report Card, to be submitted and maintained by the Examination Branch.

To prepare these proformas, Prof. Sanket Vij was requested to do the needful in consultation with the other members. He assured that he will prepare the documents within 5 days.

2. The committee resolved to add/amend the following clauses in the Ph.D. Ordinance of BPSMV:-

Clause	Existing	Proposed
1.	DEFINITIONS : 1.1. Programme stands for Doctor of Philosophy (Ph. D.). 1.2. Course stands for individual paper 1.3. Credit is the weightage assigned to a course in terms of contact hours. One contact hour per week per course per semester is equivalent to one credit. 1.4. Grade stands for a letter grade assigned to a student on the basis of	No change

	evaluation of a course on the 10 point scale. 1.5. Grade point stands for the numerical equivalent of the letter grade. 1.6. Semester Grade Point Average (SGPA) and Cumulative Grade Point Average (CGPA) are the weight average of the grade points and to describe the performance of the candidate in the courses of a particular semester.	
2.	2. ACADEMIC ELIGIBILITY : 2.1. *Master's degree in the subject concerned or in allied subjects with at least 55% marks in aggregate (52.5% for SC/ST/Differently abled candidates) or an equivalent grade from a University or a recognized institution of higher learning. 2.2. The Departmental Research Committee (DRC) of the department concern shall decide, subject to approval by the Academic Council, the relevance of allied subjects.	No Change
3 3.1	PROCEDURE FOR ADMISSION TO PRE Ph.D. COURSE: Admissions to the Ph.D. Programme shall be advertised once in a year, normally in the month of March/April, each year.	Admissions to the Ph.D. Programme shall be advertised once in a year, normally in the month of May/June, each year.
3.2	Admissions to the Ph.D. Programme shall be made through an Entrance Test conducted by Controller of Examination of the University for each Discipline. The syllabus for the Entrance Test shall be laid down by the concerned Teaching Departments. The entrance test will be of three hours duration and will be for 100 marks. The question paper will have two parts. Part-1 of the question paper shall be common for all the disciplines and Part-II of the question paper shall be discipline specific. Part-I will have 25 objective-type questions carrying 25 marks related to reasoning/aptitude/current affairs/ general knowledge etc. and Part-II carrying 75 marks will require the students to answer Objective-type/short answer questions in the subject concerned. A candidate must secure 55% marks to qualify the entrance test (52.5% for SC/ST/Differently abled candidates).	Admissions to the Ph.D. Programme shall be made through an Entrance Test conducted by Controller of Examination of the University for each Discipline. The entrance test will be of three hours duration and will be of 100 marks. The question paper will have two parts Part-1 of the question paper will have 25 objective type (MC questions carrying 25 marks relat to reasoning/research aptitu current affairs/Gene Knowledge/language skills in eq proportions and Part-II of the ques paper shall be discipline spe carrying 75 marks will require students to answer Objec

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		type/short type questions in the subject concerned. The syllabus for the Part-II of the Entrance Test shall be laid down by the concerned Teaching Department(s). A candidate must secure 50% marks to qualify the entrance test (47.5% for SC/ST/Differently abled candidates).
3.2 (a)	The candidates who have qualified JRF (valid) conducted by the UGC/CSIR/DBT/DST/CBSE and ASRB etc. are exempted from Entrance Test and their admissions will be made on the available vacant seats as well as over and above the seats available in the concerned department, subject to the constraint (of the supervisor-scholars ratio) in the Departments/Institutes of the University. However, they will submit a tentative proposal to discuss their research interest/area before the DRC. In case at a time, number of applications of JRF students are more than number of seats available in the department/institute, merit list for admission shall be prepared on the basis of the following criteria: • 10% weightage to marks in the Matric Examination • 20% weightage to marks in the Senior Secondary Examination • 30% weightage to marks in the Bachelor's Degree Examination 40% weightage to marks in the Master Degree Examination The JRF students will be considered from the date of registration.	No change
3.2 (b)	Nil	EXEMPTION FROM COURSE WORK 1. Students who have completed M. Phil in accordance to UGC guidelines shall be exempted from Pre-PhD course work. 2. Students who have passed Pre-PhD course work from any Central/ State/ Govt./ R&D institutions/ University having distance more than 300 kms. shall be considered on supernumerary seats. However, such student will have to apply at the time of admission to the concerned Department.

3.3	From those who qualify for admission, the department will invite for interview, in the order of merit, three times the total number of seats in the department (For example, if a department has 8 seats, 24 candidates who have qualified the written entrance test will be invited in order of merit for interview).	No change
3.4	The merit list for admission to Pre-Ph. D. course shall be prepared by the concerned Department according to the following criteria : 3.4.1.1 10% weightage to marks in the Senior Secondary Examination. 3.4.1.2 10% weightage to marks in the Bachelors Degree Examination. 3.4.1.3 10% weightage to marks in the Master Degree Examination. 3.4.1.4 40% weightage to marks in the entrance test. 3.4.1.5 20% weightage to performance in the interview conducted by DRC on the basis of criteria approved by DRC of the concerned Department. 3.4.1.6 10% weightage to the research statement/board area of research submitted by the qualified candidate. 3.4.1.7 *05 marks to those candidates who have qualified for NET/GATE/SLET.	No change
3.5	The supervisor will be nominated subsequently by the Departmental Research Committee (DRC) for each admitted candidate. The final approval of synopsis shall follow the successful completion of course work.	No change
3.6	Only a predetermined number of students in accordance with the seats announced in the admission brochure of the university shall be admitted.	No change
3.7	While granting admissions to the Pre-Ph.D. programme, the Department/Institute will take into account the National/State level Reservation Policy.	No change
3.8	15% supernumerary seats shall be reserved for foreign students and 1 supernumerary seat in each subject shall be reserved for teachers/employees of the university who qualify the Entrance Test.	No change
3.9	The faculty members of B.P.S. Mahila Vishwavidyalaya shall be exempted from Pre-Ph.D. Course work. However, the faculty members shall appear in the Pre-	Removed from ordinance

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	Ph.D. examination to qualify Pre-Ph. D. Course work.	
3.10	Nil	The candidate seeking admission to regular PH.D. must produce NOC from his employer on or before interview.
4 4.1	COURSE WORK : Each admitted student shall be required to complete the mandatory course work of minimum 15 credits in one semester.	No change
4.2	The Department concerned shall design the Pre-Ph.D. course as per UGC guidelines. "The Pre-Ph.D. course must include a course on research methodology which may include quantitative methods and computer applications. It may also involve review of published research in relevant area". If advisable, the Department may allow the students to take one course in an allied discipline in any other Department of the University.	No change
4.3	The qualifying marks in each paper of the course work shall be 50%. In case, a candidate fails to complete the course work she may be permitted by the Post Graduate Board of Studies (PGBOS) on the recommendation of the Head of the Department and DRC to complete the course work in an additional semester. No further extension shall be permissible.	The qualifying marks in each paper of the course work shall be 50%. In case, a candidate fails to complete the course work she may be permitted to complete the course work in three attempts in subsequent years from the date of admission.
4.4	Only on satisfactory completion of mandatory course work, the candidate's Registration in the Ph.D. programme shall be confirmed. The pass Grade C+ (50%) and higher grades.	No change
5 5.1	APPLICATION & REGISTRATION : Application (s) for registration to Ph.D. programme from eligible candidates on the prescribed form along with the synopsis of research prepared in consultation with the department faculty shall be considered by the Department Staff Committee. The Department Staff Committee may : 5.1.1 recommend the synopsis of research for consideration by Department Research Committee. Or 5.1.2 suggest suitable changes in the synopsis of research. Or 5.1.3 reject the synopsis of research.	No change

5.2	Head of the concerned Department, on behalf of the Department Staff Committee, shall place the application(s) for registration along with the recommendations of the Department Staff Committee before the Departmental Research Committee (DRC). DRC shall invite the candidate(s) to defend their research proposal(s).	No change
5.3	The Department Research Committee for registration to the programme in the University Teaching Departments shall consist of the following : 5.3.1 Head of the Department concerned - Chairman 5.3.2 All Professors and Associate Professors. 5.3(3) *One Assistant Professor among those eligible for appointment as supervisor, by rotation for two years. 5.3.4 Two outside experts to be nominated by the Vice-Chancellor for a period of two years out of the panel of six experts proposed by the Department Staff Committee. 5.3.5 Dean of the concerned Faculty.	No change
	5.3.6 Nil Two/fifths of the members shall form a quorum. The proceedings of meeting of the Departmental Research Committee will be valid if at least one out of two experts attends the meeting. *Provided that the Assistant Professor in the Department should have at least three years of full time teaching experience at the PG or five years at UG level.	The supervisor of the candidate should be a member of DRC as a special invitee for case of concerned candidate.
5.4	The DRC shall assign supervisor to each qualified admitted candidate. In the case of subject of interdisciplinary/inter-specialty nature, the DRC may recommend the appointment of a Joint Supervisor from other Universities/Research Labs etc. from recognized Indian or Foreign Universities & R&D Institutions. The main supervisor will get full credit of the research work.	No change
5.5	*All the Professors, Associate Professor & Assistant Professor in the Department having doctorate qualification in the concerned discipline shall be eligible for nomination as research supervisor. The maximum number of Research Scholars to be registered under a supervisor/joint supervisor shall be as under: Professor =	

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	8, Associate Professor = 6, Assistant Professor = 4 *Provided that an Associate Professor with three publications in reputed journals can be considered only for the membership of DRC for the next two years, with immediate effect, after that Ph.D. shall remain the essential qualification/requirement for the membership of Departmental Research Committee.	No change
5.6	DRC shall recommend the registration of the qualified candidates with the nominated supervisors and while recommending the registration of the candidate for consideration by Post Graduate Board of Studies, the DRC shall clearly state whether in its opinion, 5.6.1.1. The subject proposed for research is suitable or not: 5.6.1.2. The supervisor(s) recommended is/are eligible or not. However, if the DRC decides so, it may either reject the application or may suggest suitable changes in the topic of research for reasons to be recorded. In the latter case the candidate shall be given appropriate time to process her application for registration through the Department Staff Committee for another presentation before DRC.	No change
5.7	The recommendations of the DRC for Ph.D. registration shall be placed before the PGBOS, the Faculty and the Academic Council for its consideration and approval, respectively. The date of registration of the research scholar shall be the date on which the P.G. Board of Studies recommends the registration of the candidate.	No change
5.8	A candidate may, normally not later than one year after his registration, modify the topic of her subject on the recommendations of the P. G. Board of Studies.	No change
6 6.1	CHANGE OF SUPERVISOR : The change of Supervisor may be allowed on academic grounds at the recommendation of the Department Staff Committee, DRC and PG BOS.	No change
6.2	However, the change will be allowed after the approval of the Academic Council.	No change
7 7.1	Period of work:- Every candidate registered for Ph.D. programme shall be required to pursue her research work at least for two years. The reduction in this period shall not be allowed under any circumstances. The Maximum duration of the Ph. D. work shall be 4 years and an extension of one	Period of work:- Every candidate registered for Ph.D programme shall be required to pursue her research work for a minimum duration of 3 years including course work. The maximum duration for the Ph.D work shall

	year may be given with the permission of the Vice Chancellor on the recommendation of the Head of the Department and Research Supervisor.	be six years. However, subsequent extensions for a maximum period of 2 years may be granted with the approval of the Vice-Chancellor on the recommendation of supervisor and DRC.
7.2	Nil	Full time period of work:- The candidates who are awarded fellowship by the University/outside agency to carry out Ph.D. work shall be required to stay at University headquarter for whole duration of the fellowship. The Chairperson of the Department concerned will certify the stay of the candidate.
8	MEDIUM : In the language subjects, the thesis may be presented in English/Hindi or the language concerned. In other subjects, the research scholar shall submit thesis in English.	No change
9	MONITORING : 9.1. Every research scholar shall be required to submit half yearly report on the prescribed Performa to the Department. The Supervisor of the Research Scholar will give his assessment about the progress of the scholar. The Report shall be placed before the Department Staff Committee and Departmental Research Committee for its evaluation. The progress report will also be submitted to the Dean of the concerned faculty. 9.2. In case two consecutive six monthly reports are unsatisfactory, the Head of the Department on behalf of the Department Staff Committee present the case to DRC. The DRC may recommend, along with the observation of the Dean of the concerned faculty, to the P.G. Board of Studies cancellation of the registration of the said candidate. 9.3. Once in a year, the Research Scholar will present a seminar on her research conducted in the previous year in research colloquium. This seminar will be organized by the concerned Head of the Teaching Department.	No change

10 10.1	SUBMISSION: Ph.D. student shall publish at least two research papers in refereed/reputed journals related to the thesis work before the submission of the thesis and produce evidence for the same in the form of acceptance letter or the reprint. The list of refereed/reputed journals shall be specified by the University time to time. The Copyrights of the published work shall be jointly shared by the Supervisor and Scholar.	SUBMISSION: Ph.D. student shall publish at least two research papers in refereed/reputed journals related to the thesis work before the submission of the thesis and produce evidence for the same in the form of acceptance letter or the reprint. The list of refereed/reputed journals shall be specified by the University/UGC from time to time. The Copyrights of the published work shall be jointly shared by the Supervisor and Scholar.
10.2	Prior to submission of the thesis, the student shall make a Pre-Ph.D. presentation in Department three months before the submission of thesis. The Pre-Ph.D. presentation may be open to all Faculty members and research students for getting the feedback and comments which may be incorporated into the draft thesis under advice of the supervisor.	Prior to submission of the thesis, the student shall make a Pre-Ph.D. presentation before the DRC in the Department (three months before the submission of thesis). The Chairperson of the concerned Department shall issue a circular one week prior to pre submission on the recommendation of the supervisor. The Pre-Ph.D. presentation may be open to all Faculty members and research students for getting the feedback and comments which may be incorporated into the draft thesis under advice of the supervisor.
10.3	The thesis shall be an original piece of research work characterized either by discovery of new facts or enunciation of a new theory or by fresh interpretation of known facts or theories. In either case, it should evince the candidate's capacity for critical acumen and judgment.	No change
10.4	The research scholar shall submit three printed typed copies of her thesis, mentioning the name of the candidate/supervisor, etc. along with two soft copies of thesis on 2 GDs.	The research scholar shall submit three printed typed copies of her thesis, mentioning the name of the candidate/supervisor, etc. along with two soft copies of thesis (2 CDs). a) The inter line spacing shall be 1.5, Font size shall be 12 for running text. Printing shall be two-side. b) Plagiarism Report as obtained from Central Library as per parameters of UGC shall be included as an Appendix in the thesis and Copy of the Publications of research paper shall also be included as an Appendix in the thesis.

10.5	A candidate shall also submit six copies of the summary of the thesis in about 300 words indicating how far the thesis embodies the result of his own research and in what respects his investigations appear to him to advance the knowledge of the subject of his thesis.	A candidate shall also submit six copies of the summary of the thesis in about 300-500 words indicating how far the thesis embodies the result of his own research and in what respects his investigations appear to him to advance the knowledge of the subject of his thesis. The COE will send the same to the approved examiners for seeking their consent to examine the thesis.
10.6	Nil	The R & S Branch shall provide information regarding submission of fee for the thesis and the candidate will be required to take 'No Dues' from R&S, Accounts, Library, concerned Deptt and Hostel. Only than the thesis shall be accepted by the Examination Branch.
10.7	Nil	Ph.D. Scholar Report Card submitted by the Scholar at the time of submission of thesis will be maintained by the COE.
11 11.1	APPOINTMENT OF EXAMINERS On receiving application request along with an abstract of the thesis including synopsis/chapter scheme from the research scholar duly certified by the Supervisor that her research work is complete and ready for submission, the P.G. Board of Studies shall approve, a panel of at least six external examiners not below the rank of Professor to evaluate the thesis provided by the concern Supervisor. The supervisor shall ensure that the proposed examiners are from the same area of specialization to which Ph. D. thesis to be evaluated pertains. The Board of Studies may ensure while recommending the examiners that 50% of the external examiners are from within Haryana and 50% from outside of the state. Efforts should be made to recommend examiners of national and international repute and from the leading Institutes/Universities in the country. It shall be up to the P.G. Board of Studies concerned to recommend the examiners from outside the Country.	APPOINTMENT OF EXAMINERS On receiving application request along with an abstract of the thesis including synopsis/chapter scheme/summary from the research scholar duly certified by the Supervisor that her research work is complete and ready for submission, the P.G. Board of Studies shall approve, a panel of at least eight external examiners not below the rank of Professor to evaluate the thesis recommended by the concerned supervisor.

	Board of Examiners consisting of Supervisor and one of the examiners who evaluated the thesis, to be nominated by the Vice-Chancellor within a period of one month of the receipt of reports of evaluation of thesis.	No change
13.2	In case both the examiners who evaluated the thesis are unable to conduct the viva-voce, the Vice-Chancellor shall appoint another examiner out of the panel to conduct the viva-voce examination.	No change
13.3	The reports of the examiners on the thesis as well as on the viva-voce examination shall be placed before a Committee consisting of the Vice-Chancellor, the Dean and the, Head of the Department concerned, within one month of the viva -voce examination. The Committee shall further, after considering the total process of evaluation, recommend it to the Academic Council for final consideration and approval. If the Dean or Head of the Department somehow is not able to participate in the meeting, the Vice-Chancellor will co-opt any other senior member of the Faculty, in his/her/ their place.	13.3 The confidential reports submitted by the examiners on the thesis as well as on the viva-voce examination duly signed by the examiner and countersigned by the Chairperson shall be placed before Research Committee consisting of the Vice-Chancellor, the Dean of the Faculty and the Head of the Department concerned, within one month of the viva -voce examination. The Committee shall further, after considering the total process of evaluation, recommend it to the Academic Council for final consideration and approval. If the Dean or Head of the Department somehow is not able to participate in the meeting, the Vice-Chancellor will co-opt any other senior member of the Faculty, in his/her/ their place.
13.4	Following the successful completion of the evaluation process and announcements of the award of Ph.D., the University shall submit a soft copy of Ph.D. thesis to UGC within a period of thirty days for hosting the same on INFLIBNET which shall be accessible to all Institutions/Universities. Along with Degree, the University shall issue a certificate certifying that the degree has been awarded in accordance with the provisions of the Ph.D. Regulations of the UGC.	13.4 Following the successful completion of the evaluation process and announcements of the award of Ph.D., the University shall submit a soft copy of Ph.D. thesis to UGC within a period of thirty days for hosting the same on INFLIBNET which shall be accessible to all Institutions/Universities. Along with Degree, the University shall issue a Notification certifying that the degree shall be awarded in accordance with the provisions of the Ph.D. Regulations of the UGC.
13.5	The publication right/copyright will be jointly shared by the supervisor and research scholar.	No change

11.2	The candidate shall submit her thesis within six months from the date on which the Board of Studies has approved the appointment of examiners provided that the Board of Studies may, for satisfactory reasons, extend the period by a maximum of another six months only.	No change
12.	EVALUATION OF THESIS 12.1 The thesis shall be referred to two examiners selected by the Vice-Chancellor out of the already approved panel. At least one examiner shall be from outside the State/Country. The examiners shall be requested to send their reports within two months. 12.2 The examiners shall give detailed report on the thesis and make a clear-cut recommendation whether:- a) The thesis be accepted. OR b) The thesis be rejected. OR c) The research scholar be asked to resubmit the thesis with improvements/revisions. 12.3 In case the examiner(s) recommend revision of the thesis, suggestions for such revision should be part of the examiner's report. The research scholar shall be required to submit the revised thesis within one year of communication to her. After revision, the thesis shall be sent to the same examiner(s) for evaluation, unless examiner/examiners express her inability. 12.4 If one examiner recommends award of Ph.D. degree and the other recommends rejection, then the thesis shall be sent to the third examiner for taking a final decision. In any case, there should be two positive recommendations for the award of Ph.D. degree. 12.5 Nil	No change 12.5 The Controller of Examinations sh send the performa for evaluation the Ph.D thesis alongv remuneration performa to examiners.
13	VIVA-VOCE EXAMINATION & AWARD OF DEGREE 13.1 The viva-voce examination shall be held by a	

Bhaghat Phool Singh Mahila Vishwavidyalaya, Khanpur Kalan, 131305

Faculty of_____
Department of _____
Title of
Thesis_____

Ph.D Scholar Report Card

1. Name of Research Scholar : _____

2. Address : _____

_____

_____

3. Telephone No. & E-Mail : _____

4. Mother" Name : _____

5. Father's Name : _____

6. Name & Designation of
Supervisor
Address : _____

_____

_____

7. Name & Designation of
Co-Supervisor, if any : _____
Address : _____

_____

8. Mode of Admission
Through M.Phil/ Pre Ph.D course : _____

9. Date of Registration in Ph.D
programme vide letter
No. _____ dt._____ : _____

14	GENERAL GUIDELINES : 14.1 Where this document is silent about any rule, the University Ordinance/UGC guidelines from time to time will be applicable. 14.2 The Programme fee shall be paid by the candidate as prescribed by the University from time to time. 14.3 Eligibility Criteria, Fee Structure, Academic Calendar, Examination Schedule, Sports Calendar and Cultural Calendar for the academic year shall be given in the University Prospectus. 14.4 All academic problems of the students other than those affecting the University rules and regulations framed from time to time may be looked into by the Dean of Academic Affairs.	No change
14.5	Notwithstanding anything in this ordinance, the Vice-Chancellor may take such measures as may be necessary in respect of candidates registered with the University.	Replace to clause 14.6.
14.5		No re-evaluation shall be permitted of the answer books of Entrance Test of Pre-Ph.D. Examinations.
14.6	Nil	Notwithstanding anything in this ordinance, the Vice-Chancellor may take such measures as may be necessary in respect of candidates registered with the University.

Annexure:-

1. Form of report on Ph.D. Thesis
2. Ph.D. Scholar Report Card

(Prof. Ipshita Bansal)

(Prof. Sudesh Chikkara)

(Prof. Amrita)

(Prof. Sanket Vij)

(Prof. Vijay Nehra)

(Dr. J.S. Malik)
Special invitee

(Kuldeep Singh)
Member Secretary

10. Progress Reports half yearly:

Sr. No.	Period	Date on which sent to Registration Branch	Progress Status
1.			
2.			
3.			
4.			
5.			
6.			

11. Details of Annual Seminar :

Sr. No.	Date of which Seminar presented
1.	
2.	
3.	
4.	
5.	
6.	

12. Key dates:

Date of Regn.	Regn. Cancelled on (if any)	Cancellation Revoked on	Date of extension (if any) and duration	Date of pre submission seminar	Thesis submitted on	Viva-voce exam held on

13. Research papers published out of thesis:

Sr. No.	Title of Paper	Name of Journal/ Volume/ Issue/ Year/ Page No. (s)	ISSN Number	Impact Factor
1				
2				

3				
4				
5				
6				

14.

Examiners	Thesis sent	Reports received on	Recommendations
First			
Second			

15. Main contributions made by the Research Scholar (less than 200 words):

16. Reports of Examiners (each less than 150 words)

Examiner 1:

Examiner 2:

17. Recommendations of External Examiners who conducted the Viva-Voce:

18. Corrections, if any indicated in the Reports: _____

_____

_____

19. Correction carried out or not : _____

Dated Signature of Supervisor

Countersigned by:
Head of the Department

Kindly Despatch by Regd. Post To :

Controller of Examination
Bhagat Phool Singh Mahila Vishwavidyalaya
Khanpur Kalan -131 305, Sonipat, Haryana

Bhagat Phool Singh Mahila Vishwavidyalaya

(Established by the State Legislature Act 31 of 2006)

FORM OF REPORT ON Ph.D. THESIS

1. Name of the Candidate :_____
2. Ph.D. Registration No. :_____
3. Faculty/Institute :_____
4. Title of the Thesis : _____

_____

_____

_____

IMPORTANT

The examiner is requested to send his/her report/recommendation under the following heads :-

1. Detailed Report (use extra sheet if required)

2. Merits of the thesis:

3. Negative aspects, if any :

4. Critical Remarks :

1	(a)	Whether the thesis is a piece of research work characterised either by discovery of new facts;	(a)
		OR	
		Enunciation of a new theory;	
		OR	
		By fresh interpretation of known facts or theories;	
	(b)	Whether the thesis evinces candidate's capacity for critical analysis/examination and judgement so far as its literary presentation is concerned.	(b)

5. Recommendations regarding publication of the thesis:

I. Thesis is fit for publication in its original form.

II. Thesis is not fit for publication.

III. Thesis is fit for publication only after making following modifications.

6. Recommendation of the Examiner: (Please tick whichever is appropriate box)

a) Thesis is highly commended, the public viva-voce be conducted and Degree may be awarded. ☐

b) Thesis is commended, the public viva-voce be conducted and degree may be awarded. ☐

c) Thesis is commended and the Degree may be awarded subject to the candidate's furnishing satisfactory clarifications to my queries during the public viva-voce examination. ☐

d) Thesis is commended and the Degree may be awarded subject to the condition that the corrections/ modifications, suggested by me are carried out in the thesis and duly certified by the supervisor- convener before the public viva-voce examination. ☐

e) Theses needs to be resubmitted after revision of evaluation. ☐

f) Thesis is not commended and the Degree may not be awarded. ☐

7. Suggestions, if any, for modification/improvement of the thesis in case the thesis referred back to the candidate for revision :

8. Questions to be asked for Viva-Voce. (Optional):

(Signature of the examiner)
Name : _____
Address :_____
_____
_____
_____
Mobile No._____
email_____

Note :- If necessary, blank sheets may be added to complete the report under any particular head(s) above]

ANNEXURE - 13

ORDINANCE NO. BPSMV/PH. D./2011/1

Amended on 25/07/2015 by the EC

ORDINANCE FOR ADMISSION, REGISTRATION AND AWARD OF DEGREE OF DOCTOR OF PHILOSOPHY (PH. D.)

1. DEFINITIONS :

1.1. **Programme** stands for Doctor of Philosophy (Ph. D.).
1.2. **Course** stands for individual paper
1.3. **Credit** is the weightage assigned to a course in terms of contact hours. One contact hour per week per course per semester is equivalent to one credit.
1.4. **Grade** stands for a letter grade assigned to a student on the basis of evaluation of a course on the 10 point scale.
1.5. **Grade point** stands for the numerical equivalent of the letter grade.
1.6. **Semester Grade Point Average (SGPA)** and **Cumulative Grade Point Average (CGPA)** are the weighted average of the grade points and describe the performance of the candidate in the courses of a particular semester.

2. ACADEMIC ELIGIBILITY :

2.1. *Master's degree in the subject concerned or in allied subjects with at least 55% marks in aggregate (52.5% for SC/ST/Differently abled candidates) or an equivalent grade from a University or a recognized institution of higher learning.

2.2. The Departmental Research Committee (DRC) of the department concern shall decide, subject to approval by the Academic Council, the relevance of allied subjects.

3. PROCEDURE FOR ADMISSION TO PRE Ph.D. COURSE :

3.1. Admissions to the Ph.D. Programme shall be advertised once in a year, normally in the month of March/April, each year.

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*Added/Amended vide Executive Council Reso. No. 14 held on 25/07/2015

his own research and in what respects his investigations appear to him to advance the knowledge of the subject of his thesis.

11. APPOINTMENT OF EXAMINERS

11.1. On receiving application request along with an abstract of the thesis including synopsis/chapter scheme from the research scholar duly certified by the Supervisor that her research work is complete and ready for submission, the P.G. Board of Studies shall approve, a panel of at least six external examiners not below the rank of Professor to evaluate the thesis provided by the concern Supervisor.

The supervisor shall ensure that the proposed examiners are from the same area of specialization to which Ph. D. thesis to be evaluated pertains. The Board of Studies may ensure while recommending the examiners that 50% of the external examiners are from within Haryana and 50% from outside of the state. Efforts should be made to recommend examiners of national and international repute and from the leading Institutes/Universities in the country. It shall be up to the P.G. Board of Studies concerned to recommend the examiners from outside the Country.

11.2. The candidate shall submit her thesis within six months from the date on which the Board of Studies has approved the appointment of examiners provided that the Board of Studies may, for satisfactory reasons, extend the period by a maximum of another six months only.

12. EVALUATION OF THESIS

12.1. The thesis shall be referred to two examiners selected by the Vice-Chancellor out of the already approved panel. At least one examiner shall be from outside the State/Country. The examiners shall be requested to send their reports within two months.

12.2. The examiners shall give detailed report on the thesis and make a clear-cut recommendation whether:-

a) The thesis be accepted.
OR
b) The thesis be rejected.
OR
c) The research scholar be asked to resubmit the thesis with improvements/revisions.

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*Amended vide E.C. Resolution No.14 held on 25/07/2015.

Mail ID – unpdghehry@gmail.com

From

Director Higher Education, Haryana, Panchkula.

To

Vice Chancellor,
Chaudhary Devi Lal University, Sirsa.

Memo No. 18/90-2015 UNP (4)
Dated Panchkula, the 05.7.17

Subject: Regarding University Examination Re-evaluation Reform Note Marks obtained by the candidate whichever are higher by State University/ Central University in Haryana.

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Kindly refer to your memo No. CDLU/Re-Eval./17/916, dated 29.03.2017 on the subject cited above.

I have been directed to bring into your notice in reference to point No.2 of the minutes that if the change in marks exceeds 20% of the maximum marks of that paper, the average of the two scores will be taken as final award. However, if the increase of marks is more than 20%, the answer-book will be referred to 2nd re-evaluator and the average of three scores will be taken as final award.

In this regard a following example is being quoted:-

"If the marks obtained are 30/100. If in re-evaluation the marks obtained are 60/100. Then in the third re-evaluation the award given are 58/100" this outcome is against the natural justice to the student.

It is, therefore, requested to revisit the above clause and necessary amendment may please be carried out accordingly.

Further, in such cases, the name of such evaluator may also be recommended by the university to the Management and Government for disciplinary action as per rule.

Deputy Director Cadet Corps,
for Director Higher Education, Haryana,
Panchkula.

Chaudhary Devi Lal University, Sirsa

(Established by the State Legislature Act 9 of 2003)
Approved under Section 2(f) & 12(B) of U.G.C. Act 1956

No. CDLU/Re-Eval./17/
Dated-

To

The Director Higher Education, Haryana.
Shiksha Sadan, Sector-5,
Panchkula.

Sub:- Regarding University Examination Re-evaluation Reform Note Marks obtained by the candidate whichever are higher by State University/Central University in Haryana.

Please refer to your office memo no. 18/90-2015 UNP (4) dated 4.1.2017 on the subject cited above.

In this regard, it is to inform you that a meeting was held on 01.03.2017 at 11.00 A.M under the Chairmanship of the Vice-Chancellor, Chaudhary Devi Lal University, Sirsa. The minutes of the meeting is enclosed herewith.

D.A. As Above.

-Sd-
Controller of Examinations

Endst. No.CDLU/Re-eval./17/698-706 Dated:-07.03.2017

Copy of the above is forwarded to the following:-

i. The Registrar of Kurukshetra University, Kurukshetra
ii. The Registrar of Maharshi Dayanand University, Rohtak
iii. The Registrar of Ch. Ranbir Singh University, Jind
iv. The Registrar of Ch. Bansi Lal University, Bhiwani.
v. The Registrar of Bhagat Phool Singh Mahila Vishwavidyalaya,Khanpur Kalan Sonipat,Haryana
vi. The Registrar of Indira Gandhi University, Mirpur Peowri
vii. P.S. to Registrar CDLU (for kind information of the Registrar)
viii. P.S. to Vice-Chancellor (for kind information of the Hon'ble Vice-Chancellor)
ix. The Controller of Examination Ch. Devi Lal University, Sirsa

Deputy Controller of Examination.

Chaudhary Devi Lal University, Sirsa

(Established by the State Legislature Act 9 of 2003)
Approved under Section 2(f) & 12(B) of U.G.C. Act, 1956

Minutes of the meeting held on 01.03.2017 at 11.00 A.M. in the camp office of the Vice Chancellor, Chaudhary Devi Lal University, Sirsa regarding "University Examination Re-evaluation Reform Note Marks obtained by the candidate whichever are higher by State University/Central University in Haryana" as per directions of the Director, Higher Education Haryana, Panchkula vide memo no. 18/90-2015 UNP(4) Dated 08.02.2017.

The following were present:-

Prof. Vijay Kayat, — In-chair
Vice Chancellor , Ch. Devi Lal University, Sirsa

Dr. Aseem Miglani, — Member
Registrar, Ch. Devi Lal University, Sirsa

Dr. Rajbir Singh Mor — Member
Registrar, Ch. Ranbir Singh University, Jind

Ms. Kavita Chakravarty, — Member
Registrar, B.P.S. Mahila Vishwavidyalaya, Khanpur Kalan, Sonipat, Haryana

Dr. Joginder Malik, — Member
Controller of Examinations,
Bhagat Phool Singh Mahila Vishwavidyalaya,Khanpur Kalan Sonipat, Haryana

Dr. D.P. Goyal, — Member
Controller of Examinations, Indira Gandhi University, Mirpur, Rewari

Dr. Praveen Aghamkar, — Member
Controller of Examinations, Ch. Devi Lal University, Sirsa

Dr Amit Sehgal, — Member
Deputy Controller of Examinations, Ch. Bansi Lal University, Bhiwani

Dr. Kawaljit Singh Sandhu — Member
Deputy Controller of Examinations, Ch. Devi Lal University, Sirsa

[illegible]

161(H)

Sh. S.C. Chawla, Supdt.(Re-evaluation)
Maharshi Dayanand University, Rohtak

At the outset all the members were welcomed and then the committee considered the issues regarding "University Examination Re-evaluation Reform Note Marks obtained by the candidate whichever are higher by State University in Haryana", and in order to keep parity in re-evaluation of answer book(s), the following were unanimously resolved:

1. Eligibility criteria for re-evaluation of answer book(s):
   (i) If the award (s) in the paper(s) is/ are less than 20% of maximum marks (theory only), no re-evaluation of answer books will be allowed.
   (ii) Eligible candidate may apply for re-evaluation of answer book(s) to the Controller of Examinations of respective Universities on the prescribed application form along with requisite fee, as prescribed by the University, within 30 days from the declaration of the result of the particular examination, in particular the date on which the result uploaded on respective University website, without the Detailed Marks Card/Certificate in original.
2. If the increase of marks between re-evaluated score and the original score in a paper does not exceed 20% of the maximum marks of that paper, the average of the two scores will be taken as final award. However, if the increase of marks is more than 20%, the answer-book will be referred to 2nd re-evaluator and the average of the three scores will be taken as final award.
3. In case of decrease in marks due to re-evaluation, the previous result of the candidate will stand (PRS).
4. The controller of Examinations will ordinarily declare the results of re-evaluation within two months of the last date fixed for receipt of applications for re-evaluation. If a candidate fails or earns compartment/reappear in a paper(s) and has applied for re-evaluation but his/her result of re-evaluation is not declared before the next examination and he/she appear in the next examination in the paper(s)in which he has failed, the better of two scores 'Re-appear Score' or Re-evaluation Score; would be taken into account.

5. Further, in order to avoid confusion between rechecking and re-evaluation of answer books among the stake holders, it is decided that instructions for rechecking and re-evaluation of answer books may be uploaded on website mentioning: Rechecking of answer books involves marks awarded to various answers have been correctly added and if all the answers have been assessed/evaluated. However, re-evaluation of answer books involves complete evaluation of answer book(s) by the eligible examiner or evaluator after first evaluation of the answer books.

The meeting ended with the vote of thanks to the chair

(F.C. Dahiya) (S.C. Chawla) (Amil Sehgal) (D.P Goyal)

(Joginder Malik) (Praveen Aghamkar) (Lawaljit Sandhu)

01/3/2017

BPSMV, RE- EVALUATION RULES

1. GENERAL

1.1 These rules may be known as the BPS Mahila Vishwavidyalaya Khanpur Kalan Sonipat Re-Evaluation Rules. It supersedes all rules applicable hereinbefore. These rules will be applicable w.e.f. the examination held in May, 2012 and onwards.

SCOPE

2.1 Re-evaluation will be permitted only for the theory examinations conducted by this university.

2.2 No re-evaluation is allowed for examination in practical/Viva-Voce/Training Report/Project Report/Certificate Courses etc. or any other paper wherein there is a joint evaluation by two examiners.

Application Form

3.1(i) A candidate may apply for re-evaluation on the prescribed form, along with the original DMC & the requisite fee, within 15 days of the declaration of the result or the dispatch of the Detail Marks Card (DMC) to the Department whichever, is later.

ii) The Controller of Examinations in exceptional cases, may permit, a candidate who submits the re-evaluation form within three working days after stipulated period.

No re-evaluation form will be accepted thereafter under any circumstances.

3.2 The re-evaluation form will be free of cost and shall be available in the Examinations Branch/University

3.3. Re-evaluations form along with the requisite fee be directly submitted to the examination branch.

3.4 Application form once submitted may be withdrawn on written request in respect of one or all papers applied for re-evaluation provided that the answer-books have not been sent to the re-evaluator. No fee refund, however, will be permissible under such a situation.

FEE (Deposit & Refund)

4.1A) The re-evaluation fee as prescribed per answer book.

i)	For PG and professional courses	Rs. 500/- per paper.
ii)	For UG Courses other than professional	Rs. 300/- per paper.

B) It s uld be deposited with the University Cashier.

4.2 Refund of fee will be admissible only in the following cases:-

(i) 50% of the fee paid in case the application form is rejected/ in admissible being time bared under clause 3.

ii) 100%when re-evaluation is not possible due to some administrative technical reason.

iii) 100% in case the candidate withdraws her application for re-evaluation due to the reason that her result has been revised due to rechecking of marks but before the re-evaluation.

5. Identification of Answer Book

5.1 On a written request a candidate may be permitted to see her re-evaluated answer book for identification purpose only.

5.2 Such request should be submitted, along with a fee of Rs. 50/- a prescribed per answer book within 07 days of the communication of re-evaluated result.

Award of Re-Evaluation Marks/Score:

6. Re-evaluated Result

6.1 When Increase/Decrease is upto 15% of the Maximum Marks of the paper concerned.	Average of the Original Examiner & Re-Evaluator to be given.
6.2 When Increase/Decrease is more than 15% of the Maximum Marks of the paper concerned.	Answer Book to be sent to the second Re-Evaluator and Average of two highest scores out of the original Examiner and both the re-evaluators, to be given.

6.3 The final result of re-evaluation favourable or not will be binding upon the candidate and subject to above provisions it will supersede, suo moto, the original score/result.

7. Re-Appear Exams/ Supplementary Exam

7.1 In case the re-evaluation result has not been declared and the next supplementary/re-appear examinations are to be held, candidates should apply for such re-appear examination without waiting for the re-evaluation result.

7.2 On a written request her re-appear examination result will be kept pending till finalization of her re-evaluation result and she will be given the benefit of the best score-out of the re-appear/supplementary exam and the re-evaluated score.

7.3 In case of re-appear/fail candidates if the answer books is lost/spoiled/ damaged or not available for re-evaluation, she may be given a chance to appear in that paper in the next re-appear examination without paying any examination fee.

OR

The candidate may be given the option for refund of the re-evaluation fee in full.

8. Remuneration to the Re-evaluator(s)

The re-evaluator will be paid a remuneration as prescribed per answer book, subject to a minimum as prescribed per subject paper.

9. General Instructions

9.1 Ignorance of the titles/codes of any paper shall not be accepted as a plea for wrong entry in the application form.

9.2 Incomplete application forms, forms deficient in fee shall be rejected and no fee refund is permissible under such situation.

9.3 In case of any clarification/ambiguity the power to interpret the rules vests with the Vice-Chancellor and in case of any dispute the decision of the Vice-Chancellor will be final and binding.

9.4 The candidates should plan their future programme of taking examinations/admissions in accordance with their original result already communicated by the university till it is actually superseded by the re-evaluation result. The university does not take any responsibility of any consequences arising out of the delay in completion of the process of re-evaluation and declaration of re-evaluated result. The university shall also not be responsible if the re-evaluation result of any candidate is delayed or some mistake/discrepancy is found in the original evaluation/re-evaluation of the answer-book.

9.5 All disputes are subject to the jurisdiction at Sonipat.

CHAUDHARY DEVI LAL UNIVERSITY SIRSA

(Established by the State Legislature Act 9 of 2003)

No.CDLU/Re-val./17/_____
Dated:_____

Regd./Speed Post

4896
5/12/17

To

The Director,
Higher Education, Haryana,
Shiksha Sadan, Sector-5,
Panchkula

Sub.:- Regarding University Examination Re-evaluation Reform Note - Marks obtained by the candidate whichever are higher by State University/Central University in Haryana.

Please refer to your office memo no. 18/90-2015 UNP (4) dated 07.07.2017 on the subject cited above.

In this regards, it is to inform you that a meeting was held on 20.09.2017 at 11:30 AM under the Chairmanship of the Vice Chancellor, Chaudhary Devi Lal University, Sirsa. The minutes of the meeting are enclosed herewith for further necessary action.

30/11/17
Controller of Examinations

Endst. No. CDLU/Re-val./17/ 1834-1842 Dated : 30/11/17

Copy of the above is forwarded the following for information and further necessary action:

1. The Registrar, Kurukshetra University, Kurukshetra.
2. The Registrar, Maharshi Dayanand University, Rohtak.
3. The Registrar, Ch. Ranbir Singh University, Jind.
4. The Registrar, Ch. Bansi Lal University, Bhiwani.
5. The Registrar, Bhagat Phool Singh Mahila Vishvidyalaya, Khanpur Kalan (Sonipat).
6. The Registrar, Indira Gandhi University, Mirpur (Rewari).
7. The Controller of Examinations, CDLU, Sirsa.
8. PS to VC (for kind information of the Vice Chancellor), CDLU, Sirsa.
9. PA to Registrar (for kind information of the Registrar), CDLU, Sirsa.

Deputy Controller of Examinations
30/11/17

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CHAUDHARY DEVI LAL UNIVERSITY, SIRSA

(Established by the State Legislature Act 9 of 2003)

Minutes of the meeting held on 20-09-2017 at 11:30 A.M. in the Committee Room of the Vice Chancellor, Chaudhary Devi Lal University, Sirsa regarding "University Examination Re-evaluation Reform Note Marks obtained by the candidate whichever are higher by State University/Central University in Haryana" as per directions of the Director, Higher Education Haryana, Panchkula vide Memo No. 18/90-2015 UNP (4) Dated 07-07-2017.

The following were present:-

1.	Prof. Vijay K. Kayat Vice Chancellor, CDLU, Sirsa.	In-Chair
2.	Prof. Aseem Miglani Registrar, CDLU, Sirsa.	Member
3.	Dr. Rajbir Singh Registrar, Ch. Ranbir Singh University, Jind	Member
4.	Dr. Hukam Singh Controller of Examinations, K.U.K.	Member
5.	Dr. Joginder Malik Controller of Examinations, BPSMV, Khanpur Kalan	Member
6.	Prof. Parveen Aghamkar Controller of Examinations, CDLU, Sirsa.	Member
7.	Sh. B.S. Sindhu Controller of Examinations, MDU, Rohtak.	Member
8.	Dr. Kawaljit Singh Sandhu Deputy C.O.E., CDLU, Sirsa.	Member
9.	Sh. Atul Goyal Assistant Registrar (Colleges), C.B.L.U., Bhiwani.	Member
10.	Sh. S.C. Chawla Supdt(Re-eval.) MDU, Rohtak	Member

At the outset, all the members were welcomed and the committee considered the issues raised by the DGHE in the said Memo dated 07-07-2017 and following were unanimously resolved:

1. If the increase/decrease of marks between re-evaluated score and the original score in a paper is ~~more/less~~ upto than 20% of the maximum marks of that paper, the average of the two scores will be taken as final award. However, if the increase/decrease of the marks is more than 20%, the answer book will be referred to the 2nd re-evaluator and average of the best two scores will be taken as final award.
2. The Controller of Examinations of KUK and MDU pointed out that due to larger strength of students in their respective Universities, the implementation of Previous Result Stands (PRS) in case of decrease of marks, could not be feasible. Therefore, after a deliberation at length, it was decided that in case of decrease of marks and the student gets marks below the level of passing marks in that particular paper, the character of the result will not be changed i.e. the student will be given minimum pass marks as per the ordinance of the concerned University.
3. A committee will be constituted by all the Universities for evaluation/re-evaluation cases where variation in re-evaluation marks is more than 30% of the maximum marks of that paper. The constitution of the committee will be as under:
   - i) Dean of concerned Faculty
   - ii) Head/Chairperson of the concerned Department
   - iii) Controller of Examinations
   - iv) One Subject expert (to be nominated by the Chairperson/HOD)

The committee will recommend action against the examiner to the Vice Chancellor of the concerned university.

(S.C. Chawla) (Atul Goyal) (Kawaljit Singh Sandhu)

(B.S. Sindhu) (Joginder Malik) (Hukam Singh) (Parveen Aghamkar)

(Rajbir Singh) (Aseem Miglani) (Vijay K. Kayat)

MINUTES OF THE MEETING OF FACULTY OF EDUCATION HELD ON 03.05.2018

A meeting of Faculty of Education, BPSMV, Khanpur Kalan held on 03.05.2018 at 12.15 p.m. in the office of the Chairperson, BPSITTR, BPSMV, Khanpur Kalan.

The following were present in the meeting:

1. Dr. Sumitra Devi, Dean Faculty of Education, BPSMV, Khanpur Kalan - Chairperson
2. Dr. Suman Dalal, Chairperson, BPSITTR, BPSMV, Khanpur Kalan - Member
3. Dr. Renuka Sharma, Associate Professor, BPSITTR, BPSMV, Khanpur Kalan - Member
4. Dr. Veena Rani, Principal, Institute of Higher Learning, BPSMV, Khanpur Kalan - Member
5. Dr. Anu Balhara, Assistant Professor, BPSITTR, BPSMV, Khanpur Kalan - Secretary
6. Registrar's Nominee

At the beginning the Chairperson of the meeting welcomed the members of Faculty of Education and intimated regarding the agenda items of the meeting. All the Faculty of Education members were actively involved in deliberations and discussions. After detailed deliberations & discussions, the following business was transacted.

Agenda Item 1: Consideration and approval of Progress Report for Ph.D. submitted by following Ph.D. Scholars.

Sr. No.	Name of Ph.D. Scholar	Name of Supervisor	Period of Progress Report
1.	Usha Rani	Dr. Renuka Sharma	April 2017 to September 2017
2.	Sanchita Verma	Dr. Renuka Sharma	07.03.2017 to 07.09.2017
3.	Priyanka Gaur	Dr. Renuka Sharma	July 2016 to December 2016. January 2017 to June 2017

-Approved.

3/5/18

3/5/18

3/5/18

03/05/2018

Agenda Item 2: Consideration and approval of topic of following Ph.D. Research Scholars of 2015-16.

Sr. No.	Name & Roll Number of Ph.D. Research Scholar	Topic approved in PGBOS meeting
1.	Jyoti Singh 16061001	Effect of Remedial Instruction Programme on Academic Achievement in Science of Children with Visual Impairment
2.	Kanchan Khatreja 16061002	Relationship of Creativity in Mathematics of Elementary School Students with Anxiety and Parenting Style
3.	Kusum 16061003	Study of Academic Performance of Senior Secondary Students in relation to their Scientific Aptitude, Interest and Metacognitive Skills
4.	Mamta 16061004	A Study of Creative Thinking of School Students in relation to their Home Environment, Intelligence and Self Confidence
5.	Meena 16061007	Effectiveness of Instructional Package in Mathematics on the Performance of Children with Dyscalculia
6.	Meenu Rani 16061008	Comparative Study of Government and Private School Students with respect to Creativity, Self-Efficacy, Resilience and Academic Achievement
7.	Partibha Devi 16061009	An Assessment of the Implementation of Inclusive Education of the Disabled at Secondary Stage Scheme in Haryana
8.	Satvinder Kaur Saini 16061010	Study of Educational Aspects of the Patanjali Yog of Acharya Ramdev Ji
9.	Seema 16061011	Effect of Yoga Intervention Programme on Metacognition, Emotional Maturity and Academic Achievement of Secondary School Students
10.	Seema Rani 16061013	Effectiveness of Constructive Pedagogy of Teaching Mathematics on Learning Outcomes of Children with Hearing Impairment
11.	Sudesh Rani 16061014	Impact of an Adapted Physical Activity Programme on Psychophysical Health of Differently Abled Children

Approved

Agenda Item No. 3: Consideration and allotment of Supervisor(s) of following Ph.D. (Education) Research Scholars of 2015-16 session who have been admitted through entrance test.

Sr. No.	Roll No.	Name of the Student	Father's Name	Name of Supervisor allotted by DRC on 07.04.2018
1	16061002	KANCHAN KHATREJA	SH. UTTAM CHAND	Dr. Suman Dalal
2	16061003	KUSUM	SH. AJIT SINGH SANGWAN	Dr. Sumitra Devi

Approved.

3/5/18

3-5-18

3/5/18

03/05/2018

Agenda Item No. 4: Confirmation of allotment of Supervisor(s) of following Ph.D. (Education) Research Scholars of 2015-16 session who have been admitted under JRF Scheme.

Sr. No.	Roll No.	Name of the Student	Father's Name	Name of Supervisor
1.	16061001	JYOTI SINGH	SH. SATBIR SINGH	Dr. Poonam
2.	16061004	MAMTA	SH. RAM CHANDER	Dr. Sumitra Devi
3.	16061007	MEENA	SH. MAHENDER SINGH	Dr. Renuka Sharma
4.	16061008	MEENU RANI	SH. VED SINGH	Dr. Anu Balhara
5.	16061009	PARTIBHA DEVI	SH. UPENDER SINGH	Dr. Sandeep Berwal
6.	16061010	SATVINDER KAUR	SH. JARNAIL SINGH	Dr. Suman Dalal
7.	16061011	SEEMA	SH. BALWAN SINGH	Dr. Suman Dalal
8.	16061013	SEEMA RANI	BALRAJ SINGH	Dr. Varuna
9.	16061014	SUDESH RANI	SH. MAHABIR	Dr. Sandeep Berwal

- Approved.

Agenda Item No. 5: Consideration and approval of reducing sample size of synopsis of Priyanka Gaur D/o Sh. S.N. Gaur, Ph.D. (Education) Research Scholar (Session 2013-14) and replacing the Socio- economic Status Scale by Rajbir Singh, Radhey Shyam and Satish Kumar in place of Gyanendra P.Srivastava.

- Approved.

Agenda Item 6: Consideration and approval of topic of the following Ph.D. Research Scholar of session 2016-17.

Sr. No.	Name of Ph.D. Scholar	Topic approved in PGBOS meeting on 26.04.2018	Name of Supervisor allotted by DRC on 07.04.2018
1.	Sunita Devi D/o Sh. Mahaveer Singh 17061002	Effectiveness of Self Regulated Learning Module in Social Sciences on Academic Achievement of Secondary School Students	Dr. Suman Dalal

- Approved.

Agenda Item 7: Consideration and approval of Change of topic from "Development of Multimedia Teaching Package in Physics and its Impact on Academic Achievement of Learning Disabled" to " Study of Teachers' Enthusiasm and Quality of Life Among Secondary School Teachers in Relation to Their Organisational Climate" in respect of Ph.D. (Edu.) Research Scholar namely Manju Bala Roll No. 16061006 admitted in 2016-17 session.

Sr. No.	Name of Ph.D. Scholar	Topic approved in DRC meeting on 07.04.2018	Name of Supervisor allotted by DRC on 07.04.2018
1.	Manju Bala Roll No. 16061006	Study of Teacher Enthusiasm and Quality of Life in Different Organizational Climate of Secondary Schools	Dr. Poonam

- Approved.

3/5/18

3/5/18

3.5.18

03/05/2018

Agenda Item 8 : Consideration and approval of appointment of Panel of Examiners for evaluation of Ph.D. Thesis of Ph.D. Scholar Ms. Usha Rani, Regn. No. 12060415 (Session 2011-12).

- Approved.

Agenda Item 9 : Consideration and approval of appointment of Panel of Examiners for evaluation of Ph.D. Thesis of Ph.D. Scholar Ms. Meena, Regn. No. 14060402 Session 2011-12).

- Approved.

Agenda Item 10: Consideration and approval of the Progress Report for Ph.D. (Edu.) submitted by following Ph.D. Scholars.

Sr. No.	Name of Ph.D. Scholar	Name of Supervisor	Period of Progress Report
1.	Anisha D/o Sh. Satbir Singh	Dr. Reena Rani	July, 2017 to December, 2017 January 2018 to March, 2018
2.	Joyti Sehrawat D/o Sh. Pratap Singh Sehrawat	Dr. Poonam	June, 2017 to March, 2018
3.	Meena D/o Sh.Mange Ram	Dr. Sumitra Devi	24.03.14 to 24.09.14, 24.09.14 to 24.03.15, 24.03.15 to 24.09.15, 24.03.15 to 24.03.16, 24.03.16 to 24.09.16, 24.09.16 to 24.03.17, 24.03.17 to 24.09.17, 24.09.17 to 24.03.18
4.	Menka D/o Sh. Balganand	Dr. Reena Rani	08.09.2017 to 07.03.2018
5.	Namita Nahar D/o Sh. Kamal Kumar Nahar	Dr. Varuna	June 2017 to March, 2018
6.	Priya Dhingra D/o Sh. P.L. Dhingra	Dr. Reena Rani	Sept. 2017 to March, 2018

- Approved.

The meeting ended with the vote of thanks to the Chair

(Dr. Sumitra Devi) 3/5/18 (Dr. Suman Dalal) 3/5/18 (Dr. Renuka Sharma) 3.5.18

Veena 3/5/18 (Dr. Veena Rani)

(Dr. Anu Bathara) 03/05/2018

(Sh. Kuldeep Singh) 3/5

Minutes of the meeting of the Committee constituted by the Vice-Chancellor to frame the rules/Ordinances/Statutes related to affiliated colleges held on 10.01.2018 at 2.00 P.M in the office of Chairperson, ITTR.

The following were present:

1. Dr. Naresh Kumar, Dean of Colleges
2. Dr. Ashok Kumar, Chairperson, Deptt. of English
3. Dr. Suman Dalal, Chairperson, ITTR
4. Dr. Mahesh Sharma, MSM Instt. of Ayurveda

The convener welcomed all the members of the committee and invited suggestions/observations regarding framing of rules/ordinances/statutes related to affiliated colleges. After detailed deliberation, and considering the rules/ ordinances/ statutes of M.D.U. Rohtak, the committee prepared the Draft rules/ordinances/statutes for BPSMV Khnapur Kalan.

The meeting ended with a vote of thanks from the Chair.

10/1/18

(Dr. Naresh Kumar)

10/1/18

(Dr. Ashok Kumar)

(Dr. Suman Dalal)

10/01/18

(Dr.Mahesh Sharma)

[*Authorised English Translation*]

HARYANA GOVERNMENT

HIGHER EDUCATION DEPARTMENT

Notification

The 21st June, 2017

No. S.O. 45/H.A. 31/2006/S. 4/2017.— In exercise of the powers conferred by sub-section (1) of section 4 of Bhagat Phool Singh Mahila Vishwavidyalaya Khanpur Kalan Act, 2006 (31 of 2006), the Governor of Haryana hereby specifies that from the session 2017-18, Bhagat Phool Singh Mahila Vishwavidyalaya, Khanpur Kalan, District Sonepat shall exercise its powers over only the Government and Non-Government Girls colleges situated in district Panipat and Sonipat.

DR. MAHAVIR SINGH,
Principal Secretary to Government Haryana,
Higher Education Department.

55426—I.R.—HGP, Chd

Draft Ordinance

ORDINANCE PROCEDURE FOR GRANTING PROVISIONAL AFFILIATION TO COLLEGES/INSTITUTIONS

1.0 Essential conditions for granting provisional affiliation to colleges/institutions.

No College or Institutions shall be admitted to the privileges of affiliation of the University unless it satisfies the University that:-

1.1 It is run by the Central Government, state government, competent local authority, a society registered under the Societies Registration Act, 1860 as amended from time to time or a public trust constituted under any law for the time being in force.

1.2 Land required as per norms of UGC, as the case may be;

1.3 Administrative, academic and other buildings with sufficient accommodation to meet the immediate academic and other space requirements as specified by the University concerned for each of the higher education course/programme with adequate scope for future expansion in conformity with those prescribed by the UGC/Statutory/ Regulatory body concerned, taking care that all buildings constructed in the college are disabled friendly;

1.4 Academic building sufficient to accommodate the faculties, lecture/ seminar rooms, library and laboratories as per norms of UGC.

1.5 Number of teaching and non-teaching staff as per University norms;

1.6 Adequate civic facilities for essentials like water, electricity, ventilation, toilets, sewerage, etc. in conformity with the nouns laid down by the Central/ State PWD;

1.7 A library with at least 1000 books, or 100 books in different titles on each subject, whichever is more, of the proposed programmes to include both text books and reference books, besides two journals per subject, alongwith a book bank facility for the students belonging to the Scheduled Castes, Scheduled Tribes and such other sections as may be specified by the UGC from time to time;

1.8 Necessary laboratory equipments as prescribed by the University, for each of the higher education programmes;

1.9 A multi-purpose complex/ an auditorium and facilities for sports, canteen, health care, separate common rooms and separate hostels for boys and girls as per the local requirements as decided by the University.

1.10 Appropriate furniture for lecture/seminar rooms, laboratories, library, faculty rooms, rooms for administrative staff including the Principal, multi-purpose complex/ auditor urn, common rooms and hostel rooms, and for other facilities;

1.11 Except Govt. College, each College should have Governing Body constituted as per norms of the University.

10/1/18

cause notice for taking action against the college as per relevant statute may, withdraw the provisional affiliation already granted to the college/institution.

3.0 **Eligibility Criteria for Permanent Affiliation.**

3.1 The College seeking permanent affiliation must have completed at least five years of satisfactory performance after getting temporary affiliation and attained the academic and administrative standards as prescribed by the University/ UGC from time to time.

3.2 The college must have completed construction of buildings and all infrastructure facilities/faculty and other support system as stipulated in the Regulations.

3.3 All the teaching and non-teaching staff must have been appointed on permanent (appointed on regular basis, in case of a Government college) on the UGC/Government scales of pay.

3.4 The College shall have a duly constituted Governing Body as per the norms of the University.

3.5 The College shall be accredited by NAAC or any other statutory accreditation agency by State/Central Government.

3.6 The College should obtained a permanent NOC from the State Govt

4.0 **Procedure for granting Permanent Affiliation:**

4.1 A college which wishes to get permanent affiliation shall apply to the University after completing five years of provisional affiliation in the prescribed form along-with requisite fee within the stipulated period.

4.2 The procedure for according permanent affiliation shall be the same as for granting provisional affiliation.

4.3 If the University decides not to grant permanent affiliation to the college for reasons, to be recorded in writing, of its failure to meet the conditions/requirements for getting such affiliation, the college may apply again if it fulfils the conditions subsequently.

5.0 **Eligibility to apply for additional course/subject/intake :**

5.1 The procedure followed for grant of affiliation shall apply mutatis-mutandis to continuation affiliation from time to time and for starting new/ additiona courses/ subjects/increase in intake and programmes etc.

6.0 Withdrawal of affiliation :

6.1 The privileges conferred on a college by affiliation may be withdrawn in part or in full, suspended or modified, if the college, on due enquiry, is found to have failed to comply with any of the provisions of the Act, the Statutes, the Ordinances, the Rules and Regulations or any other direction or instruction of the UGC/University, or failed to observe any of the conditions of affiliation, or has conducted itself in a manner prejudicial to the academic and administrative standards and interests of the University after following due procedure as laid down in the Statute.

7. If an affiliated college ceases to function or is shifted to a different location or is transferred to a different Society, Trust, individual or a group of individuals without the prior approval of the University, the affiliation granted to the college shall lapse automatically on such ceaser, shifting or transfer, as the case may be and it shall be treated as a new college for the purposes of future affiliation. The University/Government shall have the duty to alleviate the educational future of the affected students in an appropriate manner as per its decision.

9. If any of the institute do not want to start new course/increase in intake granted by the University shall inform the University well before the starting of new academic session. Otherwise, all type of fee shall be charged for the course (s)/increase in intake.

APPLICATION FORM FOR SEEKING AFFILIATION OF A NEW COLLEGE

To

Dean, of Colleges,
Bhagat Phool Singh Mahila Vishwavidyalaya,
Khanpur Kalan
(Sonipat)-131305
(Haryana)

Sir/Madam,

I/we hereby apply for affiliation of a _____ to the University which the
**
_____
_____
_____
_____Proposes to start as
***
_____
from the academic year beginning from June, 20 _____. To begin with, it is proposed to start the First Year classes with the following subject/s and eventually to develop the college into a full-fledged college teaching the courses to study leading to the degree/s
of_____
and/or Diploma/s in
_____

Class		Subject	
		Compulsory	Optional
1.	Ist Year		
2.	Ist Year		
3.	Ist Year		

(Please attached separate sheet if required)

ii. I/we have read all the provision of Statute of the BPSMV Khanpur Kalan Act, 1975 and the relevant Ordinance/guidelines of the University, relating to the affiliation of colleges and undertake to abide by the said provisions. The necessary undertaking in terms of the provisions of the Statute is given in para-IV.

iii. I/we furnish below the information as required by the University.

1. The need and the justification for the proposed college stating whether there is any other college in the same area within the

5. Total Area _____sq.mts.
6. F.S.I. permitted _____
7. Total area available for construction _____sq.mts.

_____

8. Total area already utilized for other _____
purposes_____
sq.mts.
9. Total area available for the proposed
college_____sq.mts.

b. Details of documentary evidence in support of 5 (a) are given in Appendix 9.

c. A certificate that the said land is earmarked for construction of a building for
housing the proposed college is given in Appendix 10.

6. Building (including hostel, canteen etc.)

(a) (i) The proposed college is not going to be housed initially in building intended for its use, the nature and details of the present accommodation and the adequacy and suitability for various purposes of the proposed college are given in Appendix 11. The building is owned/rented by the said Society/Trust.

(ii) The building for the proposed college is already under construction. The stage of completion of the building and details regarding the sizes of rooms/halls which will be made available for the various purposes of the proposed college are given in Appendix 12. The probable date of shifting the college to its own premises is _____

OR

(b) The proposed college is going to be housed in a building intended for its use. The nature and details of accommodation on the following points are given in Appendix 13.

(i) The total floorwise built up carpet area in_____sq.mts.
(ii) The total floorwise carpet area in _____sq.mts.
(iii) The nature and timing of the use of the building for other purposes, if any,
(iv) Details of open space on the four sides of the building.

(v) The details of the various halls, rooms etc. on each floor under the following heads floor (Ground floor,First floor, Second floor etc.)

Room / Hall No.	Designation of the Room/Hall	Area of the Room/Hall	The purpose for which it is used / proposed to be

as may be prescribed;

(e) that the financial resources of the college or institution shall be such as to make due provision for its contined maintenance and working.

(f) that the strength and qualifications of teaching and non-teaching staff of the affiliated colleges and recognized institutions and the emoluments and the terms and conditions of service of the staff of affiliated colleges shall be such as prescribed by the University and which shall be sufficient to make due provision for courses of study, teaching or training or research, efficiently;

(g) that the services of all teaching and non-teaching employees and the facilities of the college to be affiliated shall be made available for conducting examinations and for promoting other activities of the University.

(h) that the directions, and orders issued by the Chancellor, Vice-Chancellor and other officers of the University in exercise of the powers conferred on them under the provisioins of the Act, Statutes, Ordinances and Regulations shall be complied with;

(i) that there shall be no change or transfer of the management without previous permission of the University,

(j) that the college or institution shall not be closed without previous permission of the University..

V. The prescribed fee of Rs._____ is sent herewith by means of a crossed orders demand draft bearing No._____ dated _____ drawn on the (Bank) _____ in favour of Registrar, BPSMV, Khanpur Kalan. Nine additional copies of the application with all the appendices referred to above are also sent herewith.

Yours faithfully,

(Signature)

PRESIDENT/SECRETARY/CHAIRMAN/TRUSTEE

Date:

Place:

/ or the individuals associated with the Society/Trust/Company established under Section-25 of Companies Act 1956, and/or the Institution.

5. That the facts stated in this certificate are true to my/our knowledge. No part of the same is false and no material has been concealed there from.

6. I will abide by all terms and conditions as laid down in the approval process.

7. That the Institution will abide by all the provisions of the University Act, Statute, Ordinance(s), Rules & Regulations and instructions issued by the University from time to time.

8. That if at any stage after visits by the University appointed committees or any other authorized officer, it is found that the college is lacking in infrastructure, faculties and attendance of students etc., the Institution shall be liable for any disciplinary action to be taken by the affiliating University as per its rules.

9. In the event of non-compliance by the <name of the Trust/Society> and/ or <name of the proposed Institution> with regard to guidelines, norms and conditions prescribed by the UGC, the event of violation of any other undertaking given to the University shall be free to take appropriate action including withdrawal of its affiliation without consideration of any related issues and that all liabilities arising out of such withdrawal shall solely be that of the Socieity/Institute/College.

DEPONENT

VERIFICATION

I, the above named deponent do hereby verify that the facts stated in the above affidavit are true to my knowledge. No part of the same is false and nothing has been concealed there from.

DEPONENT

which shall be sufficient to make due provision for courses of study, teaching or training or research efficiently.

g) that the services of all teaching and non-teaching employees and the facilities of the college to be affiliated shall be made available for conducting examinations and for promoting other activities of the University.

h) that the directions, and orders issued by the Chancellor, Vice-Chancellor and other officers of the University in exercise of the powers conferred on them under the provisions of the Act, Statutes, Ordinances and Regulations shall be complied with.

i) that there shall be no change or transfer of the management without previous permission of the University.

j) that the college or institution shall not be closed without previous permission of the University.

DEPONENT

VERIFICATION

I, the above named deponent do hereby verify that the facts stated in the above affidavit are true to my knowledge. No part of the same is false and nothing has been concealed there from.

DEPONENT

Draft Statute

Condition of admission of Colleges/Institutes to the Privileges of the University for grant of affiliation and the withdrawal of such Privileges:

1. (a) The University shall establish, maintain and grant affiliation to the colleges/Institutes established/proposed to be established within its jurisdiction subject to such conditions, if any, as may be decided upon by the Executive Council from time to time.

   (b) The Colleges shall be of two types namely University maintained colleges and affiliated colleges.

   (c) The Bhagat Phool Singh Mahila Vishwavidyalaya, Khanpur Kalan shall exercise its powers over colleges which the State Govt. may notifiy as per provision under section 4 of the Bhagat Phool Singh Mahila Vishwavidyalaya, Khanpur Kalan Act.

(2) An application for grant of affiliation shall be made by the concerned Department of the State Govt. or the officer authorized on its behalf in the case of a Govt. College and by the chairman or any other person authorized by a Society registered under the Societies Registration Act or a Public Trust constituted under any law for the time being in force in the case of non-govt. college

The last date by which such an application should reach the Registrar of the University shall be as provided in the schedule-I given in the ordinance relating to the procedure for grant of affiliation subject to the grant of NOC by the State Government and approved/recognition by the concerned Apex regulatory Body an application for seeking permission to start additional courses, shall be made by the Principal of the College or the concerned Department of the State Government, alongwith prescribed processing fee for each course/subject, and must reach the Registrar, complete in all respects, by the date given in Schedule-I.

(3) A college applying for affiliation shall send an application to the Registrar and shall satisfy the Academic Council/Executive Council;

(a) that unless it is Government College, the college shall have a regularly constituted governing body;

(b) that the qualifications of the teaching staff, their grades of pay and the conditions governing their tenure of office are in accordance with Statute/Ordinances/Rules laid down by the University (every teacher appointed in a non-govt. affiliated college shall be subject to the approval of the Vice-Chancellor in the manner prescribed by the University);

(c) that the buildings in which the college is to be located are suitable and that provision will be made in conformity with the rules of the University (i) for the residence of the students not residing with their parents/guardians in the college or in lodging approved by the college and (ii) for their supervision and physical welfare;

(d) that the provisions has been or shall be made within a specified period for a library according to the University norms;

(e) that where recognition is sought in any branch of experimental science, arrangements have been or will be made in conformity with the rules of University for imparting instruction in that branch of science in a properly equipped laboratory or museum;

(f) that the provision will, so far as circumstances may permit, be made for the residence, of the head of the college and some members of the teaching staff, in or near, the college of the place provided for the residence of students;

(g) That financial resources of the college are such as to make the provision for its continued maintenance that the required amount of endowment fund has been deposited with the Directorate of Higher Education.

(h) that the recognition of the college having regard to the educational facilities provided by other colleges is the same neighbourhood will not be injurious to the interest of education; and

(i) that the college rules fixing the fees (if any) to be paid by the students are not framed as to involve such competition with any existing college in the same neighbourhood as would be injurious to the interest of education.

The application shall further contain an assurance that after the college is recognised no transference of management shall be made except with the prior approval of the University and that all changes in the teaching staff shall forthwith be reported to the University for approval and that the institution shall faithfully observe the provisions of the Act, Statutes, Ordinances and Regulations of the University, as are made from time to time.

(4) The application shall be accompanied by the following statement, in addition to other particulars expressly required by the Ordinances:-

(a) a statement containing full information regarding the constitution of the governing body and the names of its members;

(b) a statement showing the names of teachers employed, or proposed to be employed, their qualifications, the subjects proposed to be taught by each of them, their salaries, grades of pay;

(c) a complete plan to scale, of the buildings and ground;

(d) a statement indicating:

(i) the number of students attending the college or proposed to be admitted to the college;

(ii) the number of students not residing with their parents or guardians;

(iii) the arrangements made or proposed to be made for the residence in the college, or lodging approved by the college for students not residing with their parents or guardians;

(iv) the arrangements made or proposed to be made for the supervision of students and their physical welfare including arrangements for games,physical training, playgrounds and medical assistance;

(v) the arrangements made or proposed to be made for the welfare of the students.

(e) a statement showing the number and character of the books composing the library, and the expenditure annually provided or proposed to be provided for the improvement of the library;

(f) a statement showing the appliances (including laboratory equipment, apparatus and chemicals etc.) provided or proposed to be provided for teaching the subjects in which recognition is being sought and amount to be annually incurred on such appliances;

(g) a statement showing the accommodation provided for the residence of the principal of the college and of members of the teaching staff in or near the college of the place for the residence of student;

(h) a statement showing the financial resources of the college, including a statement of the annual income and expenditure;

(i) a statement showing the rates of fee proposed to be levied and the number of students exempted wholly or in part from such fees;

(i) a statement with proof that the management:

(i) has deposited the endowment fund as required under the rules of the University;

(ii) has adequate buildings, equipments, furniture and library books or adequate funds as determined by the University for the purpose.

Note:

For starting a new college/institution or for introducing a new subject(s)/course(s)/ additional intake, it shall be incumbent upon the applicant/applicants to obtain 'No Objection Certificate' from the concerned Department in the State Government/concerned regulatory body (where ever is applicable) without which no request for affiliation shall be entertained.

(5) On receipt of an application for recognition of a new college, the Registrar shall, after ensuring that the application is complete in all respects place the matter before the Vice-Chancellor, who will appoint an inspection committee consisting of two or more competent persons.

(6) The inspection committee(s) shall visit the College and submit their report in a form prescribed by the University to the Registrar within two weeks of the date of receipt of the communication. The report of the inspection committee shall be placed before the Academic Council/Executive Council at the earliest opportunity.

(7) Where an application, or any part thereof, is granted, the Academic Council/ Executive Council it will specify the course(s) of instruction in respect of which the college is affiliated, and where the application or any part thereof is refused, the grounds of such refusal may be stated. Provided that no college shall be affiliated with retrospective effect in respect of any course of instruction.

(8) Any application for the grant of recognition may be withdrawn at any time before a decision is taken by the Executive Council.

(9) A college affiliated to this University shall pay an affiliation and course fee and thereafter continuation fee as prescribed in Schedule-I given in the ordinance.

(10) If a college fails to start classes during the academic year for which permission has been given, the permission for the course concerned shall have to be re-obtained.

(11) If a college does not provide instruction for three years continuously in a course for which affiliation had been granted, the affiliation for the course shall stand cancelled.

(12) (a) A college shall not, without the previous permission of the Academic Council suspend instruction in a course of study for which it is authorised to teach.

(b) if the Governing body/Board of Governors as the case may be, of a college proposes to discontinue a particular course/ subject or reduce the seats in the college, it shall seek the prior permission of the University and an application giving reasons in support of the proposal shall be made by the date as provided in the schedule given in the Ordinance.

(c) In the case of discontinuation of the college, it shall be incumbent upon the governing body of the institution concerned to give a notice of one year to its employees regarding termination of their services, which will take effect only if and when the permission is granted by the University and subject to the condition, if any, imposed by it.

(d) The discontinuation in respect of an integrated course of study/subject for which it is affiliated shall be in stages as under:-

(i) In the first year, admission to Part-I class will be discontinued and admission for Part-II, III will continue.

(ii) In the 2nd year, admission to Part-II class will be discontinued and admission for Part-III if any, will continue.

(iii In the 3rd year, there may be no admission.

(13) Where a college desires to add to the course of instruction in respect of which it is affiliated/admitted to the privileges of this University, the procedure prescribed by Clauses 2, 3, and 4 above shall so far as may be applicable, be followed.

Provided that in such case the condition of inquiry/inspection may be dispensed with, if the Executive Council deems it fit. The inspection committee, if appointed shall submit its report as per proforma prescribed by the University

(14) Every college shall also furnish such reports, returns and other information as the Academic Council/ Executive Council may require, from time to time, to enable it to judge in efficiency of the college.

(15) The Principal/Director of affiliated college/Institutes shall submit to the Registrar before the 31st August each year, a report indicating:

a) the change in the Governing Body/management;

b) changes in (i) the teaching staff and qualifications of new members (ii) other staff;

c) income and expenditure of the previous financial year;

d) result of examinations;

e) scholarships;

f) condition of library.

(16) The following record must be kept by every recognized/affiliated college and submitted, when required, to the officer nominated by the Vice-Chancellor:-

i) a register of admission and withdrawals. The register will give in the case of every student, the date of admission, the date of birth, name of birth place, percentage, attendance at college examinations and results of such examinations, a record of University career and date of withdrawal.

ii) Registers of daily attendance of students at lectures.

iii) A register of fees.

iv) A time table

(17) The Academic Council/ Executive Council shall cause every recognised college to be inspected from time by one or more competent persons authorised by it in this behalf. Provided that each college shall be inspected ordinarily once in every three years, and at other times where in the opinion of the Academic Council/ Executive Council, such inspection is necessary.

(18) In the beginning of each financial year the Academic Council/ Executive Council, on the recommendations of the Vice-Chancellor, may appoint inspection committee for colleges to be inspected during that year.

(19) An inspection committee to be constituted by the Vice-Chancellor shall, ordinarily consist of three or more competent members.

(20) The convener of the inspection committee shall be appointed by the Vice Chancellor and he will be responsible for arranging the inspection and report.

(21) The members of the inspection committee shall be paid travelling and halting allowance of the class to which they are entitled according to normal rules, and in addition an inspection fee as prescribed by the University from time to time.

(22) The inspection will be directed primarily to the purpose of ascertaining:-

a) if the conditions of recognition prescribed by the University are complied with;

b) that adequate measures are taken to ensure efficiency as regards:-

i) qualifications of, and duties performed by the members of the staff;
ii) instructions, residence and supervision of students;
iii) accommodation for classes and administrative offices;
iv) furniture, apparatus and sanitary arrangement;
v) library;
vi) registers for various purposes; and
vii) other similar matters.

c) if the rules concerning the science practical are being complied with and the laboratories are properly fitted with requisite apparatus, gas, fire fighting and water supply.

(23) The report of the inspection committee shall be submitted in printed form prescribed by the University within 10 days of the date of inspection to the Registrar for consideration by the Academic Council/Executive Council.

(24) If the report calls for any action by the Academic Council/Executive Council, the Academic Council/Executive Council shall specify the points on which it considers the college deficient and fix time, which may be extended for sufficient reasons, with in which the college shall take action necessary to comply with the direction of the Academic Council/Executive Council.

(25) Each College shall have a Managing Committee known as Governing body/ Board of Governors, shall be elected by the General Body or the Collegium other than the members nominated by competent/ ex-officio i.e. Principal, as the case may be, consisting of not less than three and exceeding 21 members. The office bearers shall comprise of the President, Vice-President, Treasurer, General Secretary and Secretary. The first four shall be elected by the General Body or the Collegium of the Society/ Trust running the College/Institute. The principal shall be the ex-officio Member-Secretary of the Governing Body. Of the remaining sixteen members 11 shall be elected by the General Body or the Collegium of the Society/Trust, one shall be nominated by the University, one by the State Govt., and three shall represent the staff by election. In cases where the Governing Body consists of less then 21 members, the number falling in each of the above categories will be determined on a proportionate basis, the representation of the University and the Govt. remaining invariable. As soon as the Governing Body is constituted, the names of the members will be communicated to the University and the Director of Higher Education Haryana by the secretary.

The life of the Governing body shall be three years and fresh election shall be held after every three years. The election of office bearers and members of EC among the Collegium shall be held under the supervision of an observer to be appointed by the University who shall certify that the election has been held properly and according to rules. In case the elections are not held at the end of the period stipulated above, the University shall be competent to constitute a new Governing Body. The constitution, election and personal of the Governing Body shall be subject to the approval of the University. The change in the constitution on the above lines shall be a pre-condition for the release of maintenance and other grants. Applications for grants, accompanied with certificates that the salaries of the employees have been paid and all other conditions relating to affiliation and such grants have been complied with shall be routed through the University. If in inquiry, it is found that a recognized non-govt. college is not being properly administered, the Executive Council, may authorizes the Vice-Chancellor to appoint additional representatives or representatives of the University on the managing body of the college for such period as may be prescribed by the Executive Council, If the representative of the University are not invited to a meeting of the Managing Body and or/a meeting of the Governing Body is held without the presence of the University representative, the proceedings of that meeting shall be regarded as invalid. In case, the University representative does not attend a meeting even after having confirmed his presence in writing the proceedings of such meeting shall be valid. There must be at least three meetings of the governing body in a year i.e. one per term. T.A. and D.A. of University representatives shall be paid by the college concerned.

Note:

"Managing Committee" means the Managing Committee of an affiliated college or colleges and includes a person or body of person for the time being entrusted with the management of the affairs of such college or colleges.

(26) The conditions for the grant of Association to the institutions for Oriental Titles/Modern Indian Languages examinations shall be those as prescribed in the Ordinance.

(27) If at any time, the Executive Council finds, that a college/institution is not complying with the requirements of the Act, Statutes, Ordinances or Regulations of the University or any instructions issued by it or on its behalf, the Executive Council will have the authority to impose any one or more of the following penalties:-

i) students of the college concerned shall not be accepted for the University examinations;

ii) the college staff shall be debarred from University work such as appointment as examiner, superintendent of examination centres etc;

iii) the principals or the teacher concerned shall be debarred from seeking election or nomination to a University body or his name shall be removed from the list of members of the University bodies:

iv) the approval, granted to the governing body of the college, be withdrawn in part or in whole.

v) Financial penalty as may be deemed appropriate by the Academic Council may be recommended keeping in view the circumstances of each case.

vi) Reduce seats for the next academic session by not exceeding twice the number of irregular admissions made or in case of availability of less than required teaching faculty proportionately.

vii) The affiliation associate status granted to a college or an institution by the University may be withdrawn in part or in whole or modified.

Provided that whenever any penalty under clause (v) and / or (vii) above is imposed the same shall be communicated to the Central Regulatory Body / Authority for such further action as may be decided at that/their level.

(28) Where the Executive Council proposes to withdraw the affiliation/ associate status of a college/ institution, in whole or in part, the Executive Council shall authorize the Registrar to send to the head of the college/ institution concerned, a notice stating therein the ground on which the action is proposed to be taken together with the indication that any representation in writing submitted on behalf of the college/ institution within a specific period, shall be considered by the Executive council. The period may be extended, if considered necessary, by the Executive Council.

(29) On receipt of the representation or on expiry the period referred to in clause above, the Executive Council shall consider the notice of motion, the statement or representation, if any, and make such order as the circumstances may require.

(30) Where by an order made under clause- 28, the rights conferred on, by affiliation/ associate status are withdrawn in whole or in part the grounds for such withdrawal shall be stated in the order and communicated to the head of the college/ institution concerned.

(31) In the event of withdrawal of the affiliation/ associated status of a college/institution, the Executive council shall have power to decide regarding the disposal of amalgamated fund/student fund.

ANNEXURE - 20

B.P.S. MAHILA VISHWAVIDYALAYA, KHANPUR KALAN
DEPARTMENT OF LAWS
COURSE CURICULUM & SCHEME OF EXAMINATION OF B.A. LL.B. Five Year Course
(w.e.f. 2017-18)

FIRST YEAR

First Semester

Paper Code	Course Title	Hours per week			Int. Marks	Ext. Marks	Total Marks	Total Credits
		Let.	Tut	Total				
LAW-101	Legal Methods-	5	1	6	20	80	100	6
LAW-103	Law of Torts -	5	1	6	20	80	100	6
LAW-105	History-I	5	1	6	20	80	100	6
LAW-107	Economics-I	5	1	6	20	80	100	6
LAW-109	Sociology-I	5	1	6	20	80	100	6
LAW-111	English-I	5	1	6	20	80	100	6
Total Contact hours/Credits/marks		30	06	36	120	480	600	36

Second Semester

Paper Code	Course Title	Hours per week			Int. Marks	Ext. Marks	Total Marks	Total Credits
		Let.	Tut	Total				
LAW-102	Law of Contract-I	5	1	6	20	80	100	6
LAW-104	Family Law-I	5	1	6	20	80	100	6
LAW-106	History-II	5	1	6	20	80	100	6
LAW-108	Economics-II	5	1	6	20	80	100	6
LAW-110	Sociology-II	5	1	6	20	80	100	6
LAW-112	Ehglish	5	1	6	20	80	100	6
Total Contact hours/Credits/marks		30	06	36	120	480	600	36

SECOND YEAR

Third Semester

Paper Code	Course Title	Hours per week			Int. Marks	Ext. Marks	Total Marks	Total Credits
		Let.	Tut	Total				
LAW -201	Law of Contract-II	5	1	6	20	80	100	6
LAW-203	Family Law II-	5	1	6	20	80	100	6
LAW-205	Political Science-I	5	1	6	20	80	100	6
LAW-207	Economics-III	5	1	6	20	80	100	6
LAW-209	Sociology-III	5	1	6	20	80	100	6
LAW-211	English-III	5	1	6	20	80	100	6
Total Contact hours/Credits/marks		30	06	36	120	480	600	36

Fourth Semester

Paper Code	Course Title	Hours per week			Int. Marks	Ext. Marks	Total Marks	Total Credits
		Let.	Tut	Total				
LAW-202	Law of Crimes-I	5	1	6	20	80	100	6
LAW-204	Environmental Law	5	1	6	20	80	100	6
LAW-206	Political Science-II	5	1	6	20	80	100	6
LAW-208	History-III	5	1	6	20	80	100	6
LAW-210	Information Technology	5	1	6	20	80	100	6
LAW-212	English-IV	5	1	6	20	80	100	6
Total Contact hours/Credits/marks		30	06	36	120	480	600	36

B.P.S. MAHILA VISHWAVIDYALAYA, KHANPUR KALAN
DEPARTMENT OF LAWS
COURSE CURICULUM & SCHEME OF EXAMINATION OFB. B.A. LL.B. Five Year Course
(w.e.f. 2017-18)

FIRST YEAR

First Semester

Paper Code	Course Title	Hours per week			Int. Marks	Ext. Marks	Total Marks	Total Credits
		Let.	Tut	Total				
LAW -101	Legal Methods-	5	1	6	20	80	100	6
LAW-103	Law of Torts -	5	1	6	20	80	100	6
LAW-113	Principles of Management	5	1	6	20	80	100	6
LAW-115	Managerial Economics	5	1	6	20	80	100	6
LAW-117	Business Statistics	5	1	6	20	80	100	6
LAW-111	English-I	5	1	6	20	80	100	6
Total Contact hours/Credits/marks		30	06	36	120	480	600	36

Second Semester

Paper Code	Course Title	Hours per week			Int. Marks	Ext. Marks	Total Marks	Total Credits
		Let.	Tut	Total				
LAW-102	Law of Contract-I	5	1	6	20	80	100	6
LAW-104	Family Law-I	5	1	6	20	80	100	6
LAW 114	Financial Accounting	5	1	6	20	80	100	6
LAW 116	Operational Research in Management	5	1	6	20	80	100	6
LAW 118	Economic Environment of Business	5	1	6	20	80	100	6
LAW-112	English-II	5	1	6	20	80	100	6
Total Contact hours/Credits/marks		30	06	36	120	480	600	36

SECOND YEAR

Third Semester

Paper Code	Course Title	Hours per week			Int. Marks	Ext. Marks	Total Marks	Total Credits
		Let.	Tut	Total				
LAW -201	Law of Contract-II	5	1	6	20	80	100	6
LAW-203	Family Law II-	5	1	6	20	80	100	6
LAW-213	Financial Management	5	1	6	20	80	100	6
LAW-215	Organizational Behaviour	5	1	6	20	80	100	6
LAW-217	Marketing Management	5	1	6	20	80	100	6
LAW-211	English-III	5	1	6	20	80	100	6
Total Contact hours/Credits/marks		30	06	36	120	480	600	36

Fourth Semester

Paper Code	Course Title	Hours per week			Int. Marks	Ext. Marks	Total Marks	Total Credits
		Let.	Tut	Total				
LAW-202	Law of Crimes-I	5	1	6	20	80	100	6
LAW-204	Environmental Law	5	1	6	20	80	100	6
LAW-214	Human Resource management	5	1	6	20	80	100	6
LAW-216	Value & Ethics in Business	5	1	6	20	80	100	6
LAW-210	Information Technology	5	1	6	20	80	100	6
LAW-212	English-IV	5	1	6	20	80	100	6
Total Contact hours/Credits/marks		30	06	36	120	480	600	36

BPS MAHILA VISHWAVIDYALAYA
KHANPUR KALAN

B.A.LL.B. 3rd & 4th Semester
Syllabus
w.e.f. 2018-19
(For students admitted in 2017-18)

DEPARTMENT OF LAWS

B.A. LL.B. (Hon')
3rd Semester
Law of Contract II

Paper Code: LAW 201
L – T – L
5 –0 – 1
External Marks: 80
Internal Marks: 20

Total Credits: 6

Total Marks: 100

Course Objectives- This paper is introduced to impart knowledge various special contract, law of agency and partnership.

Unit – I

Indemnity, Gurantee, Bailment and Pledge-

a. Meaning and distinction between Indemnity and Gurantee.
b. Right/duties of indemnifier, indemnified and surety.
c. Discharge of Surety.
d. Kinds of Gurantee.
e. Bailment and Pledge.
    i. Meaning and Distinction.
    ii. Rights and duties of Bailor/ Bailee, Pawnor/ pawnee
    iii. Lien.
    iv. Termination of Bailment.

Unit – II

Agency-

a. Definition of agent and principal
b. Essentials of relationship of agency.
c. Creation of agency: By agreement, ratification, necessity and law.
d. relation of Principal and Agent, sub agent and substituted agent.
e. Termination of Agency.

Unit – III

The Sale of Goods Act, 1935

a. Definition and Essentials of Sale.
b. Implied conditions and warranties in sale.
c. Transfer of title and property in sale.
d. Unpaid sellers rights against goods.

Unit – IV

Indian Partnership Act, 1932

1. Nature of Partnership firm.
2. Relation of partners to one another and outsiders.
   a. Rights/duties of partners inter se.
   b. Partnership Property.
   c. Relation of partners to third parties.
   d. Liability for holding out.
3. Minor as a partner. Partnership at will.
4. Incoming and out going partner.
5. Dissolution
   I. By Consent.
   II. By Agreement.
   III. Compulsory dissolution.
   IV. Contingent dissolution.
   V. By notice
   VI. Consequences of dissolution.
6. Registration of firm and effects of non registration.

Recommended Readings :

1. Avtar Singh, Law of Contract and Specific Relief.
2. R.K. Bangia, Law of Contract.
3. Pollock & Mulla, Indian Contract and Specific Relief Acts.
4. Avtar Singh, Law of Partnership.
5. K. Sukumaran, Pollock & Mullas, The Indian Partnership Act.

Case Law:

1. Steel Bros & Co. v. CIT, AIR 1958 SC 446
2. Cheru Pal Prakesh v. Mahadev Das Maiya, AIR 1959 SC 1243
3. CIT v.Dwarkadas Khetan & Co. AIR 1961 SC 34
4. Syndicate Bank v. RSR Engg. Works (2003) SCC 68
5. Laxminarayan Ram Gopal v. Govt. of Hyderabad, AIR 1954 SC 324
6. Mahadev v. State of Bombay, AIR 1959 SC
7. Badri Parsad v. State of M.P., AIR 1970 SC
8. State of Madras v. Gannon Dunkerley, AIR 1959 SC
9. James v. Just, (1818) Q.B.

10. Bristal Tramways v. Fait Motors Ltd. (1910) 2 Q.B. .

Note:
Instruction for Examiner:

- The paper shall be of 80 marks.
- The time allowed is three hours.
- The whole syllabus is divided into four units. Question paper shall be of two parts.
    1. Part A shall be compulsory and consist 8 short answered questions of 2 marks each at least two question shall be set from each unit.
    2. Part B shall again divided into 4 units consisting 2 questions of 16 marks each in every unit and candidate must attempt 4 questions at all selecting 1 question from each unit.

B.A. LL.B. (Hon')
3rd Semester
Family Law II

Paper Code: LAW 203
L – T – L
5 –0 – 1
External Marks: 80
Internal Marks: 20

Total Credits: 6

Total Marks: 100

Course Objectives-_The objective of the paper is to apprise the students with the laws relating to family matters governing succession, partition and joint family.

Unit – I

1. Concept of Hindu joint family and Hindu undivided family.
2. Position, powers, liabilities, duties and eligibility of Karta in Hindu joint family.
3. Mitakashra and Dayabhaga family system.
4. Concept of Co-parcenery in Hindu Law. with latest amendments.
5. Doctrine of Pious Obligation.

Unit – II

1. Historical misconception of joint family property in India.
2. Concept of property in Hindu Law & joint family property.

3. Doctrine of Blending and Accretion in Hindu Law
4. Kinds and sources of joint family property. Difference between separate and joint family property.
5. Stridhan and its subversion.
6. Mode of transfer of property by-
    A. Gift (Hindu & Muslim)
    B. Will (Hindu & Muslim)

Unit – III

1. Meaning, object and subject matter of Partition.
2. Difference between partition and family arrangements.
3. Partition- evidence and procedure and suit for partition.
4. Person entitled for partition.
5. Partition of joint Hindu family property.
6. Status of unborn person in partition of Hindu family System
7. Reunion of Hindu divided family or reopening of partition.

Unit – IV

1. Meaning and definition of Succession.
2. Succession of property of male intestate
    I. Application of Hindu Succession Act.
    II. Disqualification of heirs.
    III. Principle of inheritance.
    IV. Devolution of Mitakshra property under HSA, 1956.
3. Succession of property of a intestate female Hindu.
    I. Law relating to inheritance of female.
    II. Hindu women's estate.
4. Law relating to inheritance of Shia and Sunni Muslims.
    I. Classification of Hairs.
    II. General principles of inheritance.
5. Uniform Civil Code and Dynamics of Personal Laws.

Recommended Readings :

1. Paras Diwam- Family Law
2. Tahir Mahmood- Muslim Law
3. Poonam Pardhan Saxena- Hindu Law
4. Mulla- Hindu Law
5. R.K.Aggrawal- Hindu Law
6. Flavia Agnes- Family Law
7. J.M. Derret- Hindu Law

Case Law:

1. Moro Vishawanath v. Ganesh Vithal, (1873)10 Bom
2. CIT v. Gomedalli Laxminarayan, AIR 1935 Bom
3. R. Kuppayee v. Raja Gounder (2004) 1 SCC
4. Balmukund v. Kamlawati, AIR 1964 SC
5. Abdul Hafiz Beg v. Sahebbi, AIR 1975 Bom
6. CIT v. Chander Sen, AIR 1986 SC
7. Musa Miya v. Kadar Bux, AIR 1928 PC
8. Partibha Rani v. Suraj Kumar, AIR 1985 SC
9. Kesar Bai v. Ram Singh, (1988) P & H
10. Sunil Kumar v. Ram Parkesh, (1988)SCC
11. Arvind v. Anna, AIR 1980 SC
12. Bhagat Ram v. Teja Singh, AIR 2002 SC
13. Vellikannu v. R. Singaperumal (2005) SCC
14. ML Sabbaraya Setty v. ML Nagappa Setty, AIR 2002 SC

Note:

Instruction for Examiner:

- The paper shall be of 80 marks.
- The time allowed is three hours.
- The whole syllabus is divided into four units. Question paper shall be of two parts.
    1. Part A shall be compulsory and consist 8 short answered questions of 2 marks each at least two question shall be set from each unit.
    2. Part B shall again divided into 4 units consisting 2 questions of 16 marks each in every unit and candidate must attempt 4 questions at all selecting 1 question from each unit.

B.A. LL.B. (Hon')
3rd Semester
Political Science-I

Paper Code: LAW 205
L – T – L
5 –0 – 1
External Marks: 80

Total Credits: 6

Total Marks: 100

Internal Marks: 20

Course Objectives- This paper focuses on understanding the basic concepts, theories and functioning of state.

UNIT-I

1. Concepts of Totalitarian and Welfare State
2. Forms of Government: Democracy; Dictatorship; Military Rule.

UNIT-II

1. Forms of Government: Parliamentary; Presidential; Unitary and Federal
2. Organs of the Government: Legislature, Executive and Judiciary

UNIT-III

1. Conceptions of Political Participation; Representation and Public Opinion
2. Key Concepts: Rule of Law; Separation of Powers; and Justice

UNIT-IV

1. Concepts of Power; Authority; Legitimacy and the Contemporary Crisis of Legitimacy
2. Concepts of Political Obligation and Civil Disobedience: Meaning; Basis and Limitations

Text Books-

1. Joad, C.E.M. : Political Theory
2. Appadorai, A : Substance of Politics
3. Asirvatham, A : Political Theory
4. Ray & Bhattacharya, M. : Political Theories Ideas and Instituions
5. Narain, Iqbal : Rajniti Ke Mool Sidhant
6. Verma, S.P. : Modern Political Theory
7. Singh, G.N. : Fundamental of Political Science and Organisation
8. Jain, M.P. : Rajniti Ke Sidhant
9. Rathore, L.S. and : Political Theory and Organisation (Eastern Book
10. Haqqi, S.A.S. Company, Lucknow)
11. Ghose, Shankar : Socialism and Communism in India (Bombay A.Pub.)
12. A.C. Kapoor : Principles of Political Science

13. J.C. Johri : Principles of Political Science

Note:
Instruction for Examiner:

- The paper shall be of 80 marks.
- The time allowed is three hours.
- The whole syllabus is divided into four units. Question paper shall be of two parts.
    1. Part A shall be compulsory and consist 8 short answered questions of 2 marks each at least two question shall be set from each unit.
    2. Part B shall again divided into 4 units consisting 2 questions of 16 marks each in every unit and candidate must attempt 4 questions at all selecting 1 question from each unit.

B.A. LL.B. (Hon')
3rd Semester
Economics-III
(Development Economics and International Trade)

Paper Code: LAW 207
L – T – L
5 –0 – 1
External Marks: 80
Internal Marks: 20

Total Credits: 6

Total Marks: 100

Course Objectives- The objective of this paper is to provide broad understanding of economic development and International Trade.

Unit – I
Economic Development

1. Concept of Economic Development and Growth.
2. Factors of Economic Growth: Economic and Non-Economic.
3. Obstacles of Economic Development.
4. Inequalities of Income.
5. Measurement of Economic Development.

Unit –II

Issues in Economic Development

1. Evaluation of Planning in India: Objectives of Planning, Achievements of Planning, Failures of Planning, Suggestions for the success of plans.
2. Economic Planning: Features of Economic Planning, Need of Planning in under developed countries, Types of Planning.
3. Latest Five Year Plan.

Unit –III

International Trade

1. Foreign Trade: Volume, Compositions and Direction of India's Foreign Trade.
2. Export Promotion: Need of Export Promotion in India, Measures for Export Promotion, Obstacles in the way of Export Promotion in India, Suggestion for Export Promotion strategy.
3. Balance of Payments: Balance of Trade and Balance of Payments- A Comparative Study, Causes of adverse Balance of Payments, Measures to correct adverse Balance of Payments, Importance of Balance of Payments.
4. Regional Trading Blocks.
5. Foreign Trade and Economic growth.

Unit –IV

Theories of Development and International Trade

1. Theory of Comparative Costs.
2. Modern Theory of International Trade or H-O Theory.
3. Theory of Balanced Growth.
4. Vicious Circle of Poverty.
5. Lew's Model of Development.

Text/reference Books-

1. Fredrathue Lawis , Theory of Economic Growth, Unwin University Press.

2. Seth M.L. Money , Banking , International Trade and Public Finance.
3. Rana ,K.C. and Verma , K.N. International Economics, Vishal Publishing Co.
4. Mishra, S.K. and V.K.Puri, Modern Macro Economic Theory, Himalaya Publishing House;2003.
5. Todaro , M. Economic Development in the Third World.
6. P. Samuclsen , Economics An Introductory Analysis (ISER); Mc Graw Hill Book Co. 7th edition.
7. Economic Survey- Latest Issuse.
8. Pratiyogita Darpan(Indian Economy)-Latest Issuse.

Note:

Instruction for Examiner:

- The paper shall be of 80 marks.
- The time allowed is three hours.
- The whole syllabus is divided into four units. Question paper shall be of two parts.
    1. Part A shall be compulsory and consist 8 short answered questions of 2 marks each at least two question shall be set from each unit.
    2. Part B shall again divided into 4 units consisting 2 questions of 16 marks each in every unit and candidate must attempt 4 questions at all selecting 1 question from each unit.

B.A. LL.B. (Hon')
3rd Semester
Sociology-III
(Sociology of Law)

Paper Code: LAW 209

L – T – L
5 –0 – 1
External Marks: 80
Internal Marks: 20

Total Credits: 6

Total Marks: 100

Course Objectives- Objective of this paper is to focus on the basic concepts of sociology of law relevant for understanding law and to understand law and social change in India.

UNIT-I

1. Social Science and concept of Law.
2. The Social Basis of Law.
3. Sociological jurisprudence and sociology of law.
4. Legal Profession and society in India.

UNIT-II

1. Rousseau and Montesquieu 9Social Contract and Sprit of Laws)
2. Habermas and Fouaulty.
3. Faminist and Critical Legal perspectives.

UNIT-III

1. Law and Stratification.
2. Religion, Law and secularism.
3. Personal Law and Uniform Civil Code.
4. Equality of opportunity and Distributive justice.

UNIT- IV

1. Law and Social Change in India.
2. Social Control and Law enforcement.
3. Globalization and Law.
4. Gender justice and law in India.

Suggested readings-

1. Roger Cotterrell- The Sociology of Law.
2. J.W. Harris- Legal Philosophers.
3. Indra Deva- Sociology of Law.
4. Andre Beteille- Idea of Natural Inequality and other essays.

5. Jhon Rawls- A Theory of Justice.
6. Yogendra Singh- Social Change in India.
7. Mathieu Deflem- Sociology of Law.
8. Raymond Aron- Main Current in Sociological Thoughts.
9. Trevino A. Jaivier- The Sociology of Law.
10. Friedmans Macaulay- Law and the behavioral Science.

Note:

Instruction for Examiner:

- The paper shall be of 80 marks.
- The time allowed is three hours.
- The whole syllabus is divided into four units. Question paper shall be of two parts.
    1. Part A shall be compulsory and consist 8 short answered questions of 2 marks each at least two question shall be set from each unit.
    2. Part B shall again divided into 4 units consisting 2 questions of 16 marks each in every unit and candidate must attempt 4 questions at all selecting 1 question from each unit.

B.A. LL.B. (Hon')
3rd Semester
English-III

Paper Code: LAW 211
L – T – L
5 –0 – 1
External Marks: 80
Internal Marks: 20

Total Credits: 6

Total Marks: 100

Course Objectives- Objective of this paper is to develop the student's capability to write and speak English correctly.

UNIT – I (Literature)
Drama

As You Like It: William Shakespeare, Publisher: Rupa Publications India Pvt. Ltd. Noida.

UNIT – II (Literature)

Fiction

The Alchemist: Paulo Coelho, Publishers: Harper Collins, U. K. 1988.

(General Questions on Character, theme and plot)

UNIT – III (Grammar)

Phrases and Clauses, Conjunctions, Parallelism, Direct Indirect.

(General Questions on Character, theme and plot)

UNIT – IV (Vocabulary and Writing Skills)

Vocabulary

Foreign Words and Phrases: Meaning & Usage

Abinitio, Abintra, Adinterim, Adhoc, Advalorem, denovo, detenue, Corpus Juris Civils, Enroute, Erratum, Exgratia, Expost, Facto, Faux p[as, Homo Sapiens, Interalia, Intoto, Fait Acompli, Chef Devvoure, Jure divino, Jure Humano, Emeritus, Bon voyage, Honoris Causa, ibidem, id est, burgois, avant-garde, En masse, détente, fete, ipsofacto, magneum opus, coup de grace, Lingua franca, Modus Operandi, Liaison, pr excellence, Post Mortem , Tour de force, Resume, Viamedia Vice Versa, vis-à- vis, Volte facr, Vox Populi,

Legal Terms-Meaning and usage-

Agency, Agreement, Bailor, Bailable, Bailment, Contract , Culpable , Decree , Defamation, Execution , First Information Report , Fraud , Genocide, Guarantee, Guardian, Impugn, Locus Standi, Indemnity, Judgment, Judiciary, Legislation, Legislature, Libel Minor, Misstatement, non bailable, Order, Award, Pledge, Slander, Arbitration bankruptcy, clemency, cognizance, confiscate, consideration, divorce, illicit, immunity, impeach, Laches, Liability, Liquidate, notary public, cause célèbre, overrule, uphold, perjury, statute, testify, waive, will, writ, ratify, proviso, tenancy, pecuniary, voidable, verdict.

Writing Skills

Letter to Editor, Informal letters to friends /relatives.

Suggested Reading:

1. As You Like It: William Shakespeare, Publisher: Rupa Publications India Pvt.Ltd, Noida.
2. The Alchemist: Paulo Coelho, Publishers: Harper Collins, U. K. 1988.
3. S.C.Tripathi: Legal language, Writing and General English by Central Law publication.
4. Jack and Jean – Marie: PANORMA DE LA LANGUE FRANCAISE, CLE International Publication.
5. Oxford Advanced Learner's Dictionary, O. U. P.

6. Rymond Murphy, Murphy's English Grammar, C.U.P.
7. J. C. Nesfield: English Grammar, Composition and Usage (Revised by N. K. Aggarwal)

Note:

Instruction for Examiner:

- The paper shall be of 80 marks.
- The time allowed is three hours.
- The whole syllabus is divided into four units. Question paper shall be of two parts.
    1. Part A shall be compulsory and consist 8 short answered questions of 2 marks each at least two question shall be set from each unit.
    2. Part B shall again divided into 4 units consisting 2 questions of 16 marks each in every unit and candidate must attempt 4 questions at all selecting 1 question from each unit.

B.A. LL.B. (Hon')
4th Semester
Law of Crimes-I

Paper Code: LAW 202
L – T – L
5 –0 – 1
External Marks: 80
Internal Marks: 20

Total Credits: 6

Total Marks: 100

Course Objectives- This paper is to deal with basic principles of criminal law determining criminal liability and punishment.

UNIT-I

Introduction of Substantive Criminal Law

1. Extent and operation of Indian Penal Code.
2. Definition of Crime
3. Fundamental elements of crime
4. Stages in commission of a crime
5. Intention, preparation and attempt.

UNIT-II

General Explanations and Exceptions

1. Definitions.
2. Constructive joint liability
3. Mistake
4. Judicial and Executive acts.
5. Accidents.
6. Necessity.
7. Infancy
8. Insanity
9. Intoxication
10. Consent
11. Good faith
12. Private defence.

UNIT-III

Abetment and Criminal Conspiracy

UNIT-IV

Punishment

1. Theories- Deterrent, Retributive, Preventive, Expiatory and Reformative.
2. Punishment under IPC: Fine, Imprisonment, Capital Punishment.

Text/ Reference Books-

1. Ratan Lal & Dhiraj Lal- The Indian Penal Code.
2. H.S. Gaur- Penal Law of India
3. Glanville Williams-Text Book of Criminal Law
4. Russel on Crime.

Case Law-

1. Barendra Kumar Ghosh v. King Emperor, AIR 1925 PC
2. Basdev v. State of Pepsu, AIR 1956 SC 488
3. Sarjoo Prasad v. State of U.P., AIR 1961 SCC 631
4. Delhi Judicial Service Association v.State of Gujrat, AIR 1991 SC 2176
5. Wassan Singh v. State of Punjab, 1996 Cr.L.J. 878 SC
6. Rupan Deol Bajaj v. KPS Gill, AIR 1996 SC 309
7. Mahaboob Shah v. King Emperor, AIR 1945 PC 118
8. Haradhan Chakrabarty v. Union of India, AIR 1990 SC 1210
9. Bimbadhar Pradhan v. State of Orissa, AIR 1990 SC 1210
10. Kehar Singh v. State, AIR 1988 SC 1883

11. State of T.N. v. Nalini, AIR 1999 SC 2640
12. C.B.I. v. V.C. Sukla, AIR 1998 SC 1406

Note:

Instruction for Examiner:

- The paper shall be of 80 marks.
- The time allowed is three hours.
- The whole syllabus is divided into four units. Question paper shall be of two parts.
    1. Part A shall be compulsory and consist 8 short answered questions of 2 marks each at least two question shall be set from each unit.
    2. Part B shall again divided into 4 units consisting 2 questions of 16 marks each in every unit and candidate must attempt 4 questions at all selecting 1 question from each unit.

B.A. LL.B. (Hon')
4th Semester
Environmental Law

Paper Code: LAW 204
L – T – L
5 –0 – 1
External Marks: 80
Internal Marks: 20

Total Credits: 6

Total Marks: 100

Course Objectives- The object of this paper is to make the students well acquaint with environment and enacted laws for protection of environment in India.

UNIT-I

Environmental Law: International and National Perspective

1. Introduction-
    a. Environment- meaning.
    b. Environmental Pollution- meaning and issues.
2. International Developments-
    a. Stockhome Declaration
    b. Reo Declaration
    c. Johansburg Declaration

d. Copenhegan Declaration

3. Sustainable developments and the role of Judiciary-
   a. Constitutional Provisions
   b. Sustainable developments- meaning and concept
   c. Principles of Sustainable development
   d. Relevant Provisions- Art. 14, 19(1) (g), 21, 48A, 51A(g)
   e. Environmental Protection through Public Interest Litigation.
4. remedies under other Laws-
   a. Under Civil Law
   b. Under Criminal Law
   c. Under Law of Torts.

UNIT-II

Prevention and Control of Water & Air Pollution

The Water (Prevention and control of pollution) Act, 1974

a. Water pollution- definition
b. Central and State pollution control Boards- Constitution, powers and functions.
c. Water Pollution Control Areas
d. Sample of effluents- Procedure, Grant/Refusal, withdrawal.
e. Citizen Suit Provision.

Air (Prevention and Control of Pollution) Act,1981

a. Air pollution- definition.
b. Central and State Pollution Control Board- Constitution, powers and functions.
c. Air Pollution Control Areas.
d. Consent requirement- procedure, Grant/refusal, withdrawal.
e. Sample of effluents- Procedure, Grant/Refusal, withdrawal.
f. Citizen Suit Provision.

UNIT-III

Protection of Wild Life.

The Wild Life 9Protection) Act, 1972

a. Authorities to be appointed and constituted under the Act.
b. Hunting of Wild Animals.
c. Protection of Specified Plants.
d. Protected Area.
e. trade or commerce in wild animals, animal articles and trophies; Its Prohibition.
f. Tiger Project 2009

UNIT-IV

General Environmental Legislations-

a. Environmental (Protection) Act, 1986
   I. Meaning of Environment, Environmental Pollutants, Environment Pollution.
   II. Powers and Functions of Central Government.
   III. Citizen Suit Provisions.
b. Principal of "No Fault" and " Absolute Liability"
   I. Public Liability Insurance Act, 1991
c. National Green Tribunal Act, 2010
   I. Constitution , powers and functions.

Text/ Reference Books-

1) Shyam Diwan, Armin Rosencranz- Environmental Law & Policy in India.
2) P.Leelakrishnan- Environmental Law in India.
3) Gurdip Singh- Environmental Law in India.
4) Paras Diwan, Peeyushi Diwan- Environmental Administration, Law and Judicial Attitude.
5) A.K.Tewari- Environmental Law in India
6) Nomita Aggarwal- Social Auditing of Environmental Laws in India

Case Law-

1) Subash Kumar v. State of Bihar, AIR 1991 SC 420
2) M.C. Mehta v. Union of India, AIR 1997 SC 734.
3) M.C. Mehta v. Kamal Nath, AIR 2000 SC 1997
4) Indian Council for Enviro-Legal Action v. Union of India, AIR 1996 SC 1446.
5) Narmada Bachao Andolan v. Union of India, AIR 2000 SC 3751
6) M.C. Mehta v. Union of India, AIR 2002 SC 1696.
7) M.C. Mehta v. Union of India, AIR 1988 SC 1037.
8) M.C. Mehta v. Union of India, AIR 1988 SC 1115.
9) Tata Tea Ltd. v. State of Kerala, 1984 KLT 645
10) M.C. Mehta v. Union of India, AIR 2001 SC 1948.
11) M.C. Mehta v. Union of India, AIR 1998 (4) SCALE 68.
12) M.C. Mehta v. Union of India, AIR 1987 SC 965.
13) M.C. Mehta v. Union of India, AIR 1987 SC 982.
14) M.C. Mehta v. Union of India, AIR 1987 SC 1086.
15) M.C. Mehta v. Union of India, (Relocation of Industries in Delhi) AIR 1996 SC 2231.

Note:

Instruction for Examiner:

- The paper shall be of 80 marks.
- The time allowed is three hours.
- The whole syllabus is divided into four units. Question paper shall be of two parts.
    1. Part A shall be compulsory and consist 8 short answered questions of 2 marks each at least two question shall be set from each unit.
    2. Part B shall again divided into 4 units consisting 2 questions of 16 marks each in every unit and candidate must attempt 4 questions at all selecting 1 question from each unit.

B.A. LL.B. (Hon')
4th Semester
Political Science-II

Paper Code: LAW 206
L – T – L
5 –0 – 1
External Marks: 80
Internal Marks: 20

Total Credits: 6

Total Marks: 100

Course Objectives- This paper focuses on understanding of theories of state and basic concepts and functioning of State & Government.

UNIT-I

1. Concepts of Totalitarian and Welfare State
2. Forms of Government: Democracy; Dictatorship; Military Rule.

UNIT-II

1. Forms of Government: Parliamentary; Presidential; Unitary and Federal
2. Organs of the Government: Legislature, Executive and Judiciary

UNIT-III

1. Conceptions of Political Participation; Representation and Public Opinion
2. Key Concepts: Rule of Law; Separation of Powers; and Justice

UNIT-IV

1. Concepts of Power; Authority; Legitimacy and the Contemporary Crisis of Legitimacy

2. Concepts of Political Obligation and Civil Disobedience: Meaning; Basis and Limitations

Text/ Reference Books-

1. Joad, C.E.M. : Political Theory
2. Appadorai, A : Substance of Politics
3. Asirvatham, A : Political Theory
4. Ray & Bhattacharya, M. : Political Theories Ideas and Instituions
5. Narain, Iqbal : Rajniti Ke Mool Sidhant
6. Verma, S.P. : Modern Political Theory
7. Singh, G.N. : Fundamental of Political Science and Organisation
8. Jain, M.P. : Rajniti Ke Sidhant
9. Ghose, Shankar : Socialism and Communism in India (Bombay A.Pub.)
10. A.C. Kapoor : Principles of Political Science
11. J.C. Johri : Principles of Political Science

Note:

Instruction for Examiner:

- The paper shall be of 80 marks.
- The time allowed is three hours.
- The whole syllabus is divided into four units. Question paper shall be of two parts.
    1. Part A shall be compulsory and consist 8 short answered questions of 2 marks each at least two question shall be set from each unit.
    2. Part B shall again divided into 4 units consisting 2 questions of 16 marks each in every unit and candidate must attempt 4 questions at all selecting 1 question from each unit.

B.A. LL.B. (Hon')
4th Semester
History-III

Paper Code: LAW 208
L – T – L
5 –0 – 1
External Marks: 80
Internal Marks: 20

Total Credits: 6

Total Marks: 100

Course Objectives- This paper focuses on broad features of legal institutions and administration in ancient, medieval and modern era.

UNIT-I

1. The East India Company: Organizational set up in East India Company's settlements in India
2. Administration of justice in Surat, Madras, Bombay and Calcutta.
3. Mayor"s Courts and the Courts of Requests
4. Adalat System in Bengal – Warren Hastings Judicial plans of 1772, 1774, 1780

UNIT-II

1. Lord Cornwallis and his judicial plans of 1787, 1790, 1793
2. William Bentinck and his judicial reforms.
3. Regulating Act, 1773 – Causes, Characteristics and defects
4. Charter of 1774 and establishment of Supreme Court at Calcutta

UNIT-III

1. Trial of Raja Nand Kumar, The Patna Case.
2. Act of Settlement, 1781
3. Establishment of High Courts – The Indian High Courts Act 1861; Reforming High Courts in 1911, 1915, 1935.
4. The Federal Court of India 1935

UNIT-IV

1. The Indian Council"s Acts of 1861, 1892, 1909
2. Court System under the Indian Constitution – Supreme Court, High Courts and Subordinate Courts.
3. The Government of India Acts 1919, 1935
4. The Transfer of power and the Indian Independence Act, 1947

Text /Reference Books

1. Jain, M.P. : Outlines of Indian Legal History
2. Puri, S.K. : Legal and Constitutional History of India
3. Ramajois, M. : Legal and Constitutional History of India, Volume-I,II
4. Kulshreshtha, V.D. : Landmarks in Indian Legal and Constitutional History
5. Pranjpe, N.V. : Legal and Constitutional History of India
6. Shilwant, S.S. : Turning Points in Indian Legal and Constitutional History
7. Singh, M.P. : Outlines of Indian Legal and Constitutional History

Note:

Instruction for Examiner:

- The paper shall be of 80 marks.
- The time allowed is three hours.
- The whole syllabus is divided into four units. Question paper shall be of two parts.
    1. Part A shall be compulsory and consist 8 short answered questions of 2 marks each at least two question shall be set from each unit.
    2. Part B shall again divided into 4 units consisting 2 questions of 16 marks each in every unit and candidate must attempt 4 questions at all selecting 1 question from each unit.

B.A. LL.B. (Hon')
4th Semester
Information Technology

Paper Code: LAW 210
L – T – L
5 –0 – 1
External Marks: 80
Internal Marks: 20

Total Credits: 6

Total Marks: 100

Course Objectives- The aim of this course is to familiarize the students with the computers, operating systems, networking and use of computers in data processing.

UNIT-I

1. Fundamentals of computers- Evolution of Computing Machines, Input/Output devices,
2. Microprocessors, binary number system, generation of computers and programming languages– Algorithms and Flowcharting - Hardware and Software,
3. Classification of software - Operating systems, Computer Block diagram.

UNIT-II

1. Networking of computers . LAN, WAN, Enterprise - wide networks, Internet technologies, WWW and Internet uses. E- mail, Electronic payment systems, Websites and their uses. WAP,VPN, E-commerce

2. Information Systems for Management Decision Support Concepts of Data, Information and knowledge. Concepts of Database Management Systems, Processing of data using computers.

UNIT-III

1. Storage and Retrieval of massive data on computers. MIS, Phases in software Systems Life Cycle.
2. Application and use of Information systems in Legal Profession and their advantages. Application areas, problems Packages for Accounting and Finance, Decision Support Systems,
3. Computer viruses

UNIT-IV

1. Computerization - Prospects and Problems - Information Technology as a strategic tool for achieving competitive edge in legal profession. Infrastructure Requirement,
2. Selection of Hardware and Software, Implementation and transition problems. skills up gradation and re-deployment of staff as a result of computerization.
3. Implementing issues, opportunities, challenges, problems and managing changes.

Text/ Reference Book:

1. David, van Over: *Foundations of Business Systems*, Forth Worth, Dryden 1992.
2. Computers, Technology, Applications and Social Implications (with BASIC & PASCAL),
3. Turban, Rainer and Potter (2003) Introduction to information technology.
4. Sain, A.K., and Pradeep Kumar (2003), Computer Applications in Managements.
5. ITL Education Solution Ltd. (2005) Introduction to Information technology.
6. J. Daniel Couger & Fred R.McFadden, Whiley, *A First course in Data Processing*
7. John Moss Jones, Automating Managers: the implications of IT for Managers, Pinter,London

Note:

Instruction for Examiner:

- The paper shall be of 80 marks.
- The time allowed is three hours.
- The whole syllabus is divided into four units. Question paper shall be of two parts.

1. Part A shall be compulsory and consist 8 short answered questions of 2 marks each at least two question shall be set from each unit.
2. Part B shall again divided into 4 units consisting 2 questions of 16 marks each in every unit and candidate must attempt 4 questions at all selecting 1 question from each unit.

B.A.LL.B. (Hon')
4th Semester

English – IV

Paper code: LAW 212

L - T - L

Total Credit: 6

5 - 0- 1

External Examination: 80

Total Marks 100

Internal Examination: 20

Course Objectives- The objective of this course is to develop students capability to understand, write and speak English correctly.

UNIT – I (Literature)

Drama

The Merchant of Venice: William Shakespeare, Publisher: Maple Press Pvt, Ltd. New Delhi.(General Questions on Character, theme and plot)

UNIT – II (Literature)

Fiction

Train To Pakistan: Khushwant Singh, Publishers: Penguin Random House India Pvt. Ltd.(General Questions on Character, theme and plot)

UNIT – III

Elementary Knowledge of Phonetics:

i) Phonetic Symbols of consonant, Vowels and Dipthongs. Transcription of words.

ii) Discrimation of Sounds.

iii) Elements of speaking: Variation in tone and manner

UNIT – IV (Vocabulary and Writing Skills

Vocabulary

One Word Substitution, Words often Confused (Homophones, Homonyms),idioms related to colours only.

Writing Skills

Précis Writing

E – mail Writing

Text/ Reference books :

1. The Merchant of Venice: William Shakespeare, Publisher: Maple Press Pvt, Ltd.
2. Train To Pakistan: Khushwant Singh, Publishers: Penguin Random House India Pvt. Ltd.
3. Oxford Advanced Learner's Dictionary, O. U. P.
4. Rymond Murphy, Murphy's English Grammar, C.U.P.
5. J. C. Nesfield: English Grammar, Composition and Usage (Revised by N. K. Aggarwal)
6. W. S. Allen: Living English Structures.
7. Bansal and Harrison: Spoken English for Indian Speakers.
8. Daniel Jones: Dictionary for Pronunciation.

Note:

Instruction for Examiner:

- The paper shall be of 80 marks.
- The time allowed is three hours.
- The whole syllabus is divided into four units. Question paper shall be of two parts.
    1. Part A shall be compulsory and consist 8 short answered questions of 2 marks each at least two question shall be set from each unit.
    2. Part B shall again divided into 4 units consisting 2 questions of 16 marks each in every unit and candidate must attempt 4 questions at all selecting 1 question from each unit.

BPS MAHILA VISHWAVIDYALAYA
KHANPUR KALAN

B.B.A.LL.B. 3rd & 4th Semester
Syllabus
w.e.f. 2018-19
(For students admitted in 2017-18)

DEPARTMENT OF LAWS

B.B.A. LL.B. (Hon')
3rd Semester
Law of Contract II

Paper Code: LAW 201
L – T – L
5 –0 – 1
External Marks: 80
Internal Marks: 20

Total Credits: 6

Total Marks: 100

Course Objectives- This paper is introduced to impart knowledge various special contract, law of agency and partnership.

Unit – I

Indemnity, Gurantee, Bailment and Pledge-

a. Meaning and distinction between Indemnity and Gurantee.
b. Right/duties of indemnifier, indemnified and surety.
c. Discharge of Surety.
d. Kinds of Gurantee.
e. Bailment and Pledge.
    i. Meaning and Distinction.
    ii. Rights and duties of Bailor/ Bailee, Pawnor/ pawnee
    iii. Lien.
    iv. Termination of Bailment.

Unit – II

Agency-

a. Definition of agent and principal
b. Essentials of relationship of agency.
c. Creation of agency: By agreement, ratification, necessity and law.
d. relation of Principal and Agent, sub agent and substituted agent.
e. Termination of Agency.

Unit – III

The Sale of Goods Act, 1935

a. Definition and Essentials of Sale.
b. Implied conditions and warranties in sale.
c. Transfer of title and property in sale.
d. Unpaid sellers rights against goods.

Unit – IV

Indian Partnership Act, 1932

1. Nature of Partnership firm.
2. Relation of partners to one another and outsiders.
   a. Rights/duties of partners inter se.
   b. Partnership Property.
   c. Relation of partners to third parties.
   d. Liability for holding out.
3. Minor as a partner. Partnership at will.
4. Incoming and out going partner.
5. Dissolution
   I. By Consent.
   II. By Agreement.
   III. Compulsory dissolution.
   IV. Contingent dissolution.
   V. By notice
   VI. Consequences of dissolution.
6. Registration of firm and effects of non registration.

Recommended Readings :

1. Avtar Singh, Law of Contract and Specific Relief.
2. R.K. Bangia, Law of Contract.
3. Pollock & Mulla, Indian Contract and Specific Relief Acts.
4. Avtar Singh, Law of Partnership.
5. K. Sukumaran, Pollock & Mullas, The Indian Partnership Act.

Case Law:

1. Steel Bros & Co. v. CIT, AIR 1958 SC 446
2. Cheru Pal Prakesh v. Mahadev Das Maiya, AIR 1959 SC 1243
3. CIT v.Dwarkadas Khetan & Co. AIR 1961 SC 34
4. Syndicate Bank v. RSR Engg. Works (2003) SCC 68
5. Laxminarayan Ram Gopal v. Govt. of Hyderabad, AIR 1954 SC 324
6. Mahadev v. State of Bombay, AIR 1959 SC
7. Badri Parsad v. State of M.P., AIR 1970 SC
8. State of Madras v. Gannon Dunkerley, AIR 1959 SC
9. James v. Just, (1818) Q.B.

10. Bristal Tramways v. Fait Motors Ltd. (1910) 2 Q.B. .

Note:
Instruction for Examiner:

- The paper shall be of 80 marks.
- The time allowed is three hours.
- The whole syllabus is divided into four units. Question paper shall be of two parts.
    1. Part A shall be compulsory and consist 8 short answered questions of 2 marks each at least two question shall be set from each unit.
    2. Part B shall again divided into 4 units consisting 2 questions of 16 marks each in every unit and candidate must attempt 4 questions at all selecting 1 question from each unit.

B.B.A. LL.B. (Hon')
3rd Semester
Family Law II

Paper Code: LAW 203
L – T – L
5 –0 – 1
External Marks: 80
Internal Marks: 20

Total Credits: 6

Total Marks: 100

Course Objectives-_The objective of the paper is to apprise the students with the laws relating to family matters governing succession, partition and joint family.

Unit – I

1. Concept of Hindu joint family and Hindu undivided family.
2. Position, powers, liabilities, duties and eligibility of Karta in Hindu joint family.
3. Mitakashra and Dayabhaga family system.
4. Concept of Co-parcenery in Hindu Law. with latest amendments.
5. Doctrine of Pious Obligation.

Unit – II

1. Historical misconception of joint family property in India.
2. Concept of property in Hindu Law & joint family property.
3. Doctrine of Blending and Accretion in Hindu Law

B.B.A. LL.B. (Hon')
3rd Semester
Financial Management

Paper Code: LAW 213
L – T – L
5 –0 – 1
External Marks: 80
Internal Marks: 20

Total Credits: 6

Total Marks: 100

Course Objectives- Efficient Management of a business enterprise is closely linked with the efficient management of it finances. Accordingly, the objective of the course is to acquaint the students with the overall frame work of financial decision-making in a business unit.

UNIT-I

1. Financial Management- Meaning, Scope and objectives. Profit Vs. Wealth Maximization.
2. Financial Management and other areas of management, liquidity Vs. profitability, methods of financial management, organization of finance function.
3. Sources of Financing- Classification of sources of finance, security financing, loan financing, project financing, loan syndication- book building.
4. New financial institutions and instruments (in brief) Viz. depositiries, factoring, venture capital, credit rating, commercial paper, certificate of deposit, stock invest, global depository receipts.
5. Concept in Valuation: Time value of money, valuation concepts, valuation of securities viz. debentures, preference shares and equity shares.

UNIT-II

1. Capital Structure : Meaning, capital structure and financial structure.
2. Patterns of capital structure optimum capital structure, capital structure theories, factors determining capital structure.
3. Capital structure practices in India, Cost of Capital: concept, importance, classification and determination of cost of capital.
4. Leverages: Concept, Types of leverages and their significance.

UNIT-III

1. Capital Budgeting: concept, importance and appraisal methods, pay back period, DCF techniques, Accounting rate of return, capital rationing, concept of risk, incorporation of risk factors.
2. General Techniques, accounting rate of return, capital rationing, concept of risk, incorporation of risk factor.
3. Probability assignment, standard deviation, coefficient of variation, decision tree.

UNIT-IV

1. Working capital management: Operating Cycles, Working Capital Estimation, Concept, Management of case, inventory management.
2. Management of Accounts receivable and account payable, over and under trading.
3. Dividend, bonus and rights : Dividend policy, relevance and irrelevance, concept of dividend, corporate dividend practice in India.

Reference/Text Books-

1. Khan M.Y., Jain P.K., (2010) Financial Management, 1st Edition.
2. Maheshwari S.N., (2009) Financial Management - Principles and Practice, 9th Edition.
3. Kapil, Sheeba, (2010) Financial Management 1st edition.
4. Burk Demazo, (2010) Financial Management , Pearson Edition.
5. Ross, Stephen, Westerfield, R and Jaffe, J. (2004) Corporate Finance, 7th edition.
6. Pandey, I.M., (2007), Financial Management , Vikas Publishing House.

Note:

Instruction for Examiner:

- The paper shall be of 80 marks.
- The time allowed is three hours.
- The whole syllabus is divided into four units. Question paper shall be of two parts.
    1. Part A shall be compulsory and consist 8 short answered questions of 2 marks each at least two question shall be set from each unit.

2. Part B shall again divided into 4 units consisting 2 questions of 16 marks each in every unit and candidate must attempt 4 questions at all selecting 1 question from each unit.

B.B.A. LL.B. (Hon')
3rd Semester
Organizational Behaviour

Paper Code: LAW 215
L – T – L
5 –0 – 1
External Marks: 80
Internal Marks: 20

Total Credits: 6

Total Marks: 100

Course Objectives- The course aims to provide an understanding of basic concepts, theories and techniques in the field of human behaviour at the individual ,group and organizational level in the changing global scenario. The course must be taught using case study method.

Unit-I

1. Introduction : Concept and nature of Organizational Behaviour, contributing disciplines to the field of O.B.
2. O.B. Models; need to understand human behaviour; challenges and opportunities.

Unit –II

1. Individual & interpersonal behaviour: biographical Characteristics; ability.
2. Values; attitudes- formation, theories, organization related attitude, relationship between attitude and behavior.
3. Personality- Determinants and Traits; Emotions; Learning- theories and reinforcement schedules.
4. Perception- Process and errors, interpersonal behaviour: Johari Window,
5. Transactional Analysis- Ego states, types of transactions, life positions, application of T.A,

Unit –III

1. Group behaviour & Team development: Concept of group and group dynamics; Types of groups; formal and informal groups; Stages of Group development.
2. Theories of group formation: Group norms, group cohesiveness; think and group shift. Group decision making; inter group behaviour.
3. Concept of Team v. Group; Types of Teams; building and managing effective teams.

Unit –IV

1. Organization culture and conflict management: Organizational culture-concept, functions, socialization; creating and sustaining culture,
2. Managing Conflicts- Sources, types, process and resolution of conflicts.
3. Managing Change; resistance to change, planned change, managing across culture; empowerment and participation.

Text/reference Books-

1. Robbin, S.P. and Sanghi, S. (2009) Organizational Behaviour, 13th edition.
2. Singh Kavita, (2010) Organizational Behaviour : Text and Cases, 1st edition.
3. Luthans, Fred (2008) Organizational Behaviour , 11th edition.
4. Mirza, S., (2003) Organizational Behaviour 1st edition.
5. Mcshane, Steven, Von, Glinow and Sharma, Radha, (2008) , Organizational Behaviour , 4th edition.
6. Kinicki, Angelo and Kreitner, Robert (2005) Organizational Behaviour , 2nd edition.
7. Todaro , M. Economic Development in the Third World.

Note:

Instruction for Examiner:

- The paper shall be of 80 marks.
- The time allowed is three hours.

- The whole syllabus is divided into four units. Question paper shall be of two parts.
    1. Part A shall be compulsory and consist 8 short answered questions of 2 marks each at least two question shall be set from each unit.
    2. Part B shall again divided into 4 units consisting 2 questions of 16 marks each in every unit and candidate must attempt 4 questions at all selecting 1 question from each unit.

B.A. LL.B. (Hon')
3rd Semester
Marketing Management

Paper Code: LAW 217
L – T – L
5 –0 – 1
External Marks: 80
Internal Marks: 20

Total Credits: 6

Total Marks: 100

Course Objectives- Objective of this paper is to identify the foundation terms and concepts that are commonly used in marketing. It also identifies the essentials elements for effective marketing practice. This course will give complete relationship between marketing and other management functions.

UNIT-I

1. Introduction of marketing: Nature, scope and importance of marketing, basic concepts.
2. Marketing environment, market segmentation, targeting and positioning.

UNIT-II

1. Product :product levels, product mix, product strategy, product innovation and diffusion, product development, product life cycle and product mix.
2. Pricing Decisions: designing pricing strategies and programmes, pricing techniques.

UNIT-III

1. Place: Meaning & Importance, Types of Channels strategies, Designing and managing Marketing Channel.

2. Managing Retailing, Physical distribution, marketing logistics and supply chain management.

UNIT IV-

1. Promotion: Promotion mix, Push Vs publicity Pull Strategy; Promotional Objectives.
2. Advertising- Meaning and importance, types, media decisions, Promotion mix.
3. Personal selling- Nature, Importance and process.
4. Sales promotion- Purpose and types; publicity and public relation- Definition, importance and methods.

Text/ Reference Books-

1. Kotler, Amstrong, Agnihotri and Haque, (2010), Principles of Marketing- A South Asian Perspective.
2. Ramaswamy and Namkumar,S., (2009) Marketing Management Global Perspective: Indian Context.
3. Saxena, Rajan (2008) Marketing Management, 3rd edition.
4. Kumar, Arun and Meenakshi, N. (2009) Marketing Management .
5. Russel, Winer, (2007) Marketing Management .
6. Kotler, Koshi Jha, (2009) Marketing Management

Note:

Instruction for Examiner:

- The paper shall be of 80 marks.
- The time allowed is three hours.
- The whole syllabus is divided into four units. Question paper shall be of two parts.
    1. Part A shall be compulsory and consist 8 short answered questions of 2 marks each at least two question shall be set from each unit.
    2. Part B shall again divided into 4 units consisting 2 questions of 16 marks each in every unit and candidate must attempt 4 questions at all selecting 1 question from each unit.

B.B.A. LL.B. (Hon')
3rd Semester
English-III

Paper Code: LAW 211
L – T – L
5 –0 – 1
External Marks: 80
Internal Marks: 20

Total Credits: 6

Total Marks: 100

Course Objectives- Objective of this paper is to develop the student's capability to write and speak English correctly.

UNIT – I (Literature)
Drama
As You Like It: William Shakespeare, Publisher: Rupa Publications India Pvt. Ltd. Noida.
UNIT – II (Literature)
Fiction
The Alchemist: Paulo Coelho, Publishers: Harper Collins, U. K. 1988.
(General Questions on Character, theme and plot)
UNIT – III (Grammar)
Phrases and Clauses, Conjunctions, Parallelism, Direct Indirect.
(General Questions on Character, theme and plot)
UNIT – IV (Vocabulary and Writing Skills)
Vocabulary
Foreign Words and Phrases: Meaning & Usage
Abinitio, Abintra, Adinterim, Adhoc, Advalorem, denovo, detenue, Corpus Juris Civils, Enroute, Erratum, Exgratia, Expost, Facto, Faux p[as, Homo Sapiens, Interalia, Intoto, Fait Acompli, Chef Devvoure, Jure divino, Jure Humano, Emeritus, Bon voyage, Honoris Causa, ibidem, id est, burgois, avant-garde, En masse, détente, fete, ipsofacto, magneum opus, coup de grace, Lingua franca, Modus Operandi, Liaison, pr excellence, Post Mortem , Tour de force, Resume, Viamedia Vice Versa, vis-à- vis, Volte facr, Vox Populi,
Legal Terms-Meaning and usage-

Agency, Agreement, Bailor, Bailable, Bailment, Contract , Culpable , Decree , Defamation, Execution , First Information Report , Fraud , Genocide, Guarantee, Guardian, Impugn, Locus Standi, Indemnity, Judgment, Judiciary, Legislation, Legislature, Libel Minor, Misstatement, non bailable, Order, Award, Pledge, Slander,

Arbitration bankruptcy, clemency, cognizance, confiscate, consideration, divorce, illicit, immunity, impeach, Laches, Liability, Liquidate, notary public, cause célèbre, overrule, uphold, perjury, statute, testify, waive, will, writ, ratify, proviso, tenancy, pecuniary, voidable, verdict.

Writing Skills

Letter to Editor, Informal letters to friends /relatives.

Suggested Reading:

1. As You Like It: William Shakespeare, Publisher: Rupa Publications India Pvt.Ltd, Noida.
2. The Alchemist: Paulo Coelho, Publishers: Harper Collins, U. K. 1988.
3. S.C.Tripathi: Legal language, Writing and General English by Central Law publication.
4. Jack and Jean – Marie: PANORMA DE LA LANGUE FRANCAISE, CLE International Publication.
5. Oxford Advanced Learner's Dictionary, O. U. P.
6. Rymond Murphy, Murphy's English Grammar, C.U.P.
7. J. C. Nesfield: English Grammar, Composition and Usage (Revised by N. K. Aggarwal)

Note:

Instruction for Examiner:

- The paper shall be of 80 marks.
- The time allowed is three hours.
- The whole syllabus is divided into four units. Question paper shall be of two parts.
    1. Part A shall be compulsory and consist 8 short answered questions of 2 marks each at least two question shall be set from each unit.
    2. Part B shall again divided into 4 units consisting 2 questions of 16 marks each in every unit and candidate must attempt 4 questions at all selecting 1 question from each unit.

B.B.A. LL.B. (Hon')
4th Semester
Law of Crimes-I

Paper Code: LAW 202
L – T – L
5 –0 – 1
External Marks: 80
Internal Marks: 20

Total Credits: 6

Total Marks: 100

Course Objectives- This paper is to deal with basic principles of criminal law determining criminal liability and punishment.

UNIT-I

Introduction of Substantive Criminal Law

1. Extent and operation of Indian Penal Code.
2. Definition of Crime
3. Fundamental elements of crime
4. Stages in commission of a crime
5. Intention, preparation and attempt.

UNIT-II

General Explanations and Exceptions

1. Definitions.
2. Constructive joint liability
3. Mistake
4. Judicial and Executive acts.
5. Accidents.
6. Necessity.
7. Infancy
8. Insanity
9. Intoxication
10. Consent
11. Good faith
12. Private defence.

UNIT-III

Abetment and Criminal Conspiracy

UNIT-IV

Punishment

1. Theories- Deterrent, Retributive, Preventive, Expiatory and Reformative.
2. Punishment under IPC: Fine, Imprisonment, Capital Punishment.

Text/ Reference Books-

1. Ratan Lal & Dhiraj Lal- The Indian Penal Code.
2. H.S. Gaur- Penal Law of India
3. Glanville Williams-Text Book of Criminal Law
4. Russel on Crime.

Case Law-

1. Barendra Kumar Ghosh v. King Emperor, AIR 1925 PC
2. Basdev v. State of Pepsu, AIR 1956 SC 488
3. Sarjoo Prasad v. State of U.P., AIR 1961 SCC 631
4. Delhi Judicial Service Association v.State of Gujrat, AIR 1991 SC 2176
5. Wassan Singh v. State of Punjab, 1996 Cr.L.J. 878 SC
6. Rupan Deol Bajaj v. KPS Gill, AIR 1996 SC 309
7. Mahaboob Shah v. King Emperor, AIR 1945 PC 118
8. Haradhan Chakrabarty v. Union of India, AIR 1990 SC 1210
9. Bimbadhar Pradhan v. State of Orissa, AIR 1990 SC 1210
10. Kehar Singh v. State, AIR 1988 SC 1883
11. State of T.N. v. Nalini, AIR 1999 SC 2640
12. C.B.I. v. V.C. Sukla, AIR 1998 SC 1406

Note:

Instruction for Examiner:

- The paper shall be of 80 marks.
- The time allowed is three hours.
- The whole syllabus is divided into four units. Question paper shall be of two parts.
    1. Part A shall be compulsory and consist 8 short answered questions of 2 marks each at least two question shall be set from each unit.
    2. Part B shall again divided into 4 units consisting 2 questions of 16 marks each in every unit and candidate must attempt 4 questions at all selecting 1 question from each unit.

B.B.A. LL.B. (Hon')
4th Semester
Environmental Law

Paper Code: LAW 204
L – T – L
5 –0 – 1
External Marks: 80
Internal Marks: 20

Total Credits: 6

Total Marks: 100

Course Objectives- The object of this paper is to make the students well acquaint with environment and enacted laws for protection of environment in India.

UNIT-I

Environmental Law: International and National Perspective

1. Introduction-
    a. Environment- meaning.
    b. Environmental Pollution- meaning and issues.
2. International Developments-
    a. Stockhome Declaration
    b. Reo Declaration
    c. Johansburg Declaration
    d. Copenhegan Declaration
3. Sustainable developments and the role of Judiciary-
    a. Constitutional Provisions
    b. Sustainable developments- meaning and concept
    c. Principles of Sustainable development
    d. Relevant Provisions- Art. 14, 19(1) (g), 21, 48A, 51A(g)
    e. Environmental Protection through Public Interest Litigation.
4. remedies under other Laws-
    a. Under Civil Law
    b. Under Criminal Law
    c. Under Law of Torts.

UNIT-II

Prevention and Control of Water & Air Pollution

The Water (Prevention and control of pollution) Act, 1974
    a. Water pollution- definition
    b. Central and State pollution control Boards- Constitution, powers and functions.
    c. Water Pollution Control Areas

d. Sample of effluents- Procedure, Grant/Refusal, withdrawal.
e. Citizen Suit Provision.

Air (Prevention and Control of Pollution) Act,1981

a. Air pollution- definition.
b. Central and State Pollution Control Board- Constitution, powers and functions.
c. Air Pollution Control Areas.
d. Consent requirement- procedure, Grant/refusal, withdrawal.
e. Sample of effluents- Procedure, Grant/Refusal, withdrawal.
f. Citizen Suit Provision.

UNIT-III

Protection of Wild Life.

The Wild Life 9Protection) Act, 1972

a. Authorities to be appointed and constituted under the Act.
b. Hunting of Wild Animals.
c. Protection of Specified Plants.
d. Protected Area.
e. trade or commerce in wild animals, animal articles and trophies; Its Prohibition.
f. Tiger Project 2009

UNIT-IV

General Environmental Legislations-

a. Environmental (Protection) Act, 1986
   I. Meaning of Environment, Environmental Pollutants, Environment Pollution.
   II. Powers and Functions of Central Government.
   III. Citizen Suit Provisions.
b. Principal of "No Fault" and " Absolute Liability"
   I. Public Liability Insurance Act, 1991
c. National Green Tribunal Act, 2010
   I. Constitution , powers and functions.

Text/ Reference Books-

1) Shyam Diwan, Armin Rosencranz- Environmental Law & Policy in India.
2) P.Leelakrishnan- Environmental Law in India.
3) Gurdip Singh- Environmental Law in India.
4) Paras Diwan, Peeyushi Diwan- Environmental Administration, Law and Judicial Attitude.

5) A.K.Tewari- Environmental Law in India
6) Nomita Aggarwal- Social Auditing of Environmental Laws in India

Case Law-

1) Subash Kumar v. State of Bihar, AIR 1991 SC 420
2) M.C. Mehta v. Union of India, AIR 1997 SC 734.
3) M.C. Mehta v. Kamal Nath, AIR 2000 SC 1997
4) Indian Council for Enviro-Legal Action v. Union of India, AIR 1996 SC 1446.
5) Narmada Bachao Andolan v. Union of India, AIR 2000 SC 3751
6) M.C. Mehta v. Union of India, AIR 2002 SC 1696.
7) M.C. Mehta v. Union of India, AIR 1988 SC 1037.
8) M.C. Mehta v. Union of India, AIR 1988 SC 1115.
9) Tata Tea Ltd. v. State of Kerala, 1984 KLT 645
10) M.C. Mehta v. Union of India, AIR 2001 SC 1948.
11) M.C. Mehta v. Union of India, AIR 1998 (4) SCALE 68.
12) M.C. Mehta v. Union of India, AIR 1987 SC 965.
13) M.C. Mehta v. Union of India, AIR 1987 SC 982.
14) M.C. Mehta v. Union of India, AIR 1987 SC 1086.
15) M.C. Mehta v. Union of India, (Relocation of Industries in Delhi) AIR 1996 SC 2231.

Note:

Instruction for Examiner:

- The paper shall be of 80 marks.
- The time allowed is three hours.
- The whole syllabus is divided into four units. Question paper shall be of two parts.
    1. Part A shall be compulsory and consist 8 short answered questions of 2 marks each at least two question shall be set from each unit.
    2. Part B shall again divided into 4 units consisting 2 questions of 16 marks each in every unit and candidate must attempt 4 questions at all selecting 1 question from each unit.

B.B.A. LL.B. (Hon')
4th Semester
Human Resource Management

Paper Code: LAW 214
L – T – L.
5 –0 – 1
External Marks: 80
Internal Marks: 20

Total Credits: 6

Total Marks: 100

Course Objectives- The objective of the course is to familiarize students with diffrent aspects of managing Human Resources in the organization through the phases of acquisition, development and retention.

UNIT-I

1. Introduction: concept, nature, scope, objectives and importance of HRM, Evolution of HRM.
2. Challenges of HRM: personal management vs. HRM; strategies for future. role of HRM in strategic management; human capital; emotional quotient; mentoring; ESPO; Flexi-time.
3. Quality circles; Kaizen;TQM and six Sigma.

UNIT-II

1. Acquisition of Human resources; HR planning; job analysis- job description and job specification.
2. Recruitment- Sources and process; Selection process; Test and interviews.
3. Placement and induction; job change- transfer, promotion/demotions; separations.

UNIT-III

1. Training and Development: Concept and importance of training; types of training; methods of training; design of training programme; evaluation of training effectiveness.
2. Executive development- Process and techniques; Career planning and development.

UNIT-IV

1. compensation and maintenance: Compensation; Job Evaluation- Concept, Process and significance.
2. Components of Employee remunération- Base and supplementary; performance and potential appraisal- Concept and objectives; traditional and modern methods.

3. Limitation of performance appraisal methods, 360 degree appraisal technique; maintenance.
4. Overview of employee welfare, health and safety, social security.

Text/ Reference Books-

1. Aswathappa, K. (2010) Human Resource Management.
2. DeCenzo, D.A. and Robbins, S.P. (2007) Fundamentals of Human Resource Management.
3. Durai, Parveen, (2010) Human Resource Management.
4. Monappa, A. and Saiyadain, M 92001), Personal Management.
5. Dessler, Gray (2004) Human Resource Management.
6. Jyothi, P. and Venkatesh, D.N. (2006) Human Resource Management.

Note:

Instruction for Examiner:

- The paper shall be of 80 marks.
- The time allowed is three hours.
- The whole syllabus is divided into four units. Question paper shall be of two parts.
    1. Part A shall be compulsory and consist 8 short answered questions of 2 marks each at least two question shall be set from each unit.
    2. Part B shall again divided into 4 units consisting 2 questions of 16 marks each in every unit and candidate must attempt 4 questions at all selecting 1 question from each unit.

B,B.A. LL.B. (Hon')
4th Semester
Values & Ethics in Business

Paper Code: LAW 216
L – T – L
5 –0 – 1
External Marks: 80
Internal Marks: 20

Total Credits: 6

Total Marks: 100

Course Objectives- The basic objective of this paper is to make the students realize the importance of values and ethics in business. This course endeavors to provide a background to ethics as a prelude to learn the skill of ethical decision-making and then to apply those skills to the real and current challenges of the information profession.

UNIT-I

1. Introduction: Concept of values, types and formation of values, values and behaviour.
2. Values of Indian Managers, Ethical Decision Making.
3. Ethics: Management process and ethics, ethical decision making, ethical issues, Ethos of Vadanta in Management, relevance of ethics and values in business.

UNIT-II

1. Knowledge and wisdom: Meaning of knowledge and wisdom, difference between knowledge and wisdom, knowledge workers versus wisdom workers.
2. Concept of knowledge management and wisdom management, wisdom based management..
3. Stress management; meaning, sources and consequences of stress, stress management and detached involvement.
4. Concept of Dharma & Karma Yoga; Concept of Karma and kinds of karma yoga, Nishkam Karma and Sakam Karma.
5. Total quality management, quality of life and quality of work life.

UNIT-III

1. Understanding Progress and success- result & managing.
2. Transformation: Progress and results, definitions, functions of progress, need for transformation, process and challenges of transformation.
3. Understanding Success: definitions of success , principles of competitive success, prerequisites to create blue print for success. Successful stories of Business Gurus.

UNIT-IV

1. Corporate social responsibility & Corporate Governance: corporate responsibility of business: employees, consumers and community.
2. Corporate governance, code of corporate governance.
3. Unethical issues in business.

Text /Reference Books

1. Fernando, A.C. (2009) Business Ethics.
2. Hartman, Laura and Chatterjee, Asha, (2006) Perspective in Business Ethics.
3. Chakraborty, S.K., (2004) Ethics in Management: A Vedantic Perspective.
4. Kaur, Tripat,(2008) Values & Ethics in Managements.
5. Rao, A.B., (2006) Business Ethics and Professional Values.
6. Manuel G. Velasquez, (2007) Business Ethics Concepts, Printic Hall of India.Jain, M.P. : Outlines of Indian Legal History
7. Puri, S.K. : Legal and Constitutional History of India

Note:

Instruction for Examiner:

- The paper shall be of 80 marks.
- The time allowed is three hours.
- The whole syllabus is divided into four units. Question paper shall be of two parts.
    1. Part A shall be compulsory and consist 8 short answered questions of 2 marks each at least two question shall be set from each unit.
    2. Part B shall again divided into 4 units consisting 2 questions of 16 marks each in every unit and candidate must attempt 4 questions at all selecting 1 question from each unit.

B.B.A. LL.B. (Hon')
4th Semester
Information Technology

Paper Code: LAW 210
L – T – L
5 –0 – 1
External Marks: 80
Internal Marks: 20

Total Credits: 6

Total Marks: 100

Course Objectives- The aim of this course is to familiarize the students with the computers, operating systems, networking and use of computers in data processing.

UNIT-I

1. Fundamentals of computers- Evolution of Computing Machines, Input/Output devices,
2. Microprocessors, binary number system, generation of computers and programming languages– Algorithms and Flowcharting - Hardware and Software,
3. Classification of software - Operating systems, Computer Block diagram.

UNIT-II

1. Networking of computers . LAN, WAN, Enterprise - wide networks, Internet technologies, WWW and Internet uses. E- mail, Electronic payment systems, Websites and their uses. WAP,VPN, E-commerce

2. Information Systems for Management Decision Support Concepts of Data, Information and knowledge. Concepts of Database Management Systems, Processing of data using computers.

UNIT-III

1. Storage and Retrieval of massive data on computers. MIS, Phases in software Systems Life Cycle.
2. Application and use of Information systems in Legal Profession and their advantages. Application areas, problems Packages for Accounting and Finance, Decision Support Systems,
3. Computer viruses

UNIT-IV

1. Computerization - Prospects and Problems - Information Technology as a strategic tool for achieving competitive edge in legal profession. Infrastructure Requirement,
2. Selection of Hardware and Software, Implementation and transition problems. skills up gradation and re-deployment of staff as a result of computerization.
3. Implementing issues, opportunities, challenges, problems and managing changes.

Text/ Reference Book:

1. David, van Over: *Foundations of Business Systems*, Forth Worth, Dryden 1992.
2. Computers, Technology, Applications and Social Implications (with BASIC & PASCAL).
3. Turban, Rainer and Potter (2003) Introduction to information technology.
4. Sain, A.K., and Pradeep Kumar (2003), Computer Applications in Managements.
5. ITL Education Solution Ltd. (2005) Introduction to Information technology.
6. J. Daniel Couger & Fred R.McFadden, Whiley, *A First course in Data Processing.*
7. John Moss Jones, Automating Managers: the implications of IT for Managers, Pinter,London

Note:

Instruction for Examiner:

- The paper shall be of 80 marks.
- The time allowed is three hours.

- The whole syllabus is divided into four units. Question paper shall be of two parts.
    1. Part A shall be compulsory and consist 8 short answered questions of 2 marks each at least two question shall be set from each unit.
    2. Part B shall again divided into 4 units consisting 2 questions of 16 marks each in every unit and candidate must attempt 4 questions at all selecting 1 question from each unit.

B.B.A. LL.B. (Hon')
4th Semester
English-IV

Paper Code: LAW 212
L – T – L
5 –0 – 1
External Marks: 80
Internal Marks: 20

Total Credits: 6

Total Marks: 100

Course Objectives- The objective of this course is to develop students capability to understand, write and speak English correctly.

UNIT – I (Literature)

Drama

The Merchant of Venice: William Shakespeare, Publisher: Maple Press Pvt, Ltd. New Delhi.(General Questions on Character, theme and plot)

UNIT – II (Literature)

Fiction

Train To Pakistan: Khushwant Singh, Publishers: Penguin Random House India Pvt. Ltd.(General Questions on Character, theme and plot)

UNIT – III

Elementary Knowledge of Phonetics:

i) Phonetic Symbols of consonant, Vowels and Dipthongs. Transcription of words.

ii) Discrimation of Sounds.

iii) Elements of speaking: Variation in tone and manner

UNIT – IV (Vocabulary and Writing Skills)

Vocabulary

One Word Substitution, Words often Confused (Homophones, Homonyms),idioms related to colours only.

Writing Skills

Précis Writing

E – mail Writing

Text/ Reference books :

1. The Merchant of Venice: William Shakespeare, Publisher: Maple Press Pvt, Ltd.
2. Train To Pakistan: Khushwant Singh, Publishers: Penguin Random House India Pvt. Ltd.
3. Oxford Advanced Learner's Dictionary, O. U. P.
4. Rymond Murphy, Murphy's English Grammar, C.U.P.
5. J. C. Nesfield: English Grammar, Composition and Usage (Revised by N. K. Aggarwal)
6. W. S. Allen: Living English Structures.
7. Bansal and Harrison: Spoken English for Indian Speakers.
8. Daniel Jones: Dictionary for Pronunciation.

Note:

Instruction for Examiner:

- The paper shall be of 80 marks.
- The time allowed is three hours.
- The whole syllabus is divided into four units. Question paper shall be of two parts.
    1. Part A shall be compulsory and consist 8 short answered questions of 2 marks each at least two question shall be set from each unit.
    2. Part B shall again divided into 4 units consisting 2 questions of 16 marks each in every unit and candidate must attempt 4 questions at all selecting 1 question from each unit.

ANNEXURE - 2.3

No.LW/118/59-
dt- 9/5/18

MINUTES OF THE MEETING OF U.G. B.O.S. IN LAW HELD ON 23rd APRIL 2018 AT 11.00 A.M: IN THE OFFICE OF THE CHAIRPERSON DEPARTMENT OF LAWS

The meeting of the UGBOS in Law was held on 23rd April 2018 at 11.00 A.M. in the office of the Chairperson. The following were present-

1	Prof. (Dr) Vimal Joshi, BPSMV	Chairperson
2	Prof. (Dr) Preet Singh, MDU, Rohtak	Subject Expert
3.	Prof. (Dr.) Rajpal, KUK,	do
4	Dr Ashok Kumar, Astt. Prof, BPSMV	Member

The UGBOS after detailed discussion resoled and approved as under-

1. The board appreciated and approved the proposal of the Department to initiate the LL.B. three year course w.e.f. 2019-20 after getting affiliation by Bar Council of India and recommends for creation of two posts of Assistant Professors in Law for this course.
2. The Board approved the ordinance of LL.B. three year course.
3. The Board approved the Scheme of examination and syllabus of 1st and 2nd semester of LL B three year course
4. The Board approved the amended syllabus of B.A. LL.B. and B.B.A. LL.B. 3rd and 4th semester applicable to the students admitted on 2017-18 onwards as per the guidelines issued by Bar Council of India time to time
5. The board also authorized the Chairperson of the Department to give panel of examiners in case of urgency

The meeting ended with a thanx to the chair

Chairperson

CC to-

1. All members of the UGBOS
2. A.R. Academic BPSMV, Khanpur Kalan

Chairperson

O/C.

ANNEXURE - 24

MINUTES OF THE MEETING OF FACULTY OF LAW HELD ON 15 th MAY 2018 AT 11.00 A.M.

The meeting of the Faculty of Law was held on 15th May 2018 at 11.00 A.M.. The following were present-

1. Prof. (Dr.) Vimal Joshi, Dean, BPSMV — Chairperson
2. Dr. (Mrs). Archna Malik, Astt. Prof (Law), BPSMV — Member
3. Mr. Kuldeep Singh, Supt- in- Charge, Academic nominee of the Registrar, BPSMV, — Secretary

The Faculty after detailed discussion resolved and approved as under-

1. The topic of Ph.D. and names of the supervisors already approved by D.R.C. in its meeting dated 09/11/2017 and PGBOS in its meeting 24/04/2018 has been approved by Faculty as under-

Sr.	Candidate	Topic	Supervisor
1	Ms. Navya Gupta	Law Relating to Differently Abled Persons: A Critical Study.	Prof. Vimal Joshi
2	Ms. Annu	Women Centric Laws vis-a-vis Reverse Discrimination : recent Judicial Trends.	Dr. Ashok Kumar
3	Ms. Rekha	Sustainable Development and Human Rights: In National Perspective.	Dr. Kritika

2. The Faculty has approved the implementation of CBCS system in LL.M. course and approved to include one paper each to be included in LL.M. 1st and 2nd semester and a choice be given to students to choose the paper from the pool of papers offered by university for CBCS system
3. The scheme of examination of LL.M. with CBCS system has been approved.

15.5.18

4. The Faculty appreciated and approved the proposal of the Department to initiate the LL.B. three year course w.e.f. 2019-20 after getting affiliation by Bar Council of India and recommends for creation of two posts of Assistant Professors in Law for this course.
5. The Faculty approved the ordinance of LL.B. three year course.
6. The Faculty approved the Scheme of examination and syllabus of 1st and 2nd semester of LL.B. three year course
7. The Faculty approved the amended syllabus of B.A. LL.B. and B.B.A. LL.B. 3rd and 4th semester applicable to the students admitted on 2017-18 onwards as per the guidelines issued by Bar Council of India time to time

The meeting ended with a thanks to the chair.

15/5/18

(Archna Malik)

15.5.18

(Vimal Joshi)

15/5

(Kuldeep Singh)

CC to-

1. All members of the Faculty
2. P.A. to Registrar for the information of the Registrar.
3. A.R. Academic, BPSMV, Khanpur Kalan.

Chairperson

Annexure-25

JYOTI ARORA
IAS

D.O. No. .....

Principal Secretary to Govt. Haryana,

Technical Education Department, Chandigarh

Dated .....

Subject: Regarding Implementing the Model Curriculum of All India Council for Technical Education (AICTE), New Delhi including Induction program, Teacher's Training and Internshala.

I am glad to inform you that Sh. Parkash Javadekar, Hon'ble Minister of Human Resource Development has launched the model curriculum of AICTE on 24.01.2018 for UG/PG Programme in Engineering and Management. Haryana is the first State to take this initiative for implementing the model curriculum of AICTE which will be a mile-stone in improving the quality of Technical Education in the State. A workshop in this connection was conducted by the YMCA University of Science and Technology, Faridabad on 15.02.2018 with the initiative of State Govt. in which the representatives from various Universities of State and their affiliated Colleges have participated. I would like that the Vice-Chancellors of other affiliating universities of Technical Institutions may organized such workshops to sensitize the functionaries of affiliating institutions and all concerned. The model curriculums developed by AICTE are available on the Website https://www.aicte-india.org/education/model-syllabus.

Vice-Chancellors are requested to ensure the proper implementation of Model Curriculum of AICTE including the preparation of action plan for successful conducting of Induction program in their University and affiliated colleges from this year.

AICTE has signed an MOU with Internshala for providing the internship, counseling and guidance to the students enrolled in AICTE approved Institutions. Therefore, Vice-Chancellor may ensure that the students may register on Internshala portal as per procedure mentioned.

AICTE has introduced the concept of Virtual Lab in its model curriculum that provides the facility of remote access to the labs in various disciplines for Science & Engineering. The students can register themselves to avail this facility. In addition to above, Vice-Chancellor may ensure the teacher training for Induction Program to make it successful and the proper implementation of Proficiency Modules for students to make them compatible with the improved academic standards of the University/College and achieve their goals in this competitive environment.

Cont....

I hope you will deliberate this issue in your Academic Council and will take appropriate decision regarding the implementation of model curriculums developed by the All India Council for Technical Education, New Delhi from the next Academic session. Department of Technical Education may be apprised about the action into the matter.

Yours sincerely,

(Jyoti Arora)

Prof. S. P. Bansal,
Vice Chancellor,
Bhagat Phool Singh Mahila Vishavidyalaya,
Khanpur Kalan (Sonepat).

The Committee of the following faculty members is constituted for implementing the model curriculum of AICTE:

1. Mrs. Sonal Beniwal Assistt Prof.
2. Mr. Vinod Saroha, Assistt. Prof.
3. Mrs. Sunita Rani, Assistt Prof.
4. Mrs. Manju Saroha, Assistt Prof.

CSE/IT/1367
21/3/15

21/3/15

Officiale

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Annexure 26

Department of Computer Science & Engineering and Information Technology

BPS Mahila Vishwavidyalaya Khanpur Kalan Sonipat

(A State University Established under the Legislative Act No. 31/2006)

Ref. No BPSMV/CSE/IT/18/...

Dated ...

Minutes of the meeting of the PGBOS of Computer Science & Engineering of Department of Computer Science & Engineering and Information Technology, Bhagat Phool Singh Mahila Vishwavidyalaya, Khanpur Kalan (Sonipat), held on 16/05/2018 at 01:00 P.M. The following are the member of PGBOS:

1. Prof. Ajit Singh, Chairperson, Deptt. of CSE & IT, BPSMV, Khanpur Kalan — Chairman
2. Prof. M.N. Hoda, Director, BVICAM, New Delhi — Outside expert
3. Prof. Nasib Singh Gill, Deptt. of CSA, MDU, Rohtak — Outside expert
4. Mrs. Manju Saroha, Assistant Prof., Deptt. of CSE/IT,BPSMV — Member
5. Mrs. Sunita, Assistant Prof., Deptt. of CSE/IT,BPSMV — Member

The meeting was convened in the Department of Computer Science & Engineering and Information Technology, Bhagat Phool Singh Mahila Vishwavidyalaya, Khanpur Kalan, Sonepat. The agenda items were discussed in detail and the decisions have been taken as under:

1. Item No. 1: Considered and Approved

   The members discussed the model curriculum of AICTE. It was noted that the existing guidelines of the University, as approved by the Academic Council, which is reproduced below, needs all the syllabi to be organized in four units.

   "Nine questions will be set in all by the examiners taking two questions from each unit and one question containing short answer type questions from entire syllabus. Students will be required to attempt five questions, selecting one question from each unit. Question No.1 is compulsory which is from entire syllabus."

16/5/18 16/05/2018 16/5/18 16/5/18

It was further observed that the model curriculum of AICTE is divided into multiple modules / units. Considering this, the curriculum was re-organized into four units, to meet the existing guidelines of the University, as discussed above.

After re-organization, it was resolved to approve the curriculum and recommended to adopt the same for M.Tech Computer Science & Engineering and M.Tech Computer Science & Engineering (Network Security): 1st to 4th semesters: w.e.f. academic session 2018-2019.

2. Any other item

(i) The department is running M.Tech Computer Science & Engineering (Network Security) programme. It was observed that the AICTE has not prescribed any specific curriculum of M.Tech Computer Science & Engineering with specialization in Network Security. However, AICTE has prescribed a model curriculum for M.Tech (Computer Science & Engineering) with specialization in Information Security. Therefore, it was recommended that the AICTE's model curriculum for M.Tech (Computer Science & Engineering) with specialization in Information Security be adopted for M.Tech Computer Science & Engineering (Network Security) w.e.f. academic session 2018-2019.

(ii) Further, it was also decided that the existing passing criteria, as approved by the Academic Council of the University, reproduced below, shall be followed, for all the M. Tech. programmes:-

"The Minimum passing marks for any course/subject/(paper shall be 40% in the external examination and 40% in the aggregate of internal and external examinations of that course/subject/paper".

The committee also authorized to the Chairman for minor changes needed, if any.

With this the meeting ended with a vote of thank to the chair.

Prof. M.N. Hoda
(Outside expert)

Prof. Nasib Singh Gill
(Outside expert)

Mrs. Manju
(Member)

Mrs. Sunita
(Member)

Prof. Ajit Singh
Chairman, BOS

A copy of the above is forwarded to the following for information:

1. PA to Hon'ble Vice- Chancellor (for kind information of Hon'ble Vice-Chancellor)
2. PA to Registrar (for kind information of Worthy Registrar)
3. Assistant Registrar (Academic) for information and necessary action.
4. Controller of Examinations for information and necessary action.

Prof. Ajit Singh

Chairman, BOS

Bhagat Phool Singh Mahila Vishwavidyalaya,
Khanpur Kalan (Sonepat), Haryana-131305

www.bpswomenuniversity.ac.in

Minutes of the meeting of Faculty of Engineering and Technology held on 18.05.2018 at 3.30 p.m. in the office of Dean, Faculty of Engineering and Technology, BPSMV, Khanpur Kalan.

The following were present:-

1.	Prof. Vijay Nehra, Dean, Faculty of Engineering & Technology	Chairperson
2.	Prof. Alit Singh, Chairperson, Deptt of CSE/IT	Member
3.	Prof. Lalit Jajpura, Chairperson, Deptt of F.T.	Member
4.	Ms. Priyanka, Asstt. Prof., Deptt. of ECE	Member
5.	Ms. Manju Saroha, Asstt. Prof., Deptt. of CSE/IT	Member

After detailed discussion and deliberation, the following decisions were taken:-

Agenda No. 1: Considered and Approved.
The AICTE model curriculum of B.Tech. Electronics and Communication Engineering as resolved by Under Graduate Board of Studies in Department of Electronics and Communication Engineering held on 9/4/2018 and subsequently on17/5/2018 was considered and approved.

Agenda No. 2: Considered and Approved.
The AICTE model curriculum of M.Tech. Electronics and Communication Engineering M.Tech. ICT as resolved by Post Graduate Board of Studies of Department of Electronics and Communication Engineering held on 5/5/2018 was considered and approved.

Agenda No. 3: Considered and Approved.
The syllabi and scheme of examination of pre Ph.D course work in Electronics and Communication Engineering of Department of Electronics and Communication Engineering held on 5/5/2018 was considered and approved.

Agenda No.4: Considered and Approved.
The recommendations of Under Graduate and Post Graduate Board of Studies of Department of Fashion Technology held on 22/2/2018 was considered and approved to start integrated B.Sc. and M.Sc. (Fashion and Apparel Design). However the members of were opinion that suitable faculty may be assigned for the course as the same cannot started in Faculty of Engineering and Technology. Further, all the detail pertaining to Departments submitted on AICTE web portal may be taken into consideration before starting the course in department of Fashion Technology.

Agenda No.5: Considered and Approved.
The request of Ms. Sonia Tyagi to pursue her dissertation work after expiry of regular time period is considered and approved for further discussion and approval from Academic Council for condone of time limit for submission of dissertation.

Agenda No.6: Considered and approved the recommendation of the PGBOS held on 28/3/2018 in the Department of Computer Science & Engineering and Information Technology.

Agenda No.7: Considered and approved the recommendation of the PGBOS held on 16/5/2018 in the Department of Computer Science & Engineering and Information Technology.

Agenda No.8: Considered and approved the recommendation of the UGBOS held on 16/5/2018 in the Department of Computer Science & Engineering and Information Technology.

(Vijay Nehra) (Ajit Singh) (Lalit Jajpura) (Priyanka) (Manju Saroha)

Dean, FET

Endst. No. BPSMV/ECE/ 18/ 665-75 Date:- 22/5/18

A Copy of the above is forwarded to the following for information and necessary action:-

1. PA to Vice-Chancellor (For kind information of the Hon'ble Vice-Chancellor).
2. PA to Registrar (For kind information of the Worthy Registrar)
3. AR(Academic), BPSMV, Khanpur Kalan, Sonipat.
4. Chairperson, Department of CSE/IT, BPSMV, Khanpur Kalan, Sonipat.
5. Chairperson, Department of Fashion Technology, BPSMV, Khanpur Kalan, Sonipat.
6. Chairperson, Department of ECE, BPSMV, Khanpur Kalan, Sonipat.
7. Concerned faculty members.

Dean, FET
21/5/2018

Annexure- 24

Scheme & Syllabus

For

Master of Technology

In

Computer Science and Engineering

Department of Computer Science & Engineering
and Information Technology
BPS Mahila Vishwavidyalaya Khanpur Kalan, Sonepat
(India)
Website: www.bpswomenuniversity .ac.in

16/05/2018 16/5/2018

Department of Computer Science & Engineering
and
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Master of Technology
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(w.e.f Session 2018-2019)

First Semester

S. No	Code	Course Title	Hrs/Week			Total Credit	Marks		
			L	T	P		Internal Marks	External Marks	Total Marks
Theory									
1	MT-CS-101	Program Core I-Mathematical foundations of Computer Science	3	0	0	3	20	80	100
2	MT-CS-102	Program Core II-Advanced Data Structures	3	0	0	3	20	80	100
3		Program Elective I	3	0	0	3	20	80	100
4		Program Elective II	3	0	0	3	20	80	100
5	MT-CS-103	Research Methodology and IPR	2	0	0	2	20	80	100
6		Audit Course-I	2	0	0	0	20	80	100
Lab									
7	MT-CS-104	Laboratory 1 (Advanced Data Structures)	0	0	4	2	10	40	50
8	MT-CS-105	Laboratory 2 (Based on Electives)	0	0	4	2	10	40	50
Total			16	00	08	18	120	480	600

Program Elective I

1. MT-CS-106 Machine Learning
2. MT-CS-107 Wireless Sensor Networks
3. MT-CS-108 Introductions to Intelligent Systems

Program Elective II

1. MT-CS-109 Data Science
2. MT-CS-110 Distributed Systems
3. MT-CS-111 Advanced Wireless and Mobile Networks

Note: Minimum passing marks for any subject (paper) shell be 40% in the external examination and 40% in the aggregate of internal and external examinations of the subject.

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Second Semester

S. No	Code	Course Title	Hrs/Week			Total Credit	Marks		
			L	T	P		Internal Marks	External Marks	Total Marks
Theory									
1	MT-CS-201	Program Core III - Advance Algorithms	3	0	0	3	20	80	100
2	MT-CS-202	Program Core IV - Soft Computing	3	0	0	3	20	80	100
3		Program Elective III	3	0	0	3	20	80	100
4		Program Elective IV	3	0	0	3	20	80	100
5		Audit Course-II	2	0	0	0	20	80	100
6	MT-CS-203	Mini Project with Seminar	2	0	0	2	100	0	100
Lab									
7	MT-CS-204	Laboratory 3 (Based on cores)	0	0	4	2	10	40	50
8	MT-CS-205	Laboratory 4 (Based on Electives)	0	0	4	2	10	40	50
Total			16	00	08	18	200	400	600

*Students be encouraged to go to Industrial Training/Internship for at least 2-3 months during semester break.

Note: Minimum passing marks for any subject (paper) shell be 40% in the external examination and 40% in the aggregate of internal and external examinations of the subject.

Program Elective III

1. MT-CS-206 Data Preparation and Analysis
2. MT-CS-207 Secure Software Design & Enterprise Computing
3. MT-CS-208 Computer Vision

Program Elective IV

1. MT-CS-209 Human and Computer Interaction
2. MT-CS-210 GPU Computing
3. MT-CS-211 Digital Forensics

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Third Semester

S. No	Code	Course Title	Hrs/Week			Total Credit	Marks		
			L	T	P		Internal Marks	External Marks	Total Marks
Theory									
1		Program Elective 5	3	0	0	3	20	80	100
2		Open Elective	3	0	0	3	20	80	100
Labs									
3	MT-CS-301	Dissertation-I /Industrial Project	0	0	16	8	20	130	150
4	MT-CS-311	Industrial Training	0	0	0	2	-	50	50
		Total	06	00	16	16	60	340	400

*Students going for Industrial Project/Thesis will complete these courses through MOOCs.

Program Elective 5

1. MT-CS-302 Mobile Applications and Services
2. MT-CS-303 Compiler for HPC
3. MT-CS-304 Optimization Techniques

Open Elective

1. MT-CS-305 Business Analytics
2. MT-CS-306 Industrial Safety
3. MT-CS-307 Operations Research
4. MT-CS-308 Cost Management of Engineering Projects
5. MT-CS-309 Composite Materials
6. MT-CS-310 Waste to Energy

Note: Minimum passing marks for any subject (paper) shell be 40% in the external examination and 40% in the aggregate of internal and external examinations of the subject.

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Fourth Semester

S. No.	Paper Code	Paper	L	T	P	Credits	Marks		
							Internal Marks	External Marks	Total Marks
1.	MT-CS-401	Dissertation II	0	0	32	16	100	400	500
	Total		00	00	32	16	100	400	500

Note: Minimum passing marks for any subject (paper) shell be 40% in the external examination and 40% in the aggregate of internal and external examinations of the subject.

Department of Computer Science & Engineering
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(w.e.f Session 2018-2019)

Audit Course 1 & 2

1. MT-AUD - 01 English for Research Paper Writing
2. MT-AUD - 02 Disaster Management
3. MT-AUD - 03 Sanskrit for Technical Knowledge
4. MT-AUD - 04 Value Education
5. MT-AUD - 05 Constitution of India
6. MT-AUD - 06 Pedagogy Studies
7. MT-AUD - 07 Stress Management by Yoga
8. MT-AUD - 08 Personality Development through Life Enlightenment Skills.

Note: Audit Course 1 are from Sr. No. 1to 4 and & Audit Course 2 are from Sr. No. 5 to 8.

Department of Computer Science & Engineering
and Information Technology
Course Curriculum & Scheme of Examinations of
Master of Technology
Computer Science and Engineering
(w.e.f Session 2018-2019)

Sr. No.	Semester	Total Credits	Total Marks
1	First	18	600
2	Second	18	600
3	Third	16	400
4	Fourth	16	500
Total Credit/Marks		68	2100

Program Outcomes of M.Tech (CSE) program:

The main outcomes of the M.Tech (CSE) program are given here. At the end of the program a student is expected to have:

1. An understanding of the theoretical foundations and the limits of computing.
2. An ability to adapt existing models, techniques, algorithms, data structures, etc. for efficiently solving problems.
3. An ability to design, develop and evaluate new computer based systems for novel applications which meet the desired needs of industry and society.
4. Understanding and ability to use advanced computing techniques and tools.
5. An ability to undertake original research at the cutting edge of computer science & its related areas.
6. An ability to function effectively individually or as a part of a team to accomplish a stated goal.
7. An understanding of professional and ethical responsibility.
8. An ability to communicate effectively with a wide range of audience.
9. An ability to learn independently and engage in lifelong learning.
10. An understanding of the impact of IT related solutions in an economic, social and environment context.

16/05/2018

16/5/18 16/5/18 16/5/2018

260

MT-CS-101 **Mathematical Foundation of Computer Science**

L T P
3 0 -

Total Credits: 3
External Marks: 80
Internal Marks: 20

Duration of Exam: 3 Hrs.

Pre-requisites: Discrete Mathematics

Course Objectives:

1. To understand the mathematical fundamentals that is prerequisites for a variety of courses like Data mining, Network protocols, analysis of Web traffic, Computer security, Software engineering, Computer architecture, operating systems, distributed systems, Bioinformatics, Machine learning.
2. To develop the understanding of the mathematical and logical basis to many modern techniques in information technology like machine learning, programming language design and concurrency.
3. To study various sampling and classification Problems.

UNIT -1

Module-1:
Probability mass, density, and cumulative distribution functions, parametric families of distributions, Expected value, variance, conditional expectation, Applications of the univariate and multivariate Central Limit Theorem, Probabilistic inequalities, Markov chains

UNIT -II

Module-2:
Random samples, sampling distributions of estimators, Methods of Moments and Maximum Likelihood.

Module-3:
Statistical inference, Introduction to multivariate statistical models: regression and classification problems, principal components analysis, The problem of over fitting model assessment.

UNIT -III

Module-4:

Graph Theory

Isomorphism, Planar graphs, graph colouring, Hamilton circuits and Euler cycles. Permutations and Combinations with and without repetition, specialized techniques to solve combinatorial enumeration problems

UNIT -IV

Module-5:

Computer science and engineering applications

Data mining, Network protocols, analysis of Web traffic, Computer security, Software engineering, Computer architecture, operating systems, distributed systems, Bioinformatics, Machine learning.

Module-6:

Recent Trends in various distribution functions in mathematical field of computer science for varying fields like bioinformatics, soft computing and computer vision.

Course Outcomes:

After completion of course, students would be able to:

a. To understand the basic notions of discrete and continuous probability.
b. To understand the methods of statistical inference, and the role that sampling distributions play in those method.
c. To be able to perform correct and meaningful statistical analyses of simple to moderate complexity.

References

1. John Vince, Foundation Mathematics for Computer Science, Springer.

2. K. Trivedi.Probability and Statistics with Reliability, Queuing, and Computer Science Applications.Wiley.

3. M. Mitzenmacher and E. Upfal.Probability and Computing: Randomized Algorithms and Probabilistic Analysis.

4. Alan Tucker, Applied Combinatorics, Wiley

Note: Nine questions will be set in all by the examiners taking two questions from each unit and one question containing short answer type questions from entire syllabus. Students will be required to attempt five questions, selecting one question from each unit. Question No.1 is compulsory which is from entire syllabus.

MT-CS-102 **Advanced Data Structures**

L T P
3 0 -

Total Credits: 3
External Marks: 80
Internal Marks: 20

Duration of Exam: 3 Hrs.

Pre-requisites: UG level course in Data Structures

Course Objectives:

1. The student should be able to choose appropriate data structures, understand the ADT/libraries, and use it to design algorithms for a specific problem.
2. Students should be able to understand the necessary mathematical abstraction to solve problems.
3. To familiarize students with advanced paradigms and data structure used to solve algorithmic problems.
4. Student should be able to come up with analysis of efficiency and proofs of correctness.

UNIT -I

Module-1:

Dictionaries and Hashing

Dictionaries: Definition, Dictionary Abstract Data Type, Implementation of Dictionaries.

Hashing: Review of Hashing, Hash Function, Collision Resolution Techniques in Hashing, Separate Chaining, Open Addressing, Linear Probing, Quadratic Probing, Double Hashing, Rehashing, Extendible Hashing.

UNIT -II

Module-2:

Skip Lists

Need for Randomizing Data Structures and Algorithms, Search and Update Operations on Skip Lists, Probabilistic Analysis of Skip Lists, Deterministic Skip Lists

Module-3:

Trees: Binary Search Trees, AVL Trees, Red Black Trees, 2-3 Trees, B-Trees, Splay Trees

UNIT -III

Module-4:

Text Processing

Sting Operations, Brute-Force Pattern Matching, The Boyer- Moore Algorithm, The Knuth-Morris-Pratt Algorithm, Standard Tries, Compressed Tries, Suffix Tries, The Huffman Coding Algorithm, The Longest Common Subsequence Problem (LCS), Applying Dynamic Programming to the LCS Problem.

UNIT -IV

Module-5:

Computational Geometry

One Dimensional Range Searching, Two Dimensional Range Searching, Constructing a Priority Search Tree, Searching a Priority Search Tree, Priority Range Trees, Quadtrees, k-D Trees.

Module-6:

Recent Trends in Hashing, Trees, and various computational geometry methods for efficiently solving the new evolving problem

Course Outcomes:

a. Understand the implementation of symbol table using hashing techniques.
b. Develop and analyze algorithms for red-black trees, B-trees and Splay trees.
c. Develop algorithms for text processing applications.
d. Identify suitable data structures and develop algorithms for computational geometry problems.

References

1. Mark Allen Weiss, Data Structures and Algorithm Analysis in C++, 2nd Edition, Pearson, 2004
2. M T Goodrich Roberto Tamassia, Algorithm Design, John Willey, 2002

Note: Nine questions will be set in all by the examiners taking two questions from each unit and one question containing short answer type questions from entire syllabus. Students will be required to attempt five questions, selecting one question from each unit. Question No.1 is compulsory which is from entire syllabus.

MT-CS-106 **Machine Learning (Elective I)**

L	T	P
3	0	-

Total Credits: 3
External Marks: 80
Internal Marks: 20

Duration of Exam: 3 Hrs.

Pre-requisites: Basics of Neural Networks and Image Processing

Course Objectives:

1. To learn the concept of how to learn patterns and concepts from data without being explicitly programmed in various IOT nodes.
2. To design and analyze various machine learning algorithms and techniques with a modern outlook focusing on recent advances.
3. Explore supervised and unsupervised learning paradigms of machine learning.
4. To explore Deep learning technique and various feature extraction strategies.

UNIT -I

Module-1: Supervised Learning (Regression/Classification)

- Basic methods: Distance-based methods, Nearest-Neighbours, Decision Trees, Naive Bayes
- Linear models: Linear Regression, Logistic Regression, Generalized Linear Models
- Support Vector Machines, Nonlinearity and Kernel Methods
- Beyond Binary Classification: Multi-class/Structured Outputs, Ranking

UNIT -II

Module-2: Unsupervised Learning

- Clustering: K-means/Kernel K-means
- Dimensionality Reduction: PCA and kernel PCA
- Matrix Factorization and Matrix Completion
- Generative Models (mixture models and latent factor models)

UNIT -III

Module-3:

Evaluating Machine Learning algorithms and Model Selection, Introduction to Statistical Learning Theory, Ensemble Methods (Boosting, Bagging, Random Forests)

Module-4:

Sparse Modeling and Estimation, Modeling Sequence/Time-Series Data, Deep Learning and Feature Representation Learning

UNIT -IV

Module-5:

Scalable Machine Learning (Online and Distributed Learning)
A selection from some other advanced topics, e.g., Semi-supervised Learning, Active Learning, Reinforcement Learning, Inference in Graphical Models, Introduction to Bayesian Learning and Inference

Module-6:

Recent trends in various learning techniques of machine learning and classification methods for IOT applications, various models for IOT applications

Course Outcomes:

a. Extract features that can be used for a particular machine learning approach in various IOT applications.
b. To compare and contrast pros and cons of various machine learning techniques and to get an insight of when to apply a particular machine learning approach.
c. To mathematically analyse various machine learning approaches and paradigms.

References

1. Kevin Murphy, Machine Learning: A Probabilistic Perspective, MIT Press, 2012

2. Trevor Hastie, Robert Tibshirani, Jerome Friedman, The Elements of Statistical Learning, Springer 2009 (freely available online)

3. Christopher Bishop, Pattern Recognition and Machine Learning, Springer, 2007.

Note: Nine questions will be set in all by the examiners taking two questions from each unit and one question containing short answer type questions from entire syllabus. Students will be required to attempt five questions, selecting one question from each unit. Question No.1 is compulsory which is from entire syllabus.

MT-CS-107 **Wireless Sensor Networks (Elective I)**

L T P
3 0 -

Total Credits: 3
External Marks: 80
Internal Marks: 20

Duration of Exam: 3 Hrs.

Pre-requisites: Wireless Communication

Course Objectives:

- Architect sensor networks for various application setups.
- Devise appropriate data dissemination protocols and model links cost.
- Understanding of the fundamental concepts of wireless sensor networks and has a basic knowledge of the various protocols at various layers.
- Evaluate the performance of sensor networks and identify bottlenecks

UNIT-I

Module-1:
Introduction to Wireless Sensor Networks: Course Information, Introduction to Wireless Sensor Networks: Motivations, Applications, Performance metrics, History and Design factors
Network Architecture: Traditional layered stack, Cross-layer designs, Sensor Network Architecture
Hardware Platforms: Motes, Hardware parameters

Module-2:
Introduction to ns-3: Introduction to Network Simulator 3 (ns-3), Description of the ns-3 core module and simulation example.

UNIT-II

Module-3:
Medium Access Control Protocol design: Fixed Access, Random Access, WSN protocols: synchronized, duty-cycled
Introduction to Markov Chain: Discrete time Markov Chain definition, properties, classification and analysis
MAC Protocol Analysis: Asynchronous duty-cycled. X-MAC Analysis (Markov Chain)

UNIT-III

Module-4:
Routing protocols: Introduction, MANET protocols
Routing protocols for WSN: Resource-aware routing, Data-centric, Geographic Routing, Broadcast, Multicast

Opportunistic Routing Analysis: Analysis of opportunistic routing (Markov Chain), advanced topics in wireless sensor networks.

UNIT-IV

Module-5:

Security: Possible attacks, countermeasures, SPINS, Static and dynamic key Distribution

Module-6:

Advanced Topics

Recent development in WSN standards, software applications

Course Outcomes

After completion of course, students would be able to:

- Describe and explain radio standards and communication protocols for wireless sensor networks.
- Explain the function of the node architecture and use of sensors for various applications.
- Be familiar with architectures, functions and performance of wireless sensor networks systems and platforms.

References:

1. W. Dargie and C. Poellabauer, "Fundamentals of Wireless Sensor Networks –Theory and Practice", Wiley 2010

2. KazemSohraby, Daniel Minoli and TaiebZnati, "wireless sensor networks - Technology, Protocols, and Applications", Wiley Interscience 2007

3. Takahiro Hara, Vladimir I. Zadorozhny, and Erik Buchmann, "Wireless Sensor Network Technologies for the Information Explosion Era", springer 2010

Note: Nine questions will be set in all by the examiners taking two questions from each unit and one question containing short answer type questions from entire syllabus. Students will be required to attempt five questions, selecting one question from each unit. Question No.1 is compulsory which is from entire syllabus.

MT-CS-108 **Introduction to Intelligent Systems (Elective I)**

L T P
3 0 -

Total Credits: 3
External Marks: 80
Internal Marks: 20

Duration of Exam: 3 Hrs.

Pre-requisites: Data Structures and Data Management or Data Structures

Course Objectives:

The aim of the course is to introduce to the field of Artificial Intelligence (AI) with emphasis on its use to solve real world problems for which solutions are difficult to express using the traditional algorithmic approach. It explores the essential theory behind methodologies for developing systems that demonstrate intelligent behaviour including dealing with uncertainty, learning from experience and following problem solving strategies found in nature.

UNIT-I

Module-1:
Biological foundations to intelligent systems I: Artificial neural networks, Back-propagation networks, Radial basis function networks, and recurrent networks

Module-2:
Biological foundations to intelligent systems II: Fuzzy logic, knowledge Representation and inference mechanism, genetic algorithm, and fuzzy neural networks.

UNIT-II

Module-3:
Search Methods Basic concepts of graph and tree search. Three simple search methods: breadth-first search, depth-first search, iterative deepening search. Heuristic search methods: best-first search, admissible evaluation functions, hill-climbing search. Optimization and search such as stochastic annealing and genetic algorithm.

UNIT-III

Module-4:
Knowledge representation and logical inference Issues in knowledge representation. Structured representation, such as frames, and scripts, semantic networks and conceptual

graphs, Formal logic and logical inference, Knowledge-based systems structures, its basic components, Ideas of Blackboard architectures

UNIT-IV

Module-5:
Reasoning under uncertainty and Learning Techniques on uncertainty reasoning such as Bayesian reasoning, Certainty factors and Dempster-Shafer Theory of Evidential reasoning, A study of different learning and evolutionary algorithms, such as statistical learning and induction learning.

Module-6:
Recent trends in Fuzzy logic, Knowledge Representation

Course Outcomes:

Able to Demonstrate knowledge of the fundamental principles of intelligent systems and would be able to analyse and compare the relative merits of a variety of AI problem solving techniques.

References

1. Luger G.F. and Stubblefield W.A. (2008). Artificial Intelligence: Structures and strategies for Complex Problem Solving. Addison Wesley, 6th edition.

2. Russell S. and Norvig P. (2009). Artificial Intelligence: A Modern Approach. Prentice-Hall, 3rd edition.

Note: Nine questions will be set in all by the examiners taking two questions from each unit and one question containing short answer type questions from entire syllabus. Students will be required to attempt five questions, selecting one question from each unit. Question No.1 is compulsory which is from entire syllabus.

MT-CS-109 **Data Science (Elective II)**

L T P
3 0 -

Total Credits: 3
External Marks: 80
Internal Marks: 20

Duration of Exam: 3 Hrs.

Pre-requisites:

Course Objectives:

Provide you with the knowledge and expertise to become a proficient data scientist.

- Demonstrate an understanding of statistics and machine learning concepts that are vital for data science;
- Produce Python code to statistically analyses a dataset;
- Critically evaluate data visualizations based on their design and use for communicating stories from data;

UNIT -I

Introduction to core concepts and technologies: Introduction, Terminology, data science process, data science toolkit, Types of data, Example applications.

Data collection and management: Introduction, Sources of data, Data collection and APIs, Exploring and fixing data, Data storage and management, Using multiple data sources

UNIT- II

Data analysis: Introduction, Terminology and concepts, Introduction to statistics, Central tendencies and distributions, Variance, Distribution properties and arithmetic, Samples/CLT, Basic machine learning algorithms, Linear regression, SVM, Naive Bayes.

UNIT -III

Data visualisation: Introduction, Types of data visualisation, Data for visualisation: Data types, Data encodings, Retinal variables, Mapping variables to encodings, Visual encodings.

UNIT -IV

Applications of Data Science, Technologies for visualisation, Bokeh (Python)

Recent trends in various data collection and analysis techniques, various visualization techniques, application development methods of used in data science.

ذ Course Outcomes

On completion of the course the student should be able to

- Explain how data is collected, managed and stored for data science;
- Understand the key concepts in data science, including their real-world applications and the toolkit used by data scientists;
- Implement data collection and management scripts using MongoDB

References:

1. Cathy O'Neil and Rachel Schutt. Doing Data Science, Straight Talk From The Frontline. O'Reilly.

2. Jure Leskovek, Anand Rajaraman and Jeffrey Ullman. Mining of Massive Datasets. v2.1, Cambridge University Press.

Note: Nine questions will be set in all by the examiners taking two questions from each unit and one question containing short answer type questions from entire syllabus. Students will be required to attempt five questions, selecting one question from each unit. Question No.1 is compulsory which is from entire syllabus.

MT-CS-110 **Distributed Systems (Elective II)**

L T P
3 0 -

Total Credits: 3
External Marks: 80
Internal Marks: 20

Duration of Exam: 3 Hrs.

Pre-requisites: Database Management Systems

Course Objectives:

1. To introduce the fundamental concepts and issues of managing large volume of shared data in a parallel and distributed environment, and to provide insight into related research problems.

UNIT I

Module-1:

Introduction
Distributed data processing, what is a DDBS; Advantages and disadvantages of DDBS; Problem areas; Overview of database and computer network concepts
Distributed Database Management System Architecture Transparencies in a distributed DBMS; Distributed DBMS architecture; Global directory issues

UNIT II

Module-2:

Distributed Database Design
Alternative design strategies; Distributed design issues; Fragmentation; Data allocation
Semantics Data Control
View management; Data security; Semantic Integrity Control
Query Processing Issues
Objectives of query processing; Characterization of query processors; Layers of query processing; Query decomposition; Localization of distributed data

UNIT III

Module-3:

Distributed Query Optimization
Factors governing query optimization; Centralized query optimization; Ordering of fragment queries; Distributed query optimization algorithms

Transaction Management

The transaction concept; Goals of transaction management; Characteristics of transactions; Taxonomy of transaction models

Concurrency Control

Concurrency control in centralized database systems; Concurrency control in DDBSs; Distributed concurrency control algorithms; Deadlock management

UNIT IV

Module-4:

Reliability

Reliability issues in DDBSs; Types of failures; Reliability techniques; Commit protocols; Recovery protocols.

Module-5:

Parallel Database Systems

Parallel architectures; parallel query processing and optimization; load balancing

Module-6:

Advanced Topics

Mobile Databases, Distributed Object Management, Multi-databases

Course Outcomes:

a. Design trends in distributed systems.
b. Apply network virtualization.
c. Apply remote method invocation and objects.

References

1. Principles of Distributed Database Systems, M.T. Ozsu and P. Valduriez, Prentice-Hall, 1991.
2. Distributed Database Systems, D. Bell and J. Grimson, Addison-Wesley, 1992.

Note: Nine questions will be set in all by the examiners taking two questions from each unit and one question containing short answer type questions from entire syllabus. Students will be required to attempt five questions, selecting one question from each unit. Question No.1 is compulsory which is from entire syllabus.

MT-CS-111 **Advanced Wireless and Mobile Networks (Elective II)**

L T P
3 0 -

Total Credits: 3
External Marks: 80
Internal Marks: 20

Duration of Exam: 3 Hrs.

Pre-Requisites Computer Networks

Course Objective

- The students should get familiar with the wireless/mobile market and the future needs and challenges.
- To get familiar with key concepts of wireless networks, standards, technologies and their basic operations
- To learn how to design and analyse various medium access
- To learn how to evaluate MAC and network protocols using network simulation software tools.
- The students should get familiar with the wireless/mobile market and the future needs and challenges.

UNIT -I

Introduction:

Wireless Networking Trends, Key Wireless Physical Layer Concepts, Multiple Access Technologies -CDMA, FDMA, TDMA, Spread Spectrum technologies, Frequency reuse, Radio Propagation and Modelling, Challenges in Mobile Computing: Resource poorness, Bandwidth, energy etc.

Wireless Local Area Networks:

IEEE 802.11 Wireless LANs Physical & MAC layer, 802.11 MAC Modes (DCF & PCF) IEEE 802.11 standards, Architecture & protocols, Infrastructure vs. Adhoc Modes, Hidden Node & Exposed Terminal Problem, Problems, Fading Effects in Indoor and outdoor WLANs, WLAN Deployment issues

UNIT -II

Wireless Cellular Networks:

1G and 2G, 2.5G, 3G, and 4G, Mobile IPv4, Mobile IPv6, TCP over Wireless Networks, Cellular architecture, Frequency reuse, Channel assignment strategies, Handoff strategies, Interference and system capacity, Improving coverage and capacity in cellular systems, Spread spectrum Technologies.

UNIT -III

WiMAX (Physical layer, Media access control, Mobility and Networking), IEEE 802.22 Wireless Regional Area Networks, IEEE 802.21 Media Independent Handover Overview

Wireless Sensor Networks

Introduction, Application, Physical, MAC layer and Network Layer, Power Management, Tiny OS Overview

UNIT -IV

Wireless PANs

Bluetooth AND Zigbee, Introduction to Wireless Sensors

Security

Security in wireless Networks Vulnerabilities, Security techniques, Wi-Fi Security, DoS in wireless communication

Advanced Topics

IEEE 802.11x and IEEE 802.11i standards, Introduction to Vehicular Adhoc Networks

Course Outcomes

After completion of course, students would be:

- Demonstrate advanced knowledge of networking and wireless networking and understand various types of wireless networks, standards, operations and use cases.
- Be able to design WLAN, WPAN, WWAN, Cellular based upon underlying propagation and performance analysis.
- Demonstrate knowledge of protocols used in wireless networks and learn simulating wireless networks.
- Design wireless networks exploring trade-offs between wire line and wireless links.
- Develop mobile applications to solve some of the real world problems.

References

1. Schiller J., Mobile Communications, Addison Wesley 2000
2. Stallings W., Wireless Communications and Networks, Pearson Education 2005
3. Stojmenic Ivan, Handbook of Wireless Networks and Mobile Computing, John Wiley and Sons Inc 2002
4. Yi Bing Lin and Imrich Chlamtac, Wireless and Mobile Network Architectures, John Wiley and Sons Inc 2000
5. Pandya Raj, Mobile and Personal Communications Systems and Services, PHI 200

Note: Nine questions will be set in all by the examiners taking two questions from each unit and one question containing short answer type questions from entire syllabus. Students will be required to attempt five questions, selecting one question from each unit. Question No.1 is compulsory which is from entire syllabus.

MT-CS-103 **Research Methodology and IPR**

L	T	P
3	0	-

Total Credits: 3
External Marks: 80
Internal Marks: 20

Duration of Exam: 3 Hrs.

Pre-requisites:

Course Objectives:

1. Understand research problem formulation.
2. Analyze research related information
3. Follow research ethics
4. Understand that today's world is controlled by Computer, Information Technology, but tomorrow world will be ruled by ideas, concept, and creativity.
5. Understanding that when IPR would take such important place in growth of individuals & nation, it is needless to emphasis the need of information about Intellectual Property
   Right to be promoted among students in general & engineering in particular
6. Understand that IPR protection provides an incentive to inventors for further research work and investment in R & D, which leads to creation of new and better products, and in turn brings about, economic growth and social benefits.

UNIT -I

Module-1:

Meaning of research problem, Sources of research problem, Criteria Characteristics of a good research problem, Errors in selecting a research problem, Scope and objectives of research problem, Approaches of investigation of solutions for research problem, data collection, analysis, interpretation, Necessary instrumentations

Module-2:

Effective literature studies approaches, analysis Plagiarism, Research ethics

UNIT -II

Module-3:

Effective technical writing, how to write report, Paper Developing a Research Proposal, Format of research proposal, a presentation and assessment by a review committee

Module-4:

Nature of Intellectual Property: Patents, Designs, Trade and Copyright. Process of Patenting and Development: technological research, innovation, patenting, development.

International Scenario: International cooperation on Intellectual Property. Procedure for grants of patents, Patenting under PCT

UNIT -III

Module-5:

Patent Rights: Scope of Patent Rights, Licensing and transfer of technology, Patent information and databases, Geographical Indications

UNIT -IV

Module-6:

New Developments in IPR: Administration of Patent System. New developments in IPR; IPR of Biological Systems, Computer Software etc, Traditional knowledge Case Studies, IPR and IITs

Course Outcomes:

a. To identify sources of research problem and approaches of investigation for solutions for research problem.
b. To learn various research ethics.
c. To learn the concepts of patents, procedure for granting patents and administration of patent system.

References

1. Stuart Melville and Wayne Goddard, "Research methodology: an introduction for science & engineering students'"
2. Wayne Goddard and Stuart Melville, "Research Methodology: An Introduction"
3. Ranjit Kumar, 2nd Edition , "Research Methodology: A Step by Step Guide for beginners"
4. Halbert, "Resisting Intellectual Property", Taylor & Francis Ltd ,2007.
5. Mayall , "Industrial Design", McGraw Hill, 1992.
6. Niebel , "Product Design", McGraw Hill, 1974.
7. Asimov, "Introduction to Design", Prentice Hall, 1962.
8. Robert P. Merges, Peter S. Menell, Mark A. Lemley, " Intellectual Property in New Technological Age", 2016
9. T. Ramappa, "Intellectual Property Rights Under WTO", S. Chand, 2008

Note: Nine questions will be set in all by the examiners taking two questions from each unit and one question containing short answer type questions from entire syllabus. Students will be required to attempt five questions, selecting one question from each unit. Question No.1 is compulsory which is from entire syllabus.

MT-CS-104 **Laboratory 1 (Advanced Data Structures)**

L	T	P
-	-	4

Total Credits: 2
External Marks: 40
Internal Marks: 10

At least 10 to 15 exercises related to the subject should be given by the teacher concerned.

MT-CS-105

Laboratory 2 (Based on Electives)

L	T	P
-	-	4

Total Credits: 2
External Marks: 40
Internal Marks: 10

At least 20 exercises related to the electives subject (i.e.10 exercises from each subject) should be given by the teacher concerned.

SEMESTER I and II

Audit Courses I & II

MT-AUD-01 **English for Research Paper Writing**

L T P
3 0 -

Total Credits: 3
External Marks: 80
Internal Marks: 20

Duration of Exam: 3 Hrs.

Course Objectives:

Students will be able to:

1. Understand that how to improve your writing skills and level of readability.
2. Learn about what to write in each section.
3. Understand the skills needed when writing a Title.
4. Ensure the good quality of paper at very first-time submission

UNIT-I

Module-1:

Planning and Preparation, Word Order, Breaking up long sentences, Structuring Paragraphs and Sentences, Being Concise and Removing Redundancy, Avoiding Ambiguity and Vagueness.

UNIT-II

Module-2:

Clarifying Who Did What, Highlighting Your Findings, Hedging and Criticizing, Paraphrasing and Plagiarism, Sections of a Paper, Abstracts Introduction

Module-3:

Review of the Literature, Methods, Results, Discussion, Conclusions, the Final Check

UNIT-III

Module-4:

Key skills are needed when writing a Title, key skills are needed when writing an Abstract, key skills are needed when writing an Introduction, skills needed when writing a Review of the Literature

UNIT-IV

Module-5:

Skills are needed when writing the Methods, skills needed when writing the Results, skills are needed when writing the Discussion, skills are needed when writing the Conclusions.

Module-6:

Useful phrases, how to ensure paper is as good as it could possibly be the first- time submission

References

1. Goldbort R (2006) Writing for Science, Yale University Press (available on Google Books)

2. Day R (2006) How to Write and Publish a Scientific Paper, Cambridge University Press

3. Highman N (1998), Handbook of Writing for the Mathematical Sciences, SIAM. Highman'sbook .

4. Adrian Wallwork , English for Writing Research Papers, Springer New York DordrechtHeidelberg London, 2011

Note: Nine questions will be set in all by the examiners taking two questions from each unit and one question containing short answer type questions from entire syllabus. Students will be required to attempt five questions, selecting one question from each unit. Question No.1 is compulsory which is from entire syllabus.

MT-AUD-02

Disaster Management

L T P
3 0 -

Total Credits: 3
External Marks: 80
Internal Marks: 20

Duration of Exam: 3 Hrs.

Course Objectives:

Students will be able to

1. Learn to demonstrate a critical understanding of key concepts in disaster risk reduction and humanitarian response.
2. Critically evaluate disaster risk reduction and humanitarian response policy and practice from multiple perspectives.
3. Develop an understanding of standards of humanitarian response and practical relevance in specific types of disasters and conflict situations.
4. critically understand the strengths and weaknesses of disaster management approaches, planning and programming in different countries, particularly their home country or the countries they work in

UNIT-I

Module-1: Introduction

Disaster: Definition, Factors and Significance; Difference between Hazard and Disaster; Natural and Manmade Disasters: Difference, Nature, Types and Magnitude.

Module-2: Repercussions of Disasters and Hazards

Economic Damage, Loss of Human and Animal Life, Destruction of Ecosystem, Natural Disasters: Earthquakes, Volcanisms, Cyclones, Tsunamis, Floods, Droughts And Famines, Landslides And Avalanches, Man-made disaster: Nuclear Reactor Meltdown, Industrial Accidents, Oil Slicks And Spills, Outbreaks Of Disease And Epidemics, War And Conflicts.

UNIT-II

Module-3: Disaster Prone Areas in India

Study of Seismic Zones; Areas Prone To Floods And Droughts, Landslides And Avalanches; Areas Prone To Cyclonic And Coastal Hazards With Special Reference To Tsunami; Post-Disaster Diseases And Epidemics.

UNIT-III

Module-4: Disaster Preparedness and Management

Preparedness: Monitoring Of Phenomena Triggering A Disaster Or Hazard; Evaluation Of Risk: Application Of Remote Sensing, Data From Meteorological And Other Agencies, Media Reports: Governmental And Community Preparedness.

UNIT-IV

Module-5: Risk Assessment

Disaster Risk: Concept and Elements, Disaster Risk Reduction, Global and National Disaster Risk Situation. Techniques of Risk Assessment, Global Co-Operation in Risk Assessment and Warning, People's Participation in Risk Assessment. Strategies for Survival

Module-6: Disaster Mitigation

Meaning, Concept and Strategies of Disaster Mitigation, Emerging Trends In Mitigation. Structural Mitigation and Non-Structural Mitigation, Programs Of Disaster Mitigation in India

References

1. R. Nishith, Singh AK, "Disaster Management in India: Perspectives, issues and strategies "'NewRoyal book Company.

2. Sahni, PardeepEt.Al. (Eds.)," Disaster Mitigation Experiences And Reflections", Prentice Hall OfIndia, New Delhi.

3. Goel S. L. , Disaster Administration And Management Text And Case Studies" ,Deep &DeepPublication Pvt. Ltd., New Delhi

Note: Nine questions will be set in all by the examiners taking two questions from each unit and one question containing short answer type questions from entire syllabus. Students will be required to attempt five questions, selecting one question from each unit. Question No.1 is compulsory which is from entire syllabus.

MT-AUD-03 **Sanskrit for Technical Knowledge**

L	T	P
3	0	-

Total Credits: 3
External Marks: 80
Internal Marks: 20

Duration of Exam: 3 Hrs.

Course Objectives:

1. To get a working knowledge in illustrious Sanskrit, the scientific language in the world.
2. Learning of Sanskrit to improve brain functioning.
3. Learning of Sanskrit to develop the logic in mathematics, science & other subjects enhancing the memory power.
4. The engineering scholars equipped with Sanskrit will be able to explore the huge knowledge from ancient literature

UNIT-I

Module-1:

Alphabets in Sanskrit, Past/Present/Future Tense, Simple Sentences

UNIT-II

Module-2:

Order, Introduction of roots, Technical information about Sanskrit Literature

UNIT-III

Module-3:

Technical concepts of Engineering-Electrical, Mechanical, Architecture, Mathematics

UNIT-IV

Module-4:

Technical concepts of Engineering- Architecture, Mathematics

Course Outcomes:

After completion of course, students would be able to:

a. Understanding basic Sanskrit language.

b. Ancient Sanskrit literature about science & technology can be understood.

c. Being a logical language will help to develop logic in students

References

1. "Abhyaspustakam" – Dr.Vishwas, Samskrita-Bharti Publication, New Delhi

2. "Teach Yourself Sanskrit" Prathama Deeksha-VempatiKutumbshastri, Rashtriya SanskritSansthanam, New Delhi Publication

3. "India's Glorious Scientific Tradition" Suresh Soni, Ocean books (P) Ltd., New Delhi.Course Output

Note: Nine questions will be set in all by the examiners taking two questions from each unit and one question containing short answer type questions from entire syllabus. Students will be required to attempt five questions, selecting one question from each unit. Question No.1 is compulsory which is from entire syllabus.

MT-AUD-04 **Value Education**

L	T	P
3	0	-

Total Credits: 3
External Marks: 80
Internal Marks: 20

Duration of Exam: 3 Hrs.

Course Objectives:

Students will be able to

1. Understand value of education and self- development.
2. Imbibe good values in students.
3. Let the should know about the importance of

UNIT-I

Module-1:

Values and self-development –Social values and individual attitudes, Work ethics, Indian vision of humanism, Moral and non- moral valuation, Standards and principles, Value Judgments

UNIT-II

Module-2:

Importance of cultivation of values, Sense of duty. Devotion, Self-reliance, Confidence, Concentration, Truthfulness, Cleanliness, Honesty, Humanity, Power of faith, National Unity, Patriotism, Love for nature, Discipline

UNIT-III

Module-3:

Personality and Behavior Development - Soul and Scientific attitude, Positive Thinking, Integrity and discipline, Punctuality, Love and Kindness, Avoid fault Thinking, Free from anger, Dignity of labour, Universal brotherhood and religious tolerance, True friendship, Happiness Vs suffering, love for truth, Aware of self-destructive habits, Association and Cooperation, Doing best for saving nature

UNIT-IV

Module-4:

Character and Competence –Holy books vs Blind faith, Self-management and Good health, Science of reincarnation, Equality, Nonviolence ,Humility, Role of Women, All religions and same message, Mind your Mind, Self-control, Honesty, Studying effectively

Course Outcomes:

After completion of course, students would be able to:

a. Knowledge of self-development

b. Learn the importance of Human values

c. Developing the overall personality.

References

1 Chakroborty, S.K. "Values and Ethics for organizations Theory and practice", Oxford University Press, New Delhi

Note: Nine questions will be set in all by the examiners taking two questions from each unit and one question containing short answer type questions from entire syllabus. Students will be required to attempt five questions, selecting one question from each unit. Question No.1 is compulsory which is from entire syllabus.

MT-AUD-05 **Constitution of India**

L	T	P
3	0	-

Total Credits: 3
External Marks: 80
Internal Marks: 20

Duration of Exam: 3 Hrs.

Course Objectives:

Students will be able to:

1. Understand the premises informing the twin themes of liberty and freedom from a civil rights
2. To address the growth of Indian opinion regarding modern Indian intellectuals' constitutional role and entitlement to civil and economic rights as well as the emergence of nationhood in the early years of Indian nationalism.
3. To address the role of socialism in India after the commencement of the Bolshevik Revolution in 1917 and its impact on the initial drafting of the Indian Constitution

UNIT-I

Module-1: History of Making of the Indian Constitution

History, Drafting Committee, (Composition& Working)

Module-2: Philosophy of the Indian Constitution:

Preamble, Salient Features

Module-3: Contours of Constitutional Rights & Duties

Fundamental Rights, Right to Equality, Right to Freedom, Right against Exploitation, Right to Freedom of Religion, Cultural and Educational Rights, Right to Constitutional Remedies, Directive Principles of State Policy, Fundamental Duties.

UNIT-II

Module-4: Organs of Governance

Parliament, Composition, Qualifications and Disqualifications, Powers and Functions, Executive, President, Governor, Council of Ministers, Judiciary, Appointment and Transfer of Judges, Qualifications, Powers and Functions

UNIT-III

Module-5: Local Administration

District's Administration head: Role and Importance, Municipalities: Introduction, Mayor and role of Elected Representative, CEO of Municipal Corporation, Pachayati raj: Introduction, PRI: ZilaPachayat, Elected officials and their roles, CEO ZilaPachayat: Position and role, Block level: Organizational Hierarchy (Different departments),Village level: Role of Elected and Appointed officials,Importance of grass root democracy

UNIT-IV

Module-6: Election Commission

Election Commission: Role and Functioning, Chief Election Commissioner and Election Commissioners, State Election Commission: Role and Functioning, Institute and Bodies for the welfare of SC/ST/OBC and women

Course Outcomes:

After completion of course, students would be able to:

a. Discuss the growth of the demand for civil rights in India for the bulk of Indians before the arrival of Gandhi in Indian politics.

b. Discuss the intellectual origins of the framework of argument that informed the conceptualization of social reforms leading to revolution in India.

c. Discuss the passage of the Hindu Code Bill of 1956

References

1. The Constitution of India, 1950 (Bare Act), Government Publication.

2. Dr. S. N. Busi, Dr. B. R. Ambedkar framing of Indian Constitution, 1st Edition, 2015.

3. M. P. Jain, Indian Constitution Law, 7th Edn., Lexis Nexis, 2014.

4. D.D. Basu, Introduction to the Constitution of India, Lexis Nexis, 2015.

Note: Nine questions will be set in all by the examiners taking two questions from each unit and one question containing short answer type questions from entire syllabus. Students will be required to attempt five questions, selecting one question from each unit. Question No.1 is compulsory which is from entire syllabus.

MT-AUD-06 Pedagogy Studies

L	T	P
3	0	-

Total Credits: 3
External Marks: 80
Internal Marks: 20

Duration of Exam: 3 Hrs.

Course Objectives:

1. Review existing evidence on the review topic to inform programme design and policy making undertaken by the DfID, other agencies and researchers.
2. Identify critical evidence gaps to guide the development.

UNIT-I

Module-1: Introduction and Methodology:

Aims and rationale, Policy background, Conceptual framework and terminology, Theories of learning, Curriculum, Teacher education, Conceptual framework, Research questions, Overview of methodology and Searching

Module-2:

Thematic overview: Pedagogical practices are being used by teachers informal and informal classrooms in developing countries, Curriculum, Teacher education

UNIT-II

Module-3:

Evidence on the effectiveness of pedagogical practices, Methodology for the in depth stage: quality assessment of included studies, How can teacher education (curriculum and practicum) and the school, curriculum and guidance materials best support effective pedagogy?, Theory of change, Strength and nature of the body of evidence for effective pedagogical, practices, Pedagogic theory and pedagogical approaches, Teachers' attitudes and beliefs and Pedagogic strategies

UNIT-III

Module-4:

Professional development: alignment with classroom practices and follow up support, Peer support, Support from the head teacher and the community, Curriculum and assessment, Barriers to learning: limited resources and large class sizes

UNIT-IV

Module-5: Research gaps and future directions

Research design, Contexts, Pedagogy, Teacher education, Curriculum and assessment, Dissemination and research impact

Course Outcomes:

After completion of course, students would be able to understand

a. What pedagogical practices are being used by teachers in formal and informal classrooms in developing countries?

b. What is the evidence on the effectiveness of these pedagogical practices, in what conditions, and with what population of learners?

c. How can teacher education (curriculum and practicum) and the school curriculum and guidance materials best support effective pedagogy?

References

1. Ackers J, Hardman F (2001) Classroom interaction in Kenyan primary schools, Compare, 31 (2): 245-261.

2. Agrawal M (2004) Curricular reform in schools: The importance of evaluation, Journal ofCurriculum Studies, 36 (3): 361-379.

3. Akyeampong K (2003) Teacher training in Ghana - does it count? Multi-site teacher educationresearch project (MUSTER) country report 1. London: DFID.

4. Akyeampong K, Lussier K, Pryor J, Westbrook J (2013) Improving teaching and learning of basicmaths and reading in Africa: Does teacher preparation count? International Journal EducationalDevelopment, 33 (3): 272–282.

5. Alexander RJ (2001) Culture and pedagogy: International comparisons in primary education.Oxford and Boston: Blackwell.

6. Chavan M (2003) Read India: A mass scale, rapid, 'learning to read' campaign.

7. www.pratham.org/images/resource%20working%20paper%202.pdf.

Note: Nine questions will be set in all by the examiners taking two questions from each unit and one question containing short answer type questions from entire syllabus. Students will be required to attempt five questions, selecting one question from each unit. Question No.1 is compulsory which is from entire syllabus.

MT-AUD-07 Stress Management by Yoga

L	T	P
3	0	-

Total Credits: 3
External Marks: 80
Internal Marks: 20

Duration of Exam: 3 Hrs.

Course Objectives:

1. To achieve overall health of body
2. To overcome stress.

UNIT-I

Module-1:

Definitions of Eight parts of yog.(Ashtanga)

UNIT-II

Module-2:

Yam and Niyam, Do`s and Don't's in life.
i) Ahinsa, satya, astheya, bramhacharya and aparigraha
ii) Shaucha, santosh, tapa, swadhyay, ishwarpranidhan

UNIT-III

Module-3:

Asan and Pranayam
i) Various yog poses and their benefits for mind & body

UNIT-IV

Module-4:

Asan and Pranayam
i) Regularization of breathing techniques and its effects-Types of pranayama

Course Outcomes:

After completion of course, students would be able to:

a. Develop healthy mind in a healthy body thus improving social health also.

b. Improve efficiency.

References

1. 'Yogic Asanas for Group Tarining-Part-I" :Janardan Swami Yogabhyasi Mandal, Nagpur

2. "Rajayoga or conquering the Internal Nature" by Swami Vivekananda, AdvaitaAshrama(Publication Department), Kolkata

Note: Nine questions will be set in all by the examiners taking two questions from each unit and one question containing short answer type questions from entire syllabus. Students will be required to attempt five questions, selecting one question from each unit. Question No.1 is compulsory which is from entire syllabus.

MT-AUD-08 **Personality Development through Life Enlightenment Skills**

L	T	P
3	0	-

Total Credits: 3
External Marks: 80
Internal Marks: 20

Duration of Exam: 3 Hrs.

Course Objectives:

1. To learn to achieve the highest goal happily
2. To become a person with stable mind, pleasing personality and determination.
3. To awaken wisdom in students

UNIT-I

Module-1:

Neetisatakam-Holistic development of personality

- Verses- 19,20,21,22 (wisdom)
- Verses- 29,31,32 (pride & heroism)
- Verses- 26,28,63,65 (virtue)
- Verses- 52,53,59 (dont's)
- Verses- 71,73,75,78 (do's

UNIT-II

Module-2:

- Approach to day to day work and duties.
- Shrimad BhagwadGeeta : Chapter 2-Verses 41, 47,48,
- Chapter 3-Verses 13, 21, 27, 35, Chapter 6-Verses 5,13,17,23, 35,
- Chapter 18-Verses 45, 46, 48.

UNIT-III

Module-3:

- Statements of basic knowledge.
- Shrimad BhagwadGeeta: Chapter2-Verses 56, 62, 68
- Chapter 12 -Verses 13, 14, 15, 16,17, 18

UNIT-IV

Module-4:

- Personality of Role model. Shrimad Bhagwad Geeta:Chapter2-Verses 17, Chapter 3-Verses 36,37,42,
- Chapter 4-Verses 18, 38,39
- Chapter18 – Verses 37,38,63

Course Outcomes:

After completion of course, students would be able to:

a. Study of Shrimad-Bhagwad-Geeta will help the student in developing his personality and achieve the highest goal in life.
b. The person who has studied Geeta will lead the nation and mankind to peace and prosperity
c. Study of Neetishatakam will help in developing versatile personality of students.

References

1. "Srimad Bhagavad Gita" by Swami SwarupanandaAdvaita Ashram (PublicationDepartment), Kolkata

2. Bhartrihari's Three Satakam (Niti-sringar-vairagya) by P.Gopinath,Rashtriya Sanskrit Sansthanam, New Delhi.

Note: Nine questions will be set in all by the examiners taking two questions from each unit and one question containing short answer type questions from entire syllabus. Students will be required to attempt five questions, selecting one question from each unit. Question No.1 is compulsory which is from entire syllabus.

SEMESTER- II

MT-CS-201 **Advance Algorithms**

L T P
3 0 -

Total Credits: 3
External Marks: 80
InternalMarks:20

Duration of Exam: 3 Hrs.

Pre-requisites: UG level course in Algorithm Design and Analysis

Course Objectives:

1. Introduce students to the advanced methods of designing and analyzing algorithms.
2. The student should be able to choose appropriate algorithms and use it for a specific problem.
3. To familiarize students with basic paradigms and data structures used to solve advanced algorithmic problems.
4. Students should be able to understand different classes of problems concerning their computation difficulties.
5. To introduce the students to recent developments in the area of algorithmic design.

UNIT - I

Module-1:

Sorting: Review of various sorting algorithms, topological sorting
Graph: Definitions and Elementary Algorithms: Shortest path by BFS, shortest path in edge-weighted case (Dijkasra's), depth-first search and computation of strongly connected components, emphasis on correctness proof of the algorithm and time/space analysis, example of amortized analysis.

UNIT - II

Module-2:

Matroids: Introduction to greedy paradigm, algorithm to compute a maximum weight maximal independent set, Application to MST.

Graph Matching: Algorithm to compute maximum matching. Characterization of maximum matching by augmenting paths, Edmond's Blossom algorithm to compute augmenting path

Module-3:

Flow-Networks: Maxflow-mincut theorem, Ford-Fulkerson Method to compute maximum flow, Edmond-Karp maximum-flow algorithm.
Matrix Computations: Strassen's algorithm and introduction to divide and conquer paradigm, inverse of a triangular matrix, relation between the time complexities of basic matrix operations, LUP-decomposition

UNIT - III

Module-4:

Shortest Path in Graphs: Floyd-Warshall algorithm and introduction to dynamic programming paradigm, more examples of dynamic programming
Modulo Representation of integers/polynomials: Chinese Remainder Theorem, Conversion between base-representation and modulo-representation, Extension to polynomials, Application: Interpolation problem.
Discrete Fourier Transform (DFT): In complex field, DFT in modulo ring. Fast Fourier Transform algorithm, Schonhage-Strassen Integer Multiplication algorithm

UNIT - IV

Module-5:

Linear Programming: Geometry of the feasibility region and Simplex algorithm
NP-completeness: Examples, proof of NP-hardness and NP-completeness.
One or more of the following topics based on time and interest
Approximation algorithms, Randomized Algorithms, Interior Point Method, Advanced Number Theoretic Algorithm
Module-6:

Recent Trends in problem solving paradigms using recent searching and sorting techniques by applying recently proposed data structures.

Course Outcomes:

a. Analyze the complexity/performance of different algorithms.
b. Determine the appropriate data structure for solving a particular set of problems.

c. Categorize the different problems in various classes according to their complexity.
d. Students should have an insight of recent activities in the field of the advanced data structure

References

1. "Introduction to Algorithms" by Cormen, Leiserson, Rivest, Stein.
2. "The Design and Analysis of Computer Algorithms" by Aho, Hopcroft, Ullman.
3. "Algorithm Design" by Kleinberg and Tardos.

Note: Nine questions will be set in all by the examiners taking two questions from each unit and one question containing short answer type questions from entire syllabus. Students will be required to attempt five questions, selecting one question from each unit. Question No.1 is compulsory which is from entire syllabus.

MT-CS-202 **Soft Computing**

L T P
3 0 -

Total Credits: 3
External Marks: 80
Internal Marks: 20

Duration of Exam: 3 Hrs.

Pre-requisites: Basic knowledge of mathematics

Course Objectives:

1. To introduce soft computing concepts and techniques and foster their abilities in designing appropriate technique for a given scenario
2. To implement soft computing based solutions for real-world problems
3. To give students knowledge of non-traditional technologies and fundamentals of artificial
4. neural networks, fuzzy sets, fuzzy logic, genetic algorithms
5. To provide student an hand-on experience on MATLAB to implement various strategies

UNIT - I

Module-1: Introduction to Soft Computing and Neural Networks
Evolution of Computing: Soft Computing Constituents, From Conventional AI to Computational Intelligence: Machine Learning Basics

Module-2: Fuzzy Logic
Fuzzy Sets, Operations on Fuzzy Sets, Fuzzy Relations, Membership Functions: Fuzzy Rules and Fuzzy Reasoning, Fuzzy Inference Systems, Fuzzy Expert Systems, Fuzzy Decision Making

UNIT - II

Module-3: Neural Networks
Machine Learning Using Neural Network, Adaptive Networks, Feed forward Networks, Supervised Learning Neural Networks, Radial Basis Function Networks: Reinforcement Learning, Unsupervised Learning Neural Networks, Adaptive Resonance architectures, Advances in Neural networks

UNIT - III

Module-4: Genetic Algorithms
Introduction to Genetic Algorithms (GA), Applications of GA in Machine Learning: Machine Learning Approach to Knowledge Acquisition

UNIT - IV

Module-5: Matlab/Python Lib

Introduction to Matlab/Python, Arrays and array operations, Functions and Files, Study of neural network toolbox and fuzzy logic toolbox, Simple implementation of Artificial Neural Network and Fuzzy Logic

Module-6:

Recent Trends in deep learning, various classifiers, neural networks and genetic algorithm, Implementation of recently proposed soft computing techniques

Course Outcomes:

a. Identify and describe soft computing techniques and their roles in building intelligent machines
b. Apply fuzzy logic and reasoning to handle uncertainty and solve various engineering problems.
c. Apply genetic algorithms to combinatorial optimization problems.
d. Evaluate and compare solutions by various soft computing approaches for a given problem.

References

1. Jyh:Shing Roger Jang, Chuen:Tsai Sun, EijiMizutani, Neuro:Fuzzy and Soft Computing, Prentice:Hall of India, 2003.
2. George J. Klir and Bo Yuan, Fuzzy Sets and Fuzzy Logic:Theory and Applications, Prentice Hall, 1995.
3. MATLAB Toolkit Manual

Note: Nine questions will be set in all by the examiners taking two questions from each unit and one question containing short answer type questions from entire syllabus. Students will be required to attempt five questions, selecting one question from each unit. Question No.1 is compulsory which is from entire syllabus.

MT-CS-206 **Data Preparation and Analysis (Elective III)**

L	T	P
3	0	-

Total Credits: 3
External Marks: 80
Internal Marks: 20

Duration of Exam: 3 Hrs.

Pre-Requisites: Basics of Data Collection and Analysis, statistics

Course Objective:
To prepare the data for analysis and develop meaningful Data Visualizations

UNIT-I

Data Gathering and Preparation:
Data formats, parsing and transformation, Scalability and real-time issues

UNIT-II

Data Cleaning:
Consistency checking, Heterogeneous and missing data, Data Transformation and segmentation

UNIT-III

Exploratory Analysis:
Descriptive and comparative statistics, Clustering and association, Hypothesis generation

UNIT-IV

Visualization:
Designing visualizations, Time series, Geolocated data, Correlations and connections, Hierarchies and networks, interactivity

Course Outcomes
After completion of course, students would be: Able to extract the data for performing the Analysis.

References:
1. Making sense of Data: A practical Guide to Exploratory Data Analysis and Data Mining, by Glenn J. Myatt

Note: Nine questions will be set in all by the examiners taking two questions from each unit and one question containing short answer type questions from entire syllabus. Students will be required to attempt five questions, selecting one question from each unit. Question No.1 is compulsory which is from entire syllabus.

MT-CS-207 **Secure Software Design and Enterprise computing (Elective III)**

L	T	P
3	0	-

Total Credits: 3
External Marks: 80
Internal Marks: 20

Duration of Exam: 3 Hrs.

Pre-Requisites Computer Programming, Software Engineering

Course Objective

- To fix software flaws and bugs in various software.
- To make students aware of various issues like weak random number generation, information leakage, poor usability, and weak or no encryption on data traffic
- Techniques for successfully implementing and supporting network services on an enterprise scale and heterogeneous systems environment.
- Methodologies and tools to design and develop secure software containing minimum vulnerabilities and flaws.

UNIT -I

Secure Software Design

Identify software vulnerabilities and perform software security analysis, Master security programming practices, Master fundamental software security design concepts, Perform security testing and quality assurance.

UNIT -II

Enterprise Application Development

Describe the nature and scope of enterprise software applications, Design distributed N-tier software application, Research technologies available for the presentation, business and data tiers of an enterprise software application, Design and build a database using an enterprise database system, Develop components at the different tiers in an enterprise system, Design and develop a multi-tier solution to a problem using technologies used in enterprise system, Present software solution.

UNIT -III

Enterprise Systems Administration

Design, implement and maintain a directory-based server infrastructure in a heterogeneous systems environment, Monitor server resource utilization for system reliability and availability, Install and administer network services (DNS/DHCP/Terminal Services/Clustering/Web/Email).

UNIT -IV

Obtain the ability to manage and troubleshoot a network running multiple services, understand the requirements of an enterprise network and how to go about managing them.

Handle insecure exceptions and command/SQL injection, Defend web and mobile applications against attackers, software containing minimum vulnerabilities and flaws.

Case study of DNS server, DHCP configuration and SQL injection attack

Course Outcomes

After completion of course, students would be able to:

- Differentiate between various software vulnerabilities.
- Software process vulnerabilities for an organization.
- Monitor resources consumption in a software.
- Interrelate security and software development process.

References:

1. Theodor Richardson, Charles N Thies, Secure Software Design, Jones & Bartlett

2. Kenneth R. van Wyk, Mark G. Graff, Dan S. Peters, Diana L. Burley, Enterprise Software Security,Addison Wesley.

Note: Nine questions will be set in all by the examiners taking two questions from each unit and one question containing short answer type questions from entire syllabus. Students will be required to attempt five questions, selecting one question from each unit. Question No.1 is compulsory which is from entire syllabus.

MT-CS-208 **Computer Vision (Elective III)**

L T P
3 0 -

Total Credits: 3
External Marks: 80
Internal Marks: 20

Duration of Exam: 3 Hrs.

Pre-Requisites: Linear algebra, vector calculus, Data structures and Programming.

Course Objective

- Be familiar with both the theoretical and practical aspects of computing with images.
- Have described the foundation of image formation, measurement, and analysis.
- Understand the geometric relationships between 2D images and the 3D world.
- Grasp the principles of state-of-the-art deep neural networks.

UNIT -I

Overview, computer imaging systems, lenses, Image formation and sensing, Image analysis, pre-processing and binary image analysis
Edge detection, Edge detection performance, Hough transform, corner detection

UNIT -II

Segmentation, Morphological filtering, Fourier transform
Feature extraction, shape, histogram, color, spectral, texture, using CVIPtools, Feature analysis, feature vectors, distance /similarity measures, data preprocessing

UNIT -III

Pattern Analysis:
Clustering: K-Means, K-Medoids, Mixture of Gaussians
Classification: Discriminant Function, Supervised, Un-supervised, Semi supervised
Classifiers: Bayes, KNN, ANN models; Dimensionality Reduction: PCA, LDA, ICA, and Non-parametric methods.

UNIT -IV

Recent trends in Activity Recognition, computational photography, Biometrics.

Course Outcomes

After completion of course, students would be able to:

- Developed the practical skills necessary to build computer vision applications.
- To have gained exposure to object and scene recognition and categorization from images.

References

1. Computer Vision: Algorithms and Applications by Richard Szeliski.
2. Deep Learning, by Goodfellow, Bengio, and Courville.
3. Dictionary of Computer Vision and Image Processing, by Fisher et al.

Note: Nine questions will be set in all by the examiners taking two questions from each unit and one question containing short answer type questions from entire syllabus. Students will be required to attempt five questions, selecting one question from each unit. Question No.1 is compulsory which is from entire syllabus.

MT-CS-209 **Human and Computer Interaction (Elective IV)**

L T P
3 0 -

Total Credits: 3
External Marks: 80
Internal Marks: 20

Duration of Exam: 3 Hrs.

Course Objective

- Learn the foundations of Human Computer Interaction
- Be familiar with the design technologies for individuals and persons with disabilities
- Be aware of mobile Human Computer interaction.
- Learn the guidelines for user interface.

UNIT -I

Human: I/O channels – Memory – Reasoning and problem solving; The computer: Devices – Memory – processing and networks; Interaction: Models – frameworks – Ergonomics – styles – elements – interactivity- Paradigms.

UNIT -II

Interactive Design basics – process – scenarios – navigation – screen design – Iteration and prototyping. HCI in software process – software life cycle – usability engineering – Prototyping in practice – design rationale. Design rules – principles, standards, guidelines, rules. Evaluation Techniques – Universal Design

UNIT -III

Cognitive models –Socio-Organizational issues and stake holder requirements – Communication and collaboration models-Hypertext, Multimedia and WWW.

Mobile Ecosystem: Platforms, Application frameworks- Types of Mobile Applications: Widgets, Applications, Games- Mobile Information Architecture, Mobile 2.0, Mobile Design: Elements of Mobile Design, Tools.

UNIT -IV

Designing Web Interfaces – Drag & Drop, Direct Selection, Contextual Tools, Overlays, Inlays and Virtual Pages, Process Flow. Case Studies
Recent Trends: Speech Recognition and Translation, Multimodal System

Course Outcomes

After completion of course, students would be:

- Understand the structure of models and theries of human computer interaction and vision.

- Design an interactive web interface on the basis of models studied.

References

1. Alan Dix, Janet Finlay, Gregory Abowd, Russell Beale, "Human Computer Interaction", 3rd Edition, Pearson Education, 2004 (UNIT I , II & III)

2. Brian Fling, "Mobile Design and Development", First Edition , O□Reilly Media Inc., 2009 (UNIT – IV)

3. Bill Scott and Theresa Neil, "Designing Web Interfaces", First Edition, O□Reilly, 2009. (UNIT-V)

Note: Nine questions will be set in all by the examiners taking two questions from each unit and one question containing short answer type questions from entire syllabus. Students will be required to attempt five questions, selecting one question from each unit. Question No.1 is compulsory which is from entire syllabus.

MT-CS-210

GPU Computing (Elective IV)

L T P
3 0 -

Total Credits: 3
External Marks: 80
Internal Marks: 20

Duration of Exam: 3 Hrs.

Pre-Requisites: Computer Architecture and Organization

Course Objective

- To learn parallel programming with Graphics Processing Units (GPUs).

UNIT -I

Introduction: History, Graphics Processors, Graphics Processing Units, GPGPUs. Clock speeds, CPU / GPU comparisons, Heterogeneity, Accelerators, Parallel programming, CUDA OpenCL / OpenACC, Hello World Computation Kernels, Launch parameters, Thread hierarchy, Warps / Wavefronts, Thread blocks / Workgroups, Streaming multiprocessors, 1D / 2D / 3D thread mapping, Device properties, Simple Programs

UNIT -II

Memory: Memory hierarchy, DRAM / global, local / shared, private / local, textures, Constant Memory, Pointers, Parameter Passing, Arrays and dynamic Memory, Multi-dimensional Arrays, Memory Allocation, Memory copying across devices, Programs with matrices, Performance evaluation with different memories

UNIT -III

Synchronization: Memory Consistency, Barriers (local versus global), Atomics, Memory fence. Prefix sum, Reduction. Programs for concurrent Data Structures such as Worklists, Linked-lists Synchronization across CPU and GPU

Functions: Device functions, Host functions, Kernels functions, using libraries (such as Thrust), and developing libraries.

Support: Debugging GPU Programs. Profiling, Profile tools, Performance aspects

UNIT -IV

Streams: Asynchronous processing, tasks, Task-dependence, Overlapped data transfers, Default Stream, Synchronization with streams. Events, Event-based-Synchronization - Overlapping data transfer and kernel execution, pitfalls

Case Studies: Image Processing, Graph algorithms, Simulations, Deep Learning

Advanced topics: Dynamic parallelism, Unified Virtual Memory, Multi-GPU processing, Peer access, Heterogeneous processing

Course Outcomes

After completion of course, students would be:

- Students would learn concepts in parallel programming, implementation of programs on GPUs, debugging and profiling parallel programs.

References

1. Programming Massively Parallel Processors: A Hands-on Approach; David Kirk, Wen-mei Hwu; Morgan Kaufman; 2010 (ISBN: 978-0123814722)

2. CUDA Programming: A Developer's Guide to Parallel Computing with GPUs; Shane Cook; Morgan Kaufman; 2012 (ISBN: 978-0124159334)

Note: Nine questions will be set in all by the examiners taking two questions from each unit and one question containing short answer type questions from entire syllabus. Students will be required to attempt five questions, selecting one question from each unit. Question No.1 is compulsory which is from entire syllabus.

MT-CS-211 **Digital forensics (Elective IV)**

L T P
3 0 -

Total Credits: 3
External Marks: 80
Internal Marks: 20

Duration of Exam: 3 Hrs.

Pre-Requisites Cybercrime and Information Warfare, Computer Networks

Course Objective

- Provides an in-depth study of the rapidly changing and fascinating field of computer forensics.
- Combines both the technical expertise and the knowledge required to investigate, detect and prevent digital crimes.
- Knowledge on digital forensics legislations, digital crime, forensics processes and procedures, data acquisition and validation, e-discovery tools
- E-evidence collection and preservation, investigating operating systems and file systems, network forensics, art of steganography and mobile device forensics

UNIT -I

Digital Forensics Science: Forensics science, computer forensics, and digital forensics.
Computer Crime: Criminalistics as it relates to the investigative process, analysis of cyber-criminalistics area, holistic approach to cyber-forensics
Cyber Crime Scene Analysis: Discuss the various court orders etc., methods to search and seizure electronic evidence, retrieved and un-retrieved communications, Discuss the importance of understanding what court documents would be required for a criminal investigation.

UNIT -II

Evidence Management & Presentation: Create and manage shared folders using operating system, importance of the forensic mindset, define the workload of law enforcement, Explain what the normal case would look like, Define who should be notified of a crime, parts of gathering evidence, Define and apply probable cause.

UNIT -III

Computer Forensics: Prepare a case, Begin an investigation, Understand computer forensics workstations and software, Conduct an investigation, Complete a case, Critique a case,
Network Forensics: open-source security tools for network forensic analysis, requirements for preservation of network data.

UNIT -IV

Mobile Forensics: mobile forensics techniques, mobile forensics tools.
Legal Aspects of Digital Forensics: IT Act 2000, amendment of IT Act 2008.
Recent trends in mobile forensic technique and methods to search and seizure electronic evidence

Course Outcomes

After completion of course, students would be able to:

- Understand relevant legislation and codes of ethics
- Computer forensics and digital detective and various processes, policies and procedures
- E-discovery, guidelines and standards, E-evidence, tools and environment.
- Email and web forensics and network forensics

References

1. John Sammons, The Basics of Digital Forensics, Elsevier
2. John Vacca, Computer Forensics: Computer Crime Scene Investigation, Laxmi Publications

Note: Nine questions will be set in all by the examiners taking two questions from each unit and one question containing short answer type questions from entire syllabus. Students will be required to attempt five questions, selecting one question from each unit. Question No.1 is compulsory which is from entire syllabus.

MT-CS-203 **Mini Project with Seminar**

L	T	P
2	-	-

Total Credits: 2
Internal Marks: 100

Students may choose a project based on any subject of Computer Science & Engineering /Network Security. The student will submit a synopsis at the beginning of the semester for approval from the departmental committee in a specified format. The student will have to present the progress of the work through seminars. An assigned teacher will evaluate the performance of the students & marks will be awarded accordingly.

MT-CS-204 Laboratory 3 (Based on Cores)

L T P
- - 4

Total Credits: 2
External Marks: 40
Internal Marks: 10

At least 20 exercises related to the core subjects (i.e.10 exercises from each subject) should be given by the teacher concerned.

MT-CS-205 Laboratory 4 (Based on Electives)

L	T	P
-	-	4

Total Credits: 2
External Marks: 40
Internal Marks: 10

At least 20 exercises related to the elective subjects (i.e.10 exercises from each subject) should be given by the teacher concerned.

SEMESTER- III

MT-CS-302 **Mobile Applications and Services (Elective V)**

L	T	P
3	0	-

Total Credits: 3
External Marks: 80
InternalMarks:20

Duration of Exam: 3 Hrs.

Pre-requisites: Wireless Communication and Mobile Computing

Course Objective

- This course presents the three main mobile platforms and their ecosystems, namely Android, iOS, and PhoneGap/WebOS.
- It explores emerging technologies and tools used to design and implement feature-rich mobile applications for smartphones and tablets
- It also take into account both the technical constraints relative to storage capacity, processing capacity, display screen, communication interfaces, and the user interface, context and profile

UNIT -I

Introduction: Introduction to Mobile Computing, Introduction to Android Development Environment, Factors in Developing Mobile Applications, Mobile Software Engineering, Frameworks and Tools, Generic UI Development Android User

More on Uis: VUIs and Mobile Apps, Text-to-Speech Techniques, Designing the Right UI, Multichannel and Multimodal Uis, . Storing and Retrieving Data, Synchronization and Replication of Mobile Data, Getting the Model Right, Android Storing and Retrieving Data, Working with a Content Provider

UNIT -II

Communications via Network and the Web: State Machine, Correct Communications Model, Android Networking and Web, Telephony Deciding Scope of an App, Wireless Connectivity and Mobile Apps, Android Telephony Notifications and Alarms: Performance, Performance and Memory Management, Android Notifications and Alarms, Graphics, Performance and Multithreading, Graphics and UI Performance, Android Graphics

UNIT -III

Putting It All Together: Packaging and Deploying, Performance Best Practices, Android Field Service App, Location Mobility and Location Based Services Android Multimedia: Mobile Agents and Peer-to-Peer Architecture, Android Multimedia

UNIT -IV

Platforms and Additional Issues: Development Process, Architecture, Design, Technology Selection, Mobile App Development Hurdles, Testing, Security and Hacking, Active Transactions, More on Security, Hacking Android

Recent trends in Communication protocols for IOT nodes, mobile computing techniques in IOT, agents based communications in IOT

Course Outcomes

- On completion of the course the student should be able to identify the target platform and users and be able to define and sketch a mobile application
- understand the fundamentals, frameworks, and development lifecycle of mobile application platforms including iOS, Android, and PhoneGap
- Design and develop a mobile application prototype in one of the platform (challenge project)

References

1. Wei-Meng Lee, Beginning Android™ 4 Application Development, 2012 by John Wiley & Sons

Note: Nine questions will be set in all by the examiners taking two questions from each unit and one question containing short answer type questions from entire syllabus. Students will be required to attempt five questions, selecting one question from each unit. Question No.1 is compulsory which is from entire syllabus.

MT-CS-303 **Compiler for HPC (Elective V)**

L T P
3 0 -

Total Credits: 3
External Marks: 80
InternalMarks:20

Duration of Exam: 3 Hrs.

Pre-Requisites Data Structure, Compiler Design, Theory of Computation

Course Objective

- The objective of this course is to introduce structure of compilers and high performance compiler design for students. Concepts of cache coherence and parallel loops in compilers are included.

UNIT-I

High Performance Systems, Structure of a Compiler, Programming Language Features, Languages for High Performance

Data Dependence: Data Dependence in Loops, Data Dependence in Conditionals, Data Dependence in Parallel Loops, Program Dependence Graph.

Scalar Analysis with Factored Use-Def Chains: Constructing Factored Use-Def Chains, FUD Chains for Arrays, Induction Variables Using FUD Chains, Constant Propagation with FUD Chains, Data Dependence for Scalars. Data Dependence Analysis for Arrays

UNIT-II

Array Region Analysis, Pointer Analysis, I/O Dependence, Procedure Calls, Inter-procedural Analysis

Loop Restructuring: Simple Transformations, Loop Fusion, Loop Fission, Loop Reversal, Loop Interchanging, Loop Skewing, Linear Loop Transformations, Strip-Mining, Loop Tiling, Other Loop Transformations, and Inter-procedural Transformations.

Optimizing for Locality: Single Reference to Each Array, Multiple References, General Tiling, Fission and Fusion for Locality

UNIT-III

Concurrency Analysis: Concurrency from Sequential Loops, Concurrency from Parallel Loops, Nested Loops, Round off Error, Exceptions and Debuggers.

Vector Analysis: Vector Code, Vector Code from Sequential Loops, Vector Code from For all Loops, Nested Loops, Round off Error, Exceptions, and Debuggers, Multi-vector Computers.

UNIT-IV

Message-Passing Machines: SIMD Machines, MIMD Machines, Data Layout, Parallel Code for Array Assignment, Remote Data Access, Automatic Data Layout, Multiple Array Assignments, Other Topics.

Scalable Shared-Memory Machines: Global Cache Coherence, Local Cache Coherence, Latency Tolerant Machines.

Recent trends in compiler design for high performance computing and message passing machines and scalable shared memory machine.

Course Outcomes

After completion of course, students would be:

- Familiar with the structure of compiler.
- Parallel loops, data dependency and exception handling and debugging in compiler.

References

1. Michael Wolfe, High-Performance Compilers for Parallel Computing, Pearson

Note: Nine questions will be set in all by the examiners taking two questions from each unit and one question containing short answer type questions from entire syllabus. Students will be required to attempt five questions, selecting one question from each unit. Question No.1 is compulsory which is from entire syllabus.

MT-CS-304 **Optimization Techniques (Elective V)**

L T P
3 0 -

Total Credits: 3
External Marks: 80
InternalMarks:20

Duration of Exam: 3 Hrs.

Pre-Requisites Linear Algebra and Numerical Methods

Course Objective

- The objective of this course is to provide insight to the mathematical formulation of real world problems.
- To optimize these mathematical problems using nature based algorithms. And the solution is useful especially for NP-Hard problems.

UNIT -I

Engineering application of Optimization, Formulation of design problems as mathematical programming problems
General Structure of Optimization Algorithms, Constraints, The Feasible Region.

UNIT -II

Branches of Mathematical Programming: Optimization using calculus, Graphical Optimization, Linear Programming, Quadratic Programming, Integer Programming, Semi Definite Programming.

UNIT-III

Optimization Algorithms like Genetic Optimization, Particle Swarm Optimization, Ant Colony Optimization etc.

UNIT -IV

Real life Problems and their mathematical formulation as standard programming problems
Recent trends: Applications of ant colony optimization, genetics and linear and quadratic programming in real world applications.

Course Outcomes

After completion of course, students would be:

- Formulate optimization problems.
- Understand and apply the concept of optimality criteria for various types of optimization problems.
- Solve various constrained and unconstrained problems in Single variable as well as multivariable.

- Apply the methods of optimization in real life situation.

References

1. Laurence A. Wolsey (1998). Integer programming, Wiley, ISBN 978-0-471-28366-9
2. Practical Optimization Algorithms and Engineering Applications Andreas Antoniou.
3. An Introduction to Optimization Edwin K., P. Chong & Stanislaw h. Zak.
4. Dimitris Bertsimas; Robert Weismantel (2005), Optimization over integers, Dynamic Ideas, ISBN 978-0-9759146-2-5
5. John K. Karlof (2006). Integer programming: theory and practice.CRC Press. ISBN 978-0-8493- 1914-3
6. H. Paul Williams (2009). Logic and Integer Programming Springer. ISBN 978-0-387-92279-9
7. Michael Jünger; Thomas M. Liebling; Denis Naddef; George Nemhauser; William R. Pulleyblank; Gerhard Reinelt; Giovanni Rinaldi; Laurence A. Wolsey, eds. (2009). 50 Years of Integer Programming 1958-2008: From the Early Years to the State-of-the- Art. Springer. ISBN 978-3- 540-68274-5
8. Der-San Chen; Robert G. Batson; Yu Dang (2010). Applied Integer Programming: Modeling and Solution, John Wiley and Sons. ISBN 978-0-470-37306-4

Note: Nine questions will be set in all by the examiners taking two questions from each unit and one question containing short answer type questions from entire syllabus. Students will be required to attempt five questions, selecting one question from each unit. Question No.1 is compulsory which is from entire syllabus.

MT-CS-305 Business Analytics (Open Elective)

L	T	P
3	0	-

Total Credits: 3

External Marks: 80
Internal Marks: 20

Duration of Exam: 3 Hrs.

Course Objectives:

1. Understand the role of business analytics within an organization.
2. Analyze data using statistical and data mining techniques and understand relationships between the underlying business processes of an organization.
3. To gain an understanding of how managers use business analytics to formulate and solve business problems and to support managerial decision making.
4. To become familiar with processes needed to develop, report, and analyze business data.
5. Use decision-making tools/Operations research techniques.
6. Mange business process using analytical and management tools.
7. Analyze and solve problems from different industries such as manufacturing, service, retail, software, banking and finance, sports, pharmaceutical, aerospace etc.

UNIT-I

Module-1:

Business analytics: Overview of Business analytics, Scope of Business analytics, Business Analytics Process, Relationship of Business Analytics Process and organisation, competitive advantages of Business Analytics.
Statistical Tools: Statistical Notation, Descriptive Statistical methods, Review of probability distribution and data modelling, sampling and estimation methods overview.

Module-2:

Trendiness and Regression Analysis: Modelling Relationships and Trends in Data, simple Linear Regression.
Important Resources, Business Analytics Personnel, Data and models for Business analytics, problem solving, Visualizing and Exploring Data, Business Analytics Technology

UNIT-II

Module-3:

Organization Structures of Business analytics, Team management, Management Issues, Designing Information Policy, Outsourcing, Ensuring Data Quality, Measuring contribution of Business analytics, Managing Changes.

Descriptive Analytics, predictive analytics, predicative Modelling, Predictive analytics analysis, Data Mining, Data Mining Methodologies, Prescriptive analytics and its step in the business analytics Process, Prescriptive Modelling, nonlinear Optimization.

UNIT-III

Module-4:

Forecasting Techniques: Qualitative and Judgmental Forecasting, Statistical Forecasting Models, Forecasting Models for Stationary Time Series, Forecasting Models for Time Series with a Linear Trend, Forecasting Time Series with Seasonality, Regression Forecasting with Casual Variables, Selecting Appropriate Forecasting Models.

Monte Carlo Simulation and Risk Analysis: Monte Carle Simulation Using Analytic Solver Platform, New-Product Development Model, Newsvendor Model, Overbooking Model, Cash Budget Model.

UNIT-IV

Module-5:

Decision Analysis: Formulating Decision Problems, Decision Strategies with the without Outcome Probabilities, Decision Trees, The Value ofInformation, Utility and Decision Making.

Module-6:

Recent Trends in: Embedded and collaborative business intelligence, Visual data recovery, Data Storytelling and Data journalism.

Course Outcomes:

After completion of course, students would be able to:

a. Students will demonstrate knowledge of data analytics.
b. Students will demonstrate the ability of think critically in making decisions based on data and deep analytics.
c. Students will demonstrate the ability to use technical skills in predicative and prescriptive modeling to support business decision-making.
d. Students will demonstrate the ability to translate data into clear, actionable insights.

References

1. Business analytics Principles, Concepts, and Applications by Marc J. Schniederjans, Dara G. Schniederjans, Christopher M. Starkey, Pearson FT Press.
2. Business Analytics by James Evans, persons Education.

Note: Nine questions will be set in all by the examiners taking two questions from each unit and one question containing short answer type questions from entire syllabus. Students will be required to attempt five questions, selecting one question from each unit. Question No.1 is compulsory which is from entire syllabus.

MT-CS-306 Industrial Safety (Open Elective)

L	T	P
3	0	-

Total Credits: 3

External Marks: 80
Internal Marks: 20

Duration of Exam: 3 Hrs.

UNIT-I

Module-1:

Industrial safety: Accident, causes, types, results and control, mechanical and electrical hazards, types, causes and preventive steps/procedure, describe salient points of factories act 1948for health and safety, wash rooms, drinking water layouts, light, cleanliness, fire, guarding, pressure vessels, etc, Safety color codes. Fire prevention and firefighting, equipment and methods

Module-2:

Fundamentals of maintenance engineering: Definition and aim of maintenance engineering, Primary and secondary functions and responsibility of maintenance department, Types of maintenance, Types and applications of tools used for maintenance, Maintenance cost & its relation with replacement economy, Service life of equipment.

UNIT-II

Module-3:

Wear and Corrosion and their prevention: Wear- types, causes, effects, wear reduction methods, lubricants-types and applications, Lubrication methods, general sketch, working and applications, i. Screw down grease cup, ii. Pressure grease gun, iii. Splash lubrication, iv. Gravity lubrication, v. Wick feed lubrication vi. Side feed lubrication, vii. Ring lubrication, Definition, principle and factors affecting the corrosion. Types of corrosion, corrosion prevention methods

UNIT-III

Module-4:

Fault tracing: Fault tracing-concept and importance, decision tree concept, need and applications, sequence of fault finding activities, show as decision tree, draw decision tree for problems in machine tools, hydraulic, pneumatic, automotive, thermal and electrical equipment's like, I. Any one machine tool, ii. Pump iii. Air compressor, iv. Internal combustion engine, v. Boiler,vi. Electrical motors, Types of faults in machine tools and their general causes.

UNIT-IV

Module-5:

Periodic and preventive maintenance: Periodic inspection-concept and need, degreasing, cleaning and repairing schemes, overhauling of mechanical components, overhauling of electrical motor, common troubles and remedies of electric motor, repair complexities and its use, definition, need, steps and advantages of preventive maintenance. Steps/procedure for periodic and preventive maintenance of: I. Machine tools, ii. Pumps, iii. Air compressors, iv. Diesel generating (DG) sets, Program and schedule of preventive maintenance of mechanical and electrical equipment, advantages of preventive maintenance. Repair cycle concept and importance.

References

1. Maintenance Engineering Handbook, Higgins & Morrow, Da Information Services.
2. Maintenance Engineering, H. P. Garg, S. Chand and Company.
3. Pump-hydraulic Compressors, Audels, Mcgrew Hill Publication
4. Foundation Engineering Handbook, Winterkorn, Hans, Chapman & Hall London.

Note: Nine questions will be set in all by the examiners taking two questions from each unit and one question containing short answer type questions from entire syllabus. Students will be required to attempt five questions, selecting one question from each unit. Question No.1 is compulsory which is from entire syllabus.

MT-CS-307 Operations Research (Open Elective)

L T P

3 0 -

Total Credits: 3

External Marks: 80
Internal Marks: 20

Duration of Exam: 3 Hrs.

UNIT-I

Module-1:

Optimization Techniques, Model Formulation, models, General L.R Formulation, Simplex Techniques, Sensitivity Analysis, Inventory Control Models

UNIT-II

Module-2:

Formulation of a LPP - Graphical solution revised simplex method - duality theory - dual simplex method - sensitivity analysis - parametric programming.

UNIT-III

Module-3:

Nonlinear programming problem - Kuhn-Tucker conditions min cost flow problem - max flow problem - CPM/PERT

Module-4:

Scheduling and sequencing - single server and multiple server models - deterministic inventory models - Probabilistic inventory control models - Geometric Programming.

UNIT-IV

Module-5:

Competitive Models,Single and Multi-channel Problems, Sequencing Models, Dynamic Programming, Flow in Networks, Elementary Graph Theory, Game Theory Simulation

Course Outcomes:

After completion of course, students would be able to:

a. Students should able to apply the dynamic programming to solve problems of discreet and continuous variables.
b. Students should able to apply the concept of non-linear programming.
c. Students should able to carry out sensitivity analysis.
d. Student should able to model the real world problem and simulate it.

References

1. H.A. Taha, Operations Research, An Introduction, PHI, 2008
2. H.M. Wagner, Principles of Operations Research, PHI, Delhi, 1982.
3. J.C. Pant, Introduction to Optimisation: Operations Research, Jain Brothers, Delhi, 2008
4. Hitler Libermann Operations Research: McGraw Hill Pub. 2009
5. Pannerselvam, Operations Research: Prentice Hall of India 2010
6. Harvey M Wagner, Principles of Operations Research: Prentice Hall of India 2010

Note: Nine questions will be set in all by the examiners taking two questions from each unit and one question containing short answer type questions from entire syllabus. Students will be required to attempt five questions, selecting one question from each unit. Question No.1 is compulsory which is from entire syllabus.

MT-CS-308 Cost Management of Engineering Projects (Open Elective)

L T P

3 0 -

Total Credits: 3

External Marks: 80
Internal Marks: 20

Duration of Exam: 3 Hrs.

UNIT-I

Module-1:

Introduction and Overview of the Strategic Cost Management Process

Module-2:

Cost concepts in decision-making; Relevant cost, Differential cost, Incremental cost and Opportunity cost. Objectives of a Costing System; Inventory valuation; Creation of a Database for operational control; Provision of data for Decision-Making

UNIT-II

Module-3:

Project: meaning, Different types, why to manage, cost overruns centres, various stages of project execution: conception to commissioning. Project execution as conglomeration of technical and nontechnical activities, Detailed Engineering activities, Pre project execution main clearances and documents Project team: Role of each member. Importance Project site: Data required with significance. Project contracts, Types and contents, Project execution Project cost control. Bar charts and Network diagram. Project commissioning: mechanical and process.

UNIT-III

Module-4:

Cost Behavior and Profit Planning Marginal Costing; Distinction between Marginal Costing and Absorption Costing; Break-even Analysis, Cost-Volume-Profit Analysis, Various decision-making problems, Standard Costing and Variance Analysis. Pricing strategies: Pareto Analysis. Target costing, Life Cycle Costing. Costing of service sector, Just-in-time approach, Material Requirement Planning, Enterprise Resource Planning, Total Quality Management and Theory of constraints, Activity-Based Cost Management, Bench Marking; Balanced Score Card and Value-Chain Analysis., Budgetary Control; Flexible Budgets; Performance budgets; Zero-based budgets., Measurement of Divisional profitability pricing decisions including transfer pricing.

UNIT-IV

Module-5:

Quantitative techniques for cost management, Linear Programming, PERT/CPM, Transportation problems, Assignment problems, Simulation, Learning Curve Theory.

References

1. Cost Accounting A Managerial Emphasis, Prentice Hall of India, New Delhi
2. Charles T. Horngren and George Foster, Advanced Management Accounting
3. Robert S Kaplan Anthony A. Alkinson, Management & Cost Accounting
4. Ashish K. Bhattacharya, Principles & Practices of Cost Accounting A. H. Wheeler publisher
5. N.D. Vohra, Quantitative Techniques in Management, Tata McGraw Hill Book Co. Ltd.

Note: Nine questions will be set in all by the examiners taking two questions from each unit and one question containing short answer type questions from entire syllabus. Students will be required to attempt five questions, selecting one question from each unit. Question No.1 is compulsory which is from entire syllabus.

MT-CS-309 Composite Materials (Open Elective)

L	T	P	Total Credits: 3
3	0	-	External Marks: 80 Internal Marks: 20

Duration of Exam: 3 Hrs.

UNIT-I

Module-1: Introduction

Definition – Classification and characteristics of Composite materials, Advantages and application of composites. Functional requirements of reinforcement and matrix, Effect of reinforcement (size, shape, distribution, volume fraction) on overall composite performance.

Module-2: Reinforcements

Preparation-layup, curing, properties and applications of glass fibers, carbon fibers, Kevlar fibers and Boron fibers.Properties and applications of whiskers, particle reinforcements. Mechanical Behavior of composites: Rule of mixtures, Inverse rule of mixtures. Isostrain and Isostress conditions

UNIT-II

Module-3: Manufacturing Of Metal Matrix Composites

Casting – Solid State diffusion technique, Cladding – Hot isostatic pressing, Properties and applications. Manufacturing of Ceramic Matrix Composites: Liquid Metal Infiltration – Liquid phase sintering. Manufacturing of Carbon – Carbon composites: Knitting, Braiding, Weaving. Properties and applications

UNIT-III

Module-4: Manufacturing Of Polymer Matrix Composites

Preparation of Moulding compounds and prepregs – hand layup method – Autoclave method – Filament winding method – Compression moulding – Reaction injection moulding. Properties and applications

UNIT-IV

Module-5: Strength

Laminar Failure Criteria-strength ratio, maximum stress criteria, maximum strain criteria, interacting failure criteria, hygrothermal failure. Laminate first play failure-insight strength; Laminate strength-ply discount truncated maximum strain criterion; strength design using caplet plots; stress concentrations.

Text Books:

1. Material Science and Technology – Vol 13 – Composites by R.W.Cahn – VCH, West Germany.
2. Materials Science and Engineering, An introduction. WD Callister, Jr., Adapted by R.Balasubramaniam, John Wiley & Sons, NY, Indian edition, 2007.

References

1. Hand Book of Composite Materials-ed-Lubin.
2. Composite Materials – K.K.Chawla.
3. Composite Materials Science and Applications – Deborah D.L. Chung.
4. Composite Materials Design and Applications – Danial Gay, Suong V. Hoa, and Stephen W.Tasi.

Note: Nine questions will be set in all by the examiners taking two questions from each unit and one question containing short answer type questions from entire syllabus. Students will be required to attempt five questions, selecting one question from each unit. Question No.1 is compulsory which is from entire syllabus.

MT-CS-310 Waste to Energy (Open Elective)

L T P

3 0 -

Total Credits: 3

External Marks: 80
Internal Marks: 20

Duration of Exam: 3 Hrs.

UNIT-I

Module-1: Introduction To Energy From Waste

Waste: Classification of waste as fuel – Agro based, Forest residue,Industrial waste - MSW – Conversion devices – Incinerators, gasifiers, digestors.

Module-2: Biomass Pyrolysis

Pyrolysis – Types, slow fast – Manufacture of charcoal – Methods – Yieldsand application – Manufacture of pyrolytic oils and gases, yields and applications

UNIT-II

Module-3: Biomass Gasification

Gasifiers – Fixed bed system – Downdraft and updraft gasifiers –Fluidized bed gasifiers – Design, construction and operation – Gasifier burner arrangement for thermalheating – Gasifier engine arrangement and electrical power – Equilibrium and kinetic consideration ingasifier operation.

UNIT-III

Module-4: Biomass Combustion

Biomass stoves – Improved chullahs, types, some exotic designs, Fixedbed combustors, Types, inclined grate combustors, Fluidized bed combustors, Design, construction andoperation - Operation of all the above biomass combustors.

UNIT-IV

Module-5: Biogas

Biogas: Properties of biogas (Calorific value and composition) - Biogas plant technology andstatus - Bio energy system - Design and constructional features - Biomass resources and theirclassification - Biomass conversion processes - Thermo chemical conversion – Directcombustion -biomass gasification - pyrolysis and liquefaction - biochemical conversion - anaerobic digestion – Typesof biogas Plants – Applications - Alcohol production from biomass - Bio diesel production - Urban wasteto energy conversion - Biomass energy programme in India

References

1. Non Conventional Energy, Desai, Ashok V., Wiley Eastern Ltd., 1990.

2. Biogas Technology - A Practical Hand Book - Khandelwal, K. C. and Mahdi, S. S., Vol. I & II, TataMcGraw Hill Publishing Co. Ltd., 1983.

3. Food, Feed and Fuel from Biomass, Challal, D. S., IBH Publishing Co. Pvt. Ltd., 1991.

4. Biomass Conversion and Technology, C. Y. WereKo-Brobby and E. B. Hagan, John Wiley & Sons,1996.

Note: Nine questions will be set in all by the examiners taking two questions from each unit and one question containing short answer type questions from entire syllabus. Students will be required to attempt five questions, selecting one question from each unit. Question No.1 is compulsory which is from entire syllabus.

MT-CS-301 **Dissertation-I /Industrial Project**

L T P
0 0 16

Total Credits: 8
External Marks: 130
Internal Marks: 20

Dissertation phase-I mainly focus on the problem defining and literature survey specific to the problem. The student will submit a synopsis at the beginning of the semester for the approval from the project committee in a specified format that clearly define the problem.

MT-CS-311 Industrial Training

L	T	C
0	0	2

Total Credits: 2
External Marks: 50

Practical training conducted after second semester will be evaluated in the third semester based on Viva-Voce.

SEMESTER-IV

Dissertation Phase-II

Code No: MT-CS-401			Total Credits: 16
L	T	P	External Marks: 400
-	-	32	Internal Marks: 100

The student will submit a synopsis at the beginning of the semester for the approval from the project committee in a specified format. Synopsis must be submitted within a two weeks. The first defence, for the dissertation work, should be held with in a one month. Dissertation Report must be submitted in a specified format to the project committee for evaluation purpose.

Annexure -27

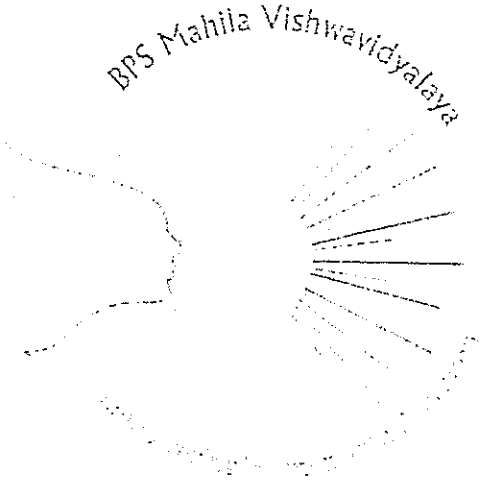
Scheme & Syllabus

For

Master of Technology

In

Computer Science and Engineering (Network Security)



Department of Computer Science & Engineering
and Information Technology
BPS Mahila Vishwavidyalaya Khanpur Kalan, Sonepat
(India)
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Department of Computer Science & Engineering
and
Information Technology
Course Curriculum & Scheme of Examinations of
Master of Technology
Computer Science and Engineering (Network Security)
(w.e.f Session 2018-2019)

First Semester

S. No	Code	Course Title	Hrs/Week L	T	P	Total Credit	Marks Internal Marks	External Marks	Total Marks
Theory									
1	MT-CS-101	Program Core I-Mathematical foundations of Computer Science	3	0	0	3	20	80	100
2	MT-CS-102	Program Core II-Advanced Data Structures	3	0	0	3	20	80	100
3		Program Elective I	3	0	0	3	20	80	100
4		Program Elective II	3	0	0	3	20	80	100
5	MT-CS-103	Research Methodology and IPR	2	0	0	2	20	80	100
6		Audit Course-I	2	0	0	0	20	80	100
Lab									
7	MT-CS-104	Laboratory 1 (Advanced Data Structures)	0	0	4	2	10	40	50
8	MT-CS-105	Laboratory 2 (Based on Electives)	0	0	4	2	10	40	50
		Total	14	00	08	18	120	480	600

Program Elective I
1. MT-CS-211 Digital Forensics
2. MT-NS-101 Ethical Hacking
3. MT-NS-102 Intrusion Detection

Program Elective II
1. MT-NS-103 Malware Analysis & Reverse Engineering
2. MT-CS-207 Secure Software Design and Enterprise Computing
3. MT-CS-106 Machine Learning

Note: Minimum passing marks for any subject (paper) shall be 40% in the external examination and 40% in the aggregate of internal and external examinations of the subject.

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Second Semester

S. No	Code	Course Title	Hrs/Week L	T	P	Total Credit	Marks Internal Marks	External Marks	Total Marks
Theory									
1	MT-CS-201	Program Core III - Advance Algorithms	3	0	0	3	20	80	100
2	MT-CS-202	Program Core IV - Soft Computing	3	0	0	3	20	80	100
3		Program Elective III	3	0	0	3	20	80	100
4		Program Elective IV	3	0	0	3	20	80	100
5		Audit Course-II	2	0	0	0	20	80	100
6	MT-CS-203	Mini Project with Seminar	2	0	0	2	100	-	100
Lab									
7	MT-CS-204	Laboratory 3 (Based on cores)	0	0	4	2	10	40	50
8	MT-CS-205	Laboratory 4 (Based on Electives)	0	0	4	2	10	40	50
		Total	14	00	08	18	200	400	600

*Students be encouraged to go to Industrial Training/Internship for at least 2-3 months during semester break.

Program Elective III

1. MT-NS-201 Data Encryption & Compression
2. MT-NS-202 Steganography & Digital Watermarking
3. MT-NS-203 Information Theory & Coding

Program Elective IV

1. MT-NS-204 Security Assessment and Risk Analysis
2. MT-NS-205 Secure Coding
3. MT-NS-206 Biometrics

Note: Minimum passing marks for any subject (paper) shall be 40% in the external examination and 40% in the aggregate of internal and external examinations of the subject.

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Third Semester

S. No	Code	Course Title	Hrs/Week L	T	P	Total Credit	Marks Internal Marks	External Marks	Total Marks
Theory									
1		Program Elective 5	3	0	0	3	20	80	100
2		Open Elective	3	0	0	3	20	80	100
Labs									
3	MT-NS-301	Dissertation-I /Industrial Project	0	0	16	8	20	130	150
4	MT-NS-302	Industrial Training	0	0	0	2		50	50
	Total		06	00	16	16	60	340	400

*Students going for Industrial Project/Thesis will complete these courses through MOOCs.

Program Elective 5

1. MT-NS-303 Data Warehousing & Mining
2. MT-NS-304 Web Search & Information Retrieval
3. MT-NS-305 Database Security and Access Control

Open Elective

1. MT-CS - 305 Business Analytics
2. MT-CS - 306 Industrial Safety
3. MT-CS - 307 Operations Research
4. MT-CS - 308 Cost Management of Engineering Projects
5. MT-CS - 309 Composite Materials
6. MT-CS - 310 Waste to Energy

Note: Minimum passing marks for any subject (paper) shall be 40% in the external examination and 40% in the aggregate of internal and external examinations of the subject.

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Fourth Semester

S. No.	Paper Code	Paper	L	T	P	Credits	Marks		
							Internal Marks	External Marks	Total Marks
1.	MT-NS-401	Dissertation II	0	0	32	16	100	400	500
		Total				16			500

Note: Minimum passing marks for any subject (paper) shell be 40% in the external examination and 40% in the aggregate of internal and external examinations of the subject.

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Audit Course 1 & 2

1. MT-AUD - 01 English for Research Paper Writing
2. MT-AUD - 02 Disaster Management
3. MT-AUD - 03 Sanskrit for Technical Knowledge
4. MT-AUD - 04 Value Education
5. MT-AUD - 05 Constitution of India
6. MT-AUD - 06 Pedagogy Studies
7. MT-AUD - 07 Stress Management by Yoga
8. MT-AUD - 08 Personality Development through Life Enlightenment Skills.

Note: Audit Course 1 are from Sr. No. 1to 4 and & Audit Course 2 are from Sr. No. 5 to 8.

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Sr. No.	Semester	Total Credits	Total Marks
1	First	18	600
2	Second	18	600
3	Third	16	400
4	Fourth	16	500
	Total Credit/Marks	68	2100

Program Outcomes of M.Tech Computer Science & Engineering (Network Security) program:

The main outcomes of the M.Tech Computer Science & Engineering (Network Security) program are given here. At the end of the program a student is expected to have:

1. An understanding of the theoretical foundations and the limits of computing.
2. An ability to adapt existing models, techniques, algorithms, data structures, etc. for efficiently solving problems.
3. An ability to design, develop and evaluate new computer based systems for novel applications which meet the desired needs of industry and society.
4. Understanding and ability to use advanced computing techniques and tools.
5. An ability to undertake original research at the cutting edge of computer science & its related areas.
6. An ability to function effectively individually or as a part of a team to accomplish a stated goal.
7. An understanding of professional and ethical responsibility.
8. An ability to communicate effectively with a wide range of audience.
9. An ability to learn independently and engage in lifelong learning.
10. An understanding of the impact of IT related solutions in an economic, social and environment context.

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SEMESTER I

MT-CS-101 **Mathematical Foundation of Computer Science**

L T P
3 0 -

Total Credits: 3
External Marks: 80
Internal Marks: 20

Duration of Exam: 3 Hrs.

Pre-requisites: Discrete Mathematics

Course Objectives:

1. To understand the mathematical fundamentals that is prerequisites for a variety of courses like Data mining, Network protocols, analysis of Web traffic, Computer security, Software engineering, Computer architecture, operating systems, distributed systems, Bioinformatics, Machine learning.
2. To develop the understanding of the mathematical and logical basis to many modern techniques in information technology like machine learning, programming language design and concurrency.
3. To study various sampling and classification Problems.

UNIT- I

Module-1:

Probability mass, density, and cumulative distribution functions, parametric families of distributions, Expected value, variance, conditional expectation, Applications of the univariate and multivariate Central Limit Theorem, Probabilistic inequalities, Markov chains

UNIT- II

Module-2:

Random samples, sampling distributions of estimators, Methods of Moments and Maximum Likelihood.

Module-3:

Statistical inference, Introduction to multivariate statistical models: regression and classification problems, principal components analysis, The problem of over fitting model assessment.

UNIT- III

Module-4:

Graph Theory: Isomorphism, Planar graphs, graph colouring, Hamilton circuits and Euler cycles. Permutations and Combinations with and without repetition, specialized techniques to solve combinatorial enumeration problems

UNIT- IV

Module-5:

Computer science and engineering applications: Data mining, Network protocols, analysis of Web traffic, Computer security, Software engineering, Computer architecture, operating systems, distributed systems, Bioinformatics, Machine learning.

Module-6:

Recent Trends in various distribution functions in mathematical field of computer science for varying fields like bioinformatics, soft computing and computer vision

Course Outcomes:

After completion of course, students would be able to:

a. To understand the basic notions of discrete and continuous probability.

b. To understand the methods of statistical inference, and the role that sampling distributions play in those method.

c. To be able to perform correct and meaningful statistical analyses of simple to moderate complexity.

References

1. John Vince. Foundation Mathematics for Computer Science. Springer.
2. K. Trivedi.Probability and Statistics with Reliability. Queuing, and Computer Science Applications.Wiley.
3. M. Mitzenmacher and E. Upfal.Probability and Computing: Randomized Algorithms and Probabilistic Analysis.
4. Alan Tucker. Applied Combinatorics. Wiley

Note: Nine questions will be set in all by the examiners taking two questions from each unit and one question containing short answer type questions from entire syllabus. Students will be required to attempt five questions, selecting one question from each unit. Question No.1 is compulsory which is from entire syllabus.

MT-CS-102

Advanced Data Structures

L T P
3 0 -

Total Credits: 3
External Marks: 80
Internal Marks: 20

Duration of Exam: 3 Hrs.

Pre-requisites: UG level course in Data Structures

Course Objectives:

1. The student should be able to choose appropriate data structures, understand the ADT/libraries, and use it to design algorithms for a specific problem.
2. Students should be able to understand the necessary mathematical abstraction to solve problems.
3. To familiarize students with advanced paradigms and data structure used to solve algorithmic problems.
4. Student should be able to come up with analysis of efficiency and proofs of correctness.

UNIT- I

Module-1: Dictionaries and Hashing

Dictionaries: Definition, Dictionary Abstract Data Type, Implementation of Dictionaries.

Hashing: Review of Hashing, Hash Function, Collision Resolution Techniques in Hashing, Separate Chaining, Open Addressing, Linear Probing, Quadratic Probing, Double Hashing, Rehashing, Extendible Hashing.

UNIT- II

Module-2: Skip Lists

Need for Randomizing Data Structures and Algorithms, Search and Update Operations on Skip Lists, Probabilistic Analysis of Skip Lists, Deterministic Skip Lists

Module-3: Trees

Trees: Binary Search Trees, AVL Trees, Red Black Trees, 2-3 Trees, B-Trees, Splay Trees

UNIT- III

Module-4: Text Processing

Sting Operations, Brute-Force Pattern Matching, The Boyer- Moore Algorithm, The Knuth-Morris-Pratt Algorithm, Standard Tries, Compressed Tries, Suffix Tries, The Huffman Coding Algorithm, The Longest Common Subsequence Problem (LCS), Applying Dynamic Programming to the LCS Problem.

UNIT- IV

Module-5: Computational Geometry

One Dimensional Range Searching, Two Dimensional Range Searching, Constructing a Priority Search Tree, Searching a Priority Search Tree, Priority Range Trees, Quadtrees, k-D Trees.

Module-6:

Recent Trends in Hashing, Trees, and various computational geometry methods for efficiently solving the new evolving problem

Course Outcomes:

a. Understand the implementation of symbol table using hashing techniques.
b. Develop and analyze algorithms for red-black trees, B-trees and Splay trees.
c. Develop algorithms for text processing applications.
d. Identify suitable data structures and develop algorithms for computational geometry problems.

References

1. Mark Allen Weiss, Data Structures and Algorithm Analysis in C++, 2nd Edition, Pearson, 2004
2. M T Goodrich Roberto Tamassia, Algorithm Design, John Willey, 2002

Note: Nine questions will be set in all by the examiners taking two questions from each unit and one question containing short answer type questions from entire syllabus. Students will be required to attempt five questions, selecting one question from each unit. Question No.1 is compulsory which is from entire syllabus.

MT-CS-211

Digital Forensics (Elective I)

L T P
3 0 -

Total Credits: 3
External Marks: 80
Internal Marks: 20

Duration of Exam: 3 Hrs.

Pre-Requisites Cybercrime and Information Warfare, Computer Networks

Course Objectives

1. Provides an in-depth study of the rapidly changing and fascinating field of computer forensics.
2. Combines both the technical expertise and the knowledge required to investigate, detect and prevent digital crimes.
3. Knowledge on digital forensics legislations, digital crime, forensics processes and procedures, data acquisition and validation, e-discovery tools
4. E-evidence collection and preservation, investigating operating systems and file systems, network forensics, art of steganography and mobile device forensics

UNIT-I

Module-1:

Digital Forensics Science: Forensics science, computer forensics, and digital forensics.
Computer Crime: Criminalistics as it relates to the investigative process, analysis of cyber-criminalistics area, holistic approach to cyber-forensics

UNIT-II

Module-2:

Cyber Crime Scene Analysis: Discuss the various court orders etc., methods to search and seizure electronic evidence, retrieved and un-retrieved communications, Discuss the importance of understanding what court documents would be required for a criminal investigation.

Module-3:

Evidence Management & Presentation: Create and manage shared folders using operating system, importance of the forensic mindset, define the workload of law enforcement. Explain what the normal case would look like, Define who should be notified of a crime, parts of gathering evidence, Define and apply probable cause.

UNIT-III

Module-4:

Computer Forensics: Prepare a case, Begin an investigation, Understand computer forensics workstations and software, Conduct an investigation, Complete a case, Critique a case.

Network Forensics: open-source security tools for network forensic analysis, requirements for preservation of network data.

UNIT-IV

Module-5:

Mobile Forensics: mobile forensics techniques, mobile forensics tools.

Legal Aspects of Digital Forensics: IT Act 2000, amendment of IT Act 2008.

Module-6:

Recent trends in mobile forensic technique and methods to search and seizure electronic evidence

Course Outcomes

After completion of course, students would be able to:

a. Understand relevant legislation and codes of ethics
b. Computer forensics and digital detective and various processes, policies and procedures
c. E-discovery, guidelines and standards, E-evidence, tools and environment.
d. Email and web forensics and network forensics

References:

1. John Sammons, The Basics of Digital Forensics, Elsevier
2. John Vacca, Computer Forensics: Computer Crime Scene Investigation, Laxmi Publications

Note: Nine questions will be set in all by the examiners taking two questions from each unit and one question containing short answer type questions from entire syllabus. Students will be required to attempt five questions, selecting one question from each unit. Question No.1 is compulsory which is from entire syllabus.

MT-NS-101

Ethical Hacking (Elective I)

L T P
3 0 -

Total Credits: 3
External Marks: 80
Internal Marks: 20

Duration of Exam: 3 Hrs.

Pre-requisites: Computer Programming, Web Programming, Computer Networks

Course Objectives:

1. Introduces the concepts of Ethical Hacking and gives the students the opportunity to learn about different tools and techniques in Ethical hacking and security and practically apply some of the tools.

UNIT-I

Module-1:

Introduction to Ethical Disclosure: Ethics of Ethical Hacking, Ethical Hacking and the legal system, Proper and Ethical Disclosure

Module-2:

Penetration Testing and Tools: Using Metasploit, Using BackTrackLiveCD, Linux Distribution

UNIT-II

Module-3:

Vulnerability Analysis: Passive Analysis, Advanced Static Analysis with IDA Pro, Advanced Reverse Engineering

UNIT-III

Module-4:

Client-side browser exploits, Exploiting Windows Access Control Model for Local Elevation Privilege, Intelligent Fuzzing with Sulley, From Vulnerability to Exploit

UNIT-IV

Module-5:

Malware Analysis: Collecting Malware and Initial Analysis, Hacking Malware

Module-6:

Case study of vulnerability of cloud platforms and mobile platforms & devices

Course Outcomes

After completion of course, students would be able to:

a. Understand the core concepts related to malware, hardware and software vulnerabilities and their causes
b. Understand ethics behind hacking and vulnerability disclosure
c. Appreciate the Cyber Laws and impact of hacking
d. Exploit the vulnerabilities related to computer system and networks using state of the art tools and technologies

References:

1. Shon Harris, Allen Harper, Chris Eagle and Jonathan Ness, Gray Hat Hacking: The Ethical
Hackers' Handbook, TMH Edition
2. Jon Erickson, Hacking: The Art of Exploitation, SPD

Note: Nine questions will be set in all by the examiners taking two questions from each unit and one question containing short answer type questions from entire syllabus. Students will be required to attempt five questions, selecting one question from each unit. Question No.1 is compulsory which is from entire syllabus.

MT-NS-102 **Intrusion Detection (Elective I)**

L T P
3 0 -

Total Credits: 3
External Marks: 80
Internal Marks: 20

Duration of Exam: 3 Hrs.

Pre-requisites: Computer Networks, Computer Programming

Course Objectives:

1. Compare alternative tools and approaches for Intrusion Detection through quantitative analysis to determine the best tool or approach to reduce risk from intrusion
2. Identify and describe the parts of all intrusion detection systems and characterize new and emerging IDS technologies according to the basic capabilities all intrusion detection systems share.

UNIT-I

Module-1:

The state of threats against computers, and networked systems-Overview of computer security solutions and why they fail-Vulnerability assessment, firewalls. VPN's - Overview of Intrusion Detection and Intrusion Prevention- Network and Host-based IDS

UNIT-II

Module-2:

Classes of attacks - Network layer: scans, denial of service, penetration- Application layer: software exploits, code injection-Human layer: identity theft, root access-Classes of attackers-Kids/hackers/sop Hesitated groups-Automated: Drones, Worms, Viruses

UNIT-III

Module-3:

A General IDS model and taxonomy, Signature-based Solutions, Snort, Snort rules, Evaluation of IDS, Cost sensitive IDS

Module-4:

Anomaly Detection Systems and Algorithms-Network Behavior Based Anomaly Detectors (rate based)-Host-based Anomaly Detectors-Software Vulnerabilities- State transition. Immunology. Payload Anomaly Detection

UNIT-IV

Module-5:

Attack trees and Correlation of alerts-Autopsy of Worms and Botnets-Malware detection-Obfuscation. polymorphism-Document vectors

Module-6:

Email/IM security issues-Viruses/Spam-From signatures to thumbprints to zero-day detection-Insider Threat issues-Taxonomy-Masquerade and Impersonation-Traitors. Decoys and Deception-Future: Collaborative Security

Course Outcomes

After completion of course, students would be able to:

a. Apply knowledge of the fundamentals and history of Intrusion Detection in order to avoid common pitfalls in the creation and evaluation of new Intrusion Detection Systems. Evaluate the security an enterprise and appropriately apply Intrusion Detection tools and techniques in order to improve their security posture

References:

1. The Art of Computer Virus Research and Defense. Peter Szor. Symantec Press ISBN 0-321- 30545-3

2. Crimeware. Understanding New Attacks and Defenses. Markus Jakobsson and Zulfikar Ramzan. Symantec Press. ISBN: 978-0-321-50195-0 2008

Note: Nine questions will be set in all by the examiners taking two questions from each unit and one question containing short answer type questions from entire syllabus. Students will be required to attempt five questions. selecting one question from each unit. Question No.1 is compulsory which is from entire syllabus.

MT-NS-103 **Malware Analysis & Reverse Engineering (Elective II)**

L T P
3 0 -

Total Credits: 3
External Marks: 80
Internal Marks: 20

Duration of Exam: 3 Hrs.

Pre-Requisites Computer Programming, Compiler Design

Course Objective

a. The objective of this course is to provide an insight to fundamentals of malware analysis which includes analysis of JIT compilers for malware detection in legitimate code. DNS filtering and reverse engineering is included.

UNIT-I

Module-1:

Fundamentals of Malware Analysis (MA), Reverse Engineering Malware (REM) Methodology, Brief Overview of Malware analysis lab setup and configuration, Introduction to key MA tools and techniques, Behavioral Analysis vs. Code Analysis, Resources for Reverse-Engineering Malware (REM) Understanding Malware Threats, Malware indicators, Malware Classification, Examining ClamAVSignatures, Creating Custom ClamAV Databases, Using YARA to Detect Malware Capabilities, Creating a Controlled and Isolated Laboratory, Introduction to MA Sandboxes, Ubuntu, Zeltser'sREMnux, SANS SIFT, Sandbox Setup and Configuration New Course Form, Routing TCP/IP Connections, Capturing and Analyzing Network Traffic, Internet simulation using INetSim, Using Deep Freeze to Preserve Physical Systems, Using FOG for Cloning and Imaging Disks, Using MySQL Database to Automate FOG Tasks, Introduction to
Python .Introduction to x86 Intel assembly language, Scanners: Virus Total, Jotti, and NoVirus Thanks, Analyzers: Threat Expert, CWSandbox, Anubis, Joebox, Dynamic Analysis Tools: Process Monitor, Regshot, HandleDiff, Analysis Automation Tools: Virtual Box, VM Ware, Python , Other Analysis Tools

UNIT-II

Module-2:

Malware Forensics
Using TSK for Network and Host Discoveries, Using Microsoft Offline API tovRegistry Discoveries , Identifying Packers using PEiD, Registry Forensics with Reg Ripper Plu-gins:, Bypassing Poison Ivy's Locked Files, Bypassing Conficker's File System· ACL Restrictions, Detecting Rogue PKI Certificates.

UNIT-III

Module-3:

Malware and Kernel Debugging

Opening and Attaching to Processes, Configuration of JIT Debugger for Shellcode Analysis, Controlling Program Execution, Setting and Catching Breakpoints, Debugging with Python Scripts and Py Commands, DLL Export Enumeration, Execution, and Debugging, Debugging a VMware Workstation Guest (on Windows), Debugging a Parallels Guest (on Mac OS X). Introduction to WinDbg Commands and Controls, Detecting Rootkits with WinDbgScripts, Kernel Debugging with IDA Pro.

UNIT-IV

Module-4:

Memory Forensics and Volatility

Memory Dumping with MoonSols Windows Memory Toolkit, Accessing VM Memory Files Overview of Volatility, Investigating Processes in Memory Dumps, Code Injection and Extraction, Detecting and Capturing Suspicious Loaded DLLs, Finding Artifacts in Process Memory, Identifying Injected Code with Malfind and YARA

Module-5:

Researching and Mapping Source Domains/IPs

Using WHOIS to Research Domains, DNS Hostname Resolution, Querying Passive DNS, Checking DNS Records, Reverse IP Search New Course Form, Creating Static Maps, Creating Interactive Maps.

Module-6:

Case study of Finding Artifacts in Process Memory, Identifying Injected Code with Malfind and YARA

Course Outcomes

On completion of the course the student should be able to

b. To understand the concept of malware and reverse engineering.
c. Implement tools and techniques of malware analysis

References:

1. Michael Sikorski, Andrew Honig "Practical Malware Analysis: The Hands-On Guide to Dissecting Malicious Software" publisher Williampollock

Note: Nine questions will be set in all by the examiners taking two questions from each unit and one question containing short answer type questions from entire syllabus. Students will be required to attempt five questions, selecting one question from each unit. Question No.1 is compulsory which is from entire syllabus.

MT-CS-207 Secure Software Design and Enterprise Computing (Elective II)

L	T	P
3	0	-

Total Credits: 3
External Marks: 80
Internal Marks: 20

Duration of Exam: 3 Hrs.

Pre-Requisites Computer Programming, Software Engineering

Course Objective

1. To fix software flaws and bugs in various software.
2. To make students aware of various issues like weak random number generation, information leakage, poor usability, and weak or no encryption on data traffic
3. Techniques for successfully implementing and supporting network services on an enterprise scale and heterogeneous systems environment.
4. Methodologies and tools to design and develop secure software containing minimum vulnerabilities and flaws.

UNIT-I

Module-1:

Secure Software Design

Identify software vulnerabilities and perform software security analysis, Master security programming practices. Master fundamental software security design concepts, Perform security testing and quality assurance.

UNIT-II

Module-2:

Enterprise Application Development

Describe the nature and scope of enterprise software applications. Design distributed N-tier software application. Research technologies available for the presentation, business and data tiers of an enterprise software application. Design and build a database using an enterprise database system. Develop components at the different tiers in an enterprise system. Design and develop a multi-tier solution to a problem using technologies used in enterprise system. Present software solution.

UNIT-III

Module-3:

Enterprise Systems Administration

Design, implement and maintain a directory-based server infrastructure in a heterogeneous systems environment. Monitor server resource utilization for system reliability and availability. Install and administer network services (DNS/DHCP/Terminal Services/Clustering/Web/Email).

UNIT-IV

Module-4:

Obtain the ability to manage and troubleshoot a network running multiple services, understand the requirements of an enterprise network and how to go about managing them.

Module-5:

Handle insecure exceptions and command/SQL injection. Defend web and mobile applications against attackers, software containing minimum vulnerabilities and flaws.

Module-6:

Case study of DNS server, DHCP configuration and SQL injection attack

Course Outcomes

After completion of course, students would be able to:

a. Differentiate between various software vulnerabilities.
b. Software process vulnerabilities for an organization.
c. Monitor resources consumption in a software.
d. Interrelate security and software development process.

References:

1. Theodor Richardson, Charles N Thies, Secure Software Design, Jones & Bartlett
2. Kenneth R. van Wyk, Mark G. Graff, Dan S. Peters, Diana L. Burley, Enterprise Software Security,Addison Wesley.

Note: Nine questions will be set in all by the examiners taking two questions from each unit and one question containing short answer type questions from entire syllabus. Students will be required to attempt five questions, selecting one question from each unit. Question No.1 is compulsory which is from entire syllabus.

MT-CS-106 Machine Learning (Elective II)

L T P
3 0 -

Total Credits: 3
External Marks: 80
Internal Marks: 20

Duration of Exam: 3 Hrs.

Pre-requisites:

Course Objectives:

1. To learn the concept of how to learn patterns and concepts from data without being explicitly programmed in various IOT nodes.
2. To design and analyze various machine learning algorithms and techniques with a modern outlook focusing on recent advances.
3. Explore supervised and unsupervised learning paradigms of machine learning.
4. To explore Deep learning technique and various feature extraction strategies.

UNIT-I

Module-1: Supervised Learning (Regression/Classification)

- Basic methods: Distance-based methods, Nearest-Neighbours, Decision Trees, Naive Bayes
- Linear models: Linear Regression, Logistic Regression, Generalized Linear Models
- Support Vector Machines, Nonlinearity and Kernel Methods
- Beyond Binary Classification: Multi-class/Structured Outputs, Ranking

UNIT-II

Module-2: Unsupervised Learning

- Clustering: K-means/Kernel K-means
- Dimensionality Reduction: PCA and kernel PCA
- Matrix Factorization and Matrix Completion
- Generative Models (mixture models and latent factor models)

UNIT-III

Module-3:

Evaluating Machine Learning algorithms and Model Selection, Introduction to Statistical Learning Theory, Ensemble Methods (Boosting, Bagging, Random Forests)

Module-4:

Sparse Modeling and Estimation, Modeling Sequence/Time-Series Data, Deep Learning and Feature Representation Learning

UNIT-IV

Module-5:

Scalable Machine Learning (Online and Distributed Learning)
A selection from some other advanced topics, e.g., Semi-supervised Learning, Active Learning, Reinforcement Learning, Inference in Graphical Models, Introduction to Bayesian Learning and Inference

Module-6:

Recent trends in various learning techniques of machine learning and classification methods for IOT applications, various models for IOT applications

Course Outcomes:

a. Extract features that can be used for a particular machine learning approach in various IOT applications.
b. To compare and contrast pros and cons of various machine learning techniques and to get an insight of when to apply a particular machine learning approach.
c. To mathematically analyse various machine learning approaches and paradigms.

References

1. Kevin Murphy, Machine Learning: A Probabilistic Perspective, MIT Press, 2012
2. Trevor Hastie, Robert Tibshirani, Jerome Friedman, The Elements of Statistical Learning, Springer 2009 (freely available online)
3. Christopher Bishop, Pattern Recognition and Machine Learning, Springer, 2007.

Note: Nine questions will be set in all by the examiners taking two questions from each unit and one question containing short answer type questions from entire syllabus. Students will be required to attempt five questions, selecting one question from each unit. Question No.1 is compulsory which is from entire syllabus.

MT-CS-103 Research Methodology and IPR (Elective II)

L T P
3 0 -

Total Credits: 3
External Marks: 80
Internal Marks: 20

Duration of Exam: 3 Hrs.

Pre-requisites:

Course Objectives:

1. Understand research problem formulation.
2. Analyze research related information
3. Follow research ethics
4. Understand that today's world is controlled by Computer, Information Technology, but tomorrow world will be ruled by ideas, concept, and creativity.
5. Understanding that when IPR would take such important place in growth of individuals & nation, it is needless to emphasis the need of information about Intellectual Property
   Right to be promoted among students in general & engineering in particular
6. Understand that IPR protection provides an incentive to inventors for further research work and investment in R & D, which leads to creation of new and better products, and in turn brings about, economic growth and social benefits.

UNIT-I

Module-1:

Meaning of research problem, Sources of research problem, Criteria Characteristics of a good research problem, Errors in selecting a research problem, Scope and objectives of research problem, Approaches of investigation of solutions for research problem, data collection, analysis, interpretation, Necessary instrumentations

Module-2:

Effective literature studies approaches, analysis Plagiarism, Research ethics

UNIT-II

Module-3:

Effective technical writing, how to write report, Paper Developing a Research Proposal, Format of research proposal, a presentation and assessment by a review committee

Module-4:

Nature of Intellectual Property: Patents, Designs, Trade and Copyright. Process of Patenting and Development: technological research, innovation, patenting, development. International Scenario: International cooperation on Intellectual Property. Procedure for grants of patents, Patenting under PCT

UNIT-III

Module-5:

Patent Rights: Scope of Patent Rights, Licensing and transfer of technology, Patent information and databases, Geographical Indications

UNIT-IV

Module-6:

New Developments in IPR: Administration of Patent System. New developments in IPR: IPR of Biological Systems, Computer Software etc. Traditional knowledge Case Studies, IPR and IITs

Course Outcomes:

a. To identify sources of research problem and approaches of investigation for solutions for research problem.

b. To learn various research ethics.

c. To learn the concepts of patents, procedure for granting patents and administration of patent system.

References

1. Stuart Melville and Wayne Goddard, "Research methodology: an introduction for science & engineering students'"
2. Wayne Goddard and Stuart Melville, "Research Methodology: An Introduction"
3. Ranjit Kumar, 2nd Edition , "Research Methodology: A Step by Step Guide for beginners"
4. Halbert, "Resisting Intellectual Property", Taylor & Francis Ltd ,2007.
5. Mayall , "Industrial Design", McGraw Hill, 1992.
6. Niebel , "Product Design", McGraw Hill, 1974.
7. Asimov, "Introduction to Design", Prentice Hall, 1962.

8. Robert P. Merges, Peter S. Menell, Mark A. Lemley, " Intellectual Property in New Technological Age", 2016
9. T. Ramappa, "Intellectual Property Rights Under WTO", S. Chand, 2008

Note: Nine questions will be set in all by the examiners taking two questions from each unit and one question containing short answer type questions from entire syllabus. Students will be required to attempt five questions, selecting one question from each unit. Question No.1 is compulsory which is from entire syllabus.

MT-CS-104 Laboratory 1 (Advanced Data Structures)

L	T	P
-	-	4

Total Credits: 2
External Marks: 40
Internal Marks: 10

Duration of Exam: Hrs.

At least 10 to 15 exercises related to the subject should be given by the teacher concerned.

MT-CS-105 Laboratory 2 (Based on Electives)

L	T	P
-	-	4

Total Credits: 2
External Marks: 40
Internal Marks: 10

Duration of Exam: Hrs.

At least 20 exercises related to the electives subject (i.e.10 exercises from each subject) should be given by the teacher concerned.

SEMESTER - I and II

Audit Courses I & II

MT-AUD-01 **English for Research Paper Writing**

L	T	P
3	0	-

Total Credits: 3
External Marks: 80
Internal Marks: 20

Duration of Exam: 3 Hrs.

Course Objectives:

Students will be able to:

1. Understand that how to improve your writing skills and level of readability.
2. Learn about what to write in each section.
3. Understand the skills needed when writing a Title.
4. Ensure the good quality of paper at very first-time submission

UNIT-I

Module-1:

Planning and Preparation, Word Order, Breaking up long sentences. Structuring Paragraphs and Sentences, Being Concise and Removing Redundancy, Avoiding Ambiguity and Vagueness.

UNIT-II

Module-2:

Clarifying Who Did What, Highlighting Your Findings, Hedging and Criticizing, Paraphrasing and Plagiarism, Sections of a Paper, Abstracts Introduction

Module-3:

Review of the Literature, Methods, Results, Discussion, Conclusions, the Final Check

UNIT-III

Module-4:

Key skills are needed when writing a Title, key skills are needed when writing an Abstract, key skills are needed when writing an Introduction, skills needed when writing a Review of the Literature

UNIT-IV

Module-5:

Skills are needed when writing the Methods. skills needed when writing the Results. skills are needed when writing the Discussion. skills are needed when writing the Conclusions.

Module-6:

Useful phrases, how to ensure paper is as good as it could possibly be the first- time submission

References

1. Goldbort R (2006) Writing for Science, Yale University Press (available on Google Books)

2. Day R (2006) How to Write and Publish a Scientific Paper. Cambridge University Press

3. Highman N (1998). Handbook of Writing for the Mathematical Sciences. SIAM. Highman'sbook .

4. Adrian Wallwork , English for Writing Research Papers. Springer New York DordrechtHeidelberg London. 2011

Note: Nine questions will be set in all by the examiners taking two questions from each unit and one question containing short answer type questions from entire syllabus. Students will be required to attempt five questions. selecting one question from each unit. Question No.1 is compulsory which is from entire syllabus.

SEMESTER II

MT-CS-201 Advance Algorithms

L T P
3 0 -

Total Credits: 3
External Marks: 80
Internal Marks: 20

Duration of Exam: 3 Hrs.

Pre-requisites: UG level course in Algorithm Design and Analysis

Course Objectives:

1. Introduce students to the advanced methods of designing and analyzing algorithms.
2. The student should be able to choose appropriate algorithms and use it for a specific problem.
3. To familiarize students with basic paradigms and data structures used to solve advanced algorithmic problems.
4. Students should be able to understand different classes of problems concerning their computation difficulties.
5. To introduce the students to recent developments in the area of algorithmic design.

UNIT - I

Module-1:

Sorting: Review of various sorting algorithms, topological sorting
Graph: Definitions and Elementary Algorithms: Shortest path by BFS, shortest path in edge-weighted case (Dijkasra's), depth-first search and computation of strongly connected components, emphasis on correctness proof of the algorithm and time/space analysis, example of amortized analysis.

UNIT - II

Module-2:

Matroids: Introduction to greedy paradigm, algorithm to compute a maximum weight maximal independent set, Application to MST.

Graph Matching: Algorithm to compute maximum matching. Characterization of maximum matching by augmenting paths. Edmond's Blossom algorithm to compute augmenting path

Module-3:

Flow-Networks: Maxflow-mincut theorem. Ford-Fulkerson Method to compute maximum flow. Edmond-Karp maximum-flow algorithm.
Matrix Computations: Strassen's algorithm and introduction to divide and conquer paradigm. inverse of a triangular matrix. relation between the time complexities of basic matrix operations. LUP-decomposition

UNIT - III

Module-4:

Shortest Path in Graphs: Floyd-Warshall algorithm and introduction to dynamic programming paradigm. more examples of dynamic programming
Modulo Representation of integers/polynomials: Chinese Remainder Theorem. Conversion between base-representation and modulo-representation. Extension to polynomials. Application: Interpolation problem.
Discrete Fourier Transform (DFT): In complex field. DFT in modulo ring. Fast Fourier Transform algorithm. Schonhage-Strassen Integer Multiplication algorithm

UNIT - IV

Module-5:

Linear Programming: Geometry of the feasibility region and Simplex algorithm
NP-completeness: Examples. proof of NP-hardness and NP-completeness.
One or more of the following topics based on time and interest
Approximation algorithms. Randomized Algorithms. Interior Point Method. Advanced Number Theoretic Algorithm

Module-6:

Recent Trends in problem solving paradigms using recent searching and sorting techniques by applying recently proposed data structures.

Course Outcomes:

a. Analyze the complexity/performance of different algorithms.
b. Determine the appropriate data structure for solving a particular set of problems.
c. Categorize the different problems in various classes according to their complexity.
d. Students should have an insight of recent activities in the field of the advanced data structure

References

1. "Introduction to Algorithms" by Cormen, Leiserson, Rivest, Stein.
2. "The Design and Analysis of Computer Algorithms" by Aho, Hopcroft, Ullman.
3. "Algorithm Design" by Kleinberg and Tardos.

Note: Nine questions will be set in all by the examiners taking two questions from each unit and one question containing short answer type questions from entire syllabus. Students will be required to attempt five questions, selecting one question from each unit. Question No.1 is compulsory which is from entire syllabus.

MT-CS-202 Soft Computing

L T P
3 0 -

Total Credits: 3
External Marks: 80
Internal Marks: 20

Duration of Exam: 3 Hrs.

Pre-requisites: Basic knowledge of mathematics

Course Objectives:

1. To introduce soft computing concepts and techniques and foster their abilities in designing appropriate technique for a given scenario
2. To implement soft computing based solutions for real-world problems
3. To give students knowledge of non-traditional technologies and fundamentals of artificial
4. neural networks. fuzzy sets. fuzzy logic. genetic algorithms
5. To provide student an hand-on experience on MATLAB to implement various strategies

UNIT - I

Module-1: Introduction to Soft Computing and Neural Networks
Evolution of Computing: Soft Computing Constituents. From Conventional AI to Computational Intelligence: Machine Learning Basics

Module-2: Fuzzy Logic
Fuzzy Sets. Operations on Fuzzy Sets. Fuzzy Relations. Membership Functions: Fuzzy Rules and Fuzzy Reasoning. Fuzzy Inference Systems. Fuzzy Expert Systems. Fuzzy Decision Making

UNIT - II

Module-3: Neural Networks
Machine Learning Using Neural Network. Adaptive Networks. Feed forward Networks. Supervised Learning Neural Networks. Radial Basis Function Networks: Reinforcement Learning. Unsupervised Learning Neural Networks. Adaptive Resonance architectures. Advances in Neural networks

UNIT - III

Module-4: Genetic Algorithms

Introduction to Genetic Algorithms (GA), Applications of GA in Machine Learning: Machine Learning Approach to Knowledge Acquisition

UNIT - IV

Module-5: Matlab/Python Lib

Introduction to Matlab/Python. Arrays and array operations. Functions and Files. Study of neural network toolbox and fuzzy logic toolbox. Simple implementation of Artificial Neural Network and Fuzzy Logic

Module-6:

Recent Trends in deep learning, various classifiers, neural networks and genetic algorithm. Implementation of recently proposed soft computing techniques

Course Outcomes:

a. Identify and describe soft computing techniques and their roles in building intelligent machines
b. Apply fuzzy logic and reasoning to handle uncertainty and solve various engineering problems.
c. Apply genetic algorithms to combinatorial optimization problems.
d. Evaluate and compare solutions by various soft computing approaches for a given problem.

References

a. Jyh:Shing Roger Jang, Chuen:Tsai Sun, EijiMizutani, Neuro:Fuzzy and Soft Computing, Prentice:Hall of India, 2003.
2. George J. Klir and Bo Yuan, Fuzzy Sets and Fuzzy Logic:Theory and Applications, Prentice Hall, 1995.
3. MATLAB Toolkit Manual

Note: Nine questions will be set in all by the examiners taking two questions from each unit and one question containing short answer type questions from entire syllabus. Students will be required to attempt five questions, selecting one question from each unit. Question No.1 is compulsory which is from entire syllabus.

MT-NS-201 Data Encryption & Compression (Elective III)

L T P
3 0 -

Total Credits: 3
External Marks: 80
Internal Marks: 20

Duration of Exam: 3 Hrs.

Pre-Requisites: Image Processing, Linear Algebra, Cryptography

Course Objective

1. This course will cover the concept of security, types of attack experienced, encryption and authentication for deal with attacks, what is data compression, need and techniques of data compression

UNIT - I

Module-1:

Introduction to Security: Need for security, Security approaches, Principles of security, Types of attacks.

Encryption Techniques: Plaintext, Cipher text, Substitution & Transposition techniques, Encryption & Decryption, Types of attacks, Key range & Size.

UNIT - II

Module-2:

Symmetric & Asymmetric Key Cryptography: Algorithm types & Modes, DES, IDEA, Differential & Linear Cryptanalysis, RSA, Symmetric & Asymmetric key together, Digital signature, Knapsack algorithm.

User Authentication Mechanism: Authentication basics, Passwords, Authentication tokens, Certificate based & Biometric authentication, Firewall.

UNIT - III

Module-3:

Case Studies Of Cryptography: Denial of service attacks, IP spoofing attacks, Secure inter branch payment transactions, Conventional Encryption and Message Confidentiality, Conventional Encryption Principles, Conventional Encryption Algorithms, Location of Encryption Devices, Key Distribution.

Public Key Cryptography and Message Authentication: Approaches to Message Authentication, SHA-1, MD5, Public-Key Cryptography Principles, RSA, Digital Signatures, Key Management.

Module-4:

Introduction: Need for data compression, Fundamental concept of data compression & coding. Communication model. Compression ratio. Requirements of data compression. Classification.

Methods of Data Compression: Data compression-- Loss less &Lossy

UNIT - IV

Module-5:

Entropy encoding-- Repetitive character encoding. Run length encoding. Zero/Blank encoding; Statistical encoding-- Huffman. Arithmetic & Lempel-Ziv coding; Source encoding-- Vector quantization (Simple vector quantization & with error term); Differential encoding—Predictive coding. Differential pulse code modulation. Delta modulation. Adaptive differential pulse code modulation; Transform based coding : Discrete cosine transform & JPEG standards; Fractal compression

Module-6:

Recent trends in encryption and data compression techniques.

Course Outcomes

After completion of course, students would be:

a. At the end of this course the student will have the knowledge of plaintext, cipher text, RSA and other cryptographic algorithm. Key Distribution. Communication Model. Various models for data compression

References:

1. Cryptography and Network Security by B. Forouzan. McGraw-Hill.
2. The Data Compression Book by Nelson. BPB.
3. Cryptography & Network Security by AtulKahate. TMH.

Note: Nine questions will be set in all by the examiners taking two questions from each unit and one question containing short answer type questions from entire syllabus. Students will be required to attempt five questions. selecting one question from each unit. Question No.1 is compulsory which is from entire syllabus.

MT-NS-202 Steganography & Digital Watermarking (Elective III)

L	T	P
3	0	-

Total Credits: 3
External Marks: 80
Internal Marks: 20

Duration of Exam: 3 Hrs.

Pre-Requisites Image and Video Processing, Linear Algebra

Course Objective

a. The objective of course is to provide a insight to steganography techniques. Watermarking techniques along with attacks on data hiding and integrity of data is included in this course.

UNIT - I

Module-1:

Steganography: Overview, History, Methods for hiding (text, images, audio, video, speech etc.), Issues: Security, Capacity and Imperceptibility, Steganalysis: Active and Malicious Attackers, Active and passive steganalysis.

Module-2:

Frameworks for secret communication (pure Steganography, secret key, public key steganography), Steganography algorithms (adaptive and non-adaptive),

UNIT - II

Module-3:

Steganography techniques: Substitution systems, Spatial Domain, Transform domain techniques, Spread spectrum, Statistical steganography, Cover Generation and cover selection, Tools: EzStego, FFEncode, Hide 4 PGP, Hide and Seek, S Tools etc.)

Module-4:

Detection, Distortion, Techniques: LSB Embedding, LSB Steganalysis using primary sets, Texture based

UNIT - III

Module-5:

Digital Watermarking: Introduction, Difference between Watermarking and Steganography, History, Classification (Characteristics and Applications), Types and techniques (Spatial-domain, Frequency-domain, and Vector quantization based

watermarking), Attacks and Tools (Attacks by Filtering, Remodulation, Distortion, Geometric Compression, Linear Compression etc.), Watermark security & authentication.

UNIT - IV

Module-6:

Recent trends in Steganography and digital watermarking techniques. Case study of LSB Embedding, LSB Steganalysis using primary sets

Course Outcomes

After completion of course, students would be:

b. Learn the concept of information hiding.
c. Survey of current techniques of steganography and learn how to detect and extract hidden information.
d. Learn watermarking techniques and through examples understand the concept.

References:

1. Peter Wayner, "Disappearing Cryptography–Information Hiding: Steganography & Watermarking", Morgan Kaufmann Publishers, New York, 2002.
2. Ingemar J. Cox, Matthew L. Miller, Jeffrey A. Bloom, Jessica Fridrich, TonKalker, "Digital Watermarking and Steganography", Margan Kaufmann Publishers, New York, 2008.
3. Information Hiding: Steganography and Watermarking-Attacks and Countermeasures by Neil F. Johnson, ZoranDuric, SushilJajodia
4. Information Hiding Techniques for Steganography and Digital Watermarking by Stefan Katzenbeisser, Fabien A. P. Petitcolas

Note: Nine questions will be set in all by the examiners taking two questions from each unit and one question containing short answer type questions from entire syllabus. Students will be required to attempt five questions, selecting one question from each unit. Question No.1 is compulsory which is from entire syllabus.

MT-NS-203 Information Theory and Coding (Elective III)

L T P
3 0 -

Total Credits: 3
External Marks: 80
Internal Marks: 20

Duration of Exam: 3 Hrs.

Pre-Requisites Probability Theory, Computer Networks

Course Objective

1. The objective of this course is to provide an insight to information coding techniques, error correction mechanism. Various compression techniques for text, video and image are covered for thorough knowledge of efficient information conveying systems.

UNIT - I

Module-1:
Information and entropy information measures. Shannon's concept of Information. Channel coding, channel mutual information capacity (BW).

Module-2:
Theorem for discrete memory less channel, information capacity theorem, Error detecting and error correcting codes.

UNIT - II

Module-3:
Types of codes: block codes. Hamming and Lee metrics, description of linear block codes, parity check Codes, cyclic code, Masking techniques.

UNIT - III

Module-4:
Compression: loss less and lossy. Huffman codes. LZW algorithm. Binary Image compression schemes, run length encoding. CCITT group 3 1-DCompression, CCITT group 3 2D compression, CCITT group 4 2DCompression.

UNIT - IV

Module-5:

Convolutional codes, sequential decoding. Video image Compression: CITT H 261 Video coding algorithm, audio (speech) Compression. Cryptography and cipher.

Module-6:

Case study of CCITT group 3 1-DCompression, CCITT group 3 2D compression.

Course Outcomes

After completion of course, students would be:

a. The aim of this course is to introduce the principles and applications of information theory.
b. The course will study how information is measured in terms of probability and entropy.
c. The students learn coding schemes, including error correcting codes, The Fourier perspective; and extensions to wavelets, complexity, compression, and efficient coding of audio-visual information.

References:

1. Fundamentals in information theory and coding, Monica Borda.Springer.
2. Communication Systems: Analog and digital, Singh and Sapre, TataMcGraw Hill.
3. Multimedia Communications Fred Halsall.
4. Information Theory, Coding and Cryptography R Bose.
5. Multimedia system Design Prabhat K Andleigh and Kiran Thakrar.

Note: Nine questions will be set in all by the examiners taking two questions from each unit and one question containing short answer type questions from entire syllabus. Students will be required to attempt five questions, selecting one question from each unit. Question No.1 is compulsory which is from entire syllabus.

MT-NS-204 Security Assessment and Risk Analysis (Elective IV)

L	T	P
3	0	-

Total Credits: 3
External Marks: 80
Internal Marks: 20

Duration of Exam: 3 Hrs.

Pre-Requisites Computer and Network Security

Course Objectives

1. Describe the concepts of risk management
2. Define and differentiate various Contingency Planning components
3. Integrate the IRP, DRP, and BCP plans into a coherent strategy to support sustained organizational operations.
4. Define and be able to discuss incident response options, and design an Incident Response Plan for sustained organizational operations.

UNIT - I

Module-1:

Security Basics: Information Security (INFOSEC) Overview: critical information characteristics – availability information states – processing security countermeasures_education, training and awareness, critical information characteristics – confidentiality critical information characteristics – integrity, information states – storage, information states – transmission, security countermeasures_policy, procedures and practices, threats, vulnerabilities.

UNIT - II

Module-2:

Threats to and Vulnerabilities of Systems: definition of terms (e.g., threats, vulnerabilities, risk), major categories of threats (e.g., fraud, Hostile Intelligence Service (HOIS), malicious logic, hackers, environmental and technological hazards, disgruntled employees, careless employees, HUMINT, and monitoring), threat impact areas, Countermeasures: assessments (e.g., surveys, inspections). Concepts of Risk Management: consequences (e.g., corrective action, risk assessment), cost/benefit analysis of controls, implementation of cost_effective controls, monitoring the efficiency and effectiveness of controls (e.g., unauthorized or inadvertent disclosure of information), threat and vulnerability assessment

UNIT - III

Module-3:

Security Planning: directives and procedures for policy mechanism. Risk Management: acceptance of risk (accreditation). corrective actions information identification. risk analysis and/or vulnerability assessment components. risk analysis results evaluation. roles and responsibilities of all the players in the risk analysis process. Contingency Planning/Disaster Recovery: agency response procedures and continuity of operations. contingency plan components. determination of backup requirements. development of plans for recovery actions after a disruptive event. development of procedures for off_site processing. emergency destruction procedures. guidelines for determining critical and essential workload. team member responsibilities in responding to an emergency situation

UNIT - IV

Module-4:

Policies and Procedures
Physical Security Measures: alarms. building construction. cabling. communications centre. environmental controls (humidity and air conditioning). filtered power. physical access control systems (key cards. locks and alarms) Personnel Security Practices and Procedures: access authorization/verification (need_to_know). contractors. employee clearances. position sensitivity. security training and awareness. systems maintenance personnel. Administrative Security Procedural Controls: attribution. copyright protection and licensing. Auditing and Monitoring: conducting security reviews. effectiveness of security programs. investigation of security breaches. privacy review of accountability controls. review of audit trails and logs

Module-5:

Operations Security (OPSEC): OPSEC surveys/OPSEC planning INFOSEC: computer security – audit. cryptography_encryption (e.g.. point_to_point. network. link). cryptography_key management (to include electronic key). cryptography_strength (e.g.. complexity. secrecy. characteristics of the key)

Module-6:

Case study of threat and vulnerability assessment

Course Outcomes
After completion of course, students would be:

a. Capable of recommending contingency strategies including data backup and recovery and alternate site selection for business resumption planning
b. Skilled to be able to describe the escalation process from incident to disaster in case of security disaster.

c. Capable of Designing a Disaster Recovery Plan for sustained organizational operations.
d. Capable of Designing a Business Continuity Plan for sustained organizational operations.

References:

1. Principles of Incident Response and Disaster Recovery. Whitman & Mattord. Course Technology
ISBN: 141883663X
2. (Web Link) http://www.cnss.gov/Assets/pdf/nstissi_4011.pdf

Note: Nine questions will be set in all by the examiners taking two questions from each unit and one question containing short answer type questions from entire syllabus. Students will be required to attempt five questions, selecting one question from each unit. Question No.1 is compulsory which is from entire syllabus.

MT-NS-205 Secure Coding (Elective IV)

L	T	P
3	0	-

Total Credits: 3
External Marks: 80
Internal Marks: 20

Duration of Exam: 3 Hrs.

Pre-Requisites Computer Programming, Compiler Design, Web programming

Course Objectives

1. Understand the basics of secure programming.
2. Understand the most frequent programming errors leading to software vulnerabilities.
3. Identify and analyze security problems in software.
4. Understand and protect against security threats and software vulnerabilities.
5. Effectively apply their knowledge to the construction of secure software systems

UNIT - I

Module-1:

Introduction to software security. Managing software security risk. Selecting software development technologies. An open source and closed source. Guiding principles for software security. Auditing software. Buffet overflows. Access control. Race conditions. Input validation. Password authentication

UNIT - II

Module-2:

Anti-tampering. Protecting against denial of service attack. Copy protection schemes. Client-side security. Database security. Applied cryptography. Randomness and determinism

UNIT - III

Module-3:

Buffer Overrun. Format String Problems. Integer Overflow. and Software Security Fundamentals SQL Injection. Command Injection. Failure to Handle Errors. and Security Touchpoints

Module-4:
Cross Site Scripting, Magic URLs, Weak Passwords, Failing to Protect Data, Weak random numbers, improper use of cryptography

UNIT - IV

Module-5:
Information Leakage, Race Conditions, Poor usability, Failing to protect network traffic, improper use of PKI, trusting network name resolution

Module-6:
Case study of Cross Site Scripting, Magic URLs, Weak Passwords Buffet overflows, Access control, Race conditions.

Course Outcomes
After completion of course, students would be able to:

a. Write secure programs and various risks in the software.
b. Eliminate security problems in the open source software.
c. Real time software and vulnerabilities associated with them.
d. Interrelate security and software engineering.

References:
1. J. Viega, M. Messier, Secure Programming Cookbook, O'Reilly.
2. M. Howard, D. LeBlanc, Writing Secure Code, Microsoft
3. J. Viega, G. McGraw, Building Secure Software, Addison Wesley

Note: Nine questions will be set in all by the examiners taking two questions from each unit and one question containing short answer type questions from entire syllabus. Students will be required to attempt five questions, selecting one question from each unit. Question No.1 is compulsory which is from entire syllabus.

MT-NS-206 Biometrics (Elective IV)

L	T	P
3	0	-

Total Credits: 3
External Marks: 80
Internal Marks: 20

Duration of Exam: 3 Hrs.

Pre-Requisites Image Processing

Course Objective

1. The objective of this course is to introduce Bio-metric and traditional authentication methods. Application of bio-metric systems in government sector and various face recognition and finger print recognition methods are included.

UNIT - I

Module-1:
Introduction and Definitions of bio-metrics. Traditional authenticated methods and technologies

Module-2:
Bio-metric technologies: Fingerprint. Face. Iris. Hand Geometry. Gait Recognition. Ear. Voice. Palm print. On-Line Signature Verification. 3D Face Recognition. Dental Identification and DNA.

UNIT - II

Module-3:
The Law and the use of multi bio-metrics systems

Module-4:
Statistical measurement of Bio-metric. Bio-metrics in Government Sector and Commercial Sector

UNIT - III

Module-5:
Case Studies of bio-metric system. Bio-metric Transaction. Bio-metric System Vulnerabilities.

UNIT - IV

Module-6:

Recent trends in Bio-metric technologies and applications in various domains.

Case study of 3D face recognition and DNA matching.

Course Outcomes

After completion of course, students would be:

a. Perform R&D on bio-metrics methods and systems.
b. A good understanding of the various modules constituting a bio-metric system.
c. Familiarity with different bio-metric traits and to appreciate their relative significance.
d. A good knowledge of the feature sets used to represent some of the popular bio-metric traits.
e. Evaluate and design security systems incorporating bio-metrics.
f. Recognize the challenges and limitations associated with bio-metrics.

References:

1. Biometrics for network security. Paul Reid. Hand book of Pearson

2. D. Maltoni. D. Maio. A. K. Jain. and S. Prabhakar. Handbook of Fingerprint Recognition. Springer Verlag. 2003.

3. A. K. Jain. R. Bolle. S. Pankanti (Eds.). BIOMETRICS: Personal Identification in Networked Society. Kluwer Academic Publishers. 1999.

4. J. Wayman. A.K. Jain. D. Maltoni. and D. Maio (Eds.). Biometric Systems: Technology. Design and Performance Evaluation. Springer. 2004.

5. Anil Jain. Arun A. Ross. Karthik Nanda kumar. Introduction to biometric. Springer. 2011.

6. Biometric Systems: Technology. Design and Performance Evaluation. J. Wayman. A.K. Jain. D. Maltoni. and D. Maio

Note: Nine questions will be set in all by the examiners taking two questions from each unit and one question containing short answer type questions from entire syllabus. Students will be required to attempt five questions. selecting one question from each unit. Question No.1 is compulsory which is from entire syllabus.

MT-CS-203 Mini Project with Seminar

L	T	P
2	-	-

Total Credits: 2
Internal Marks: 100

Students may choose a project based on any subject of Computer Science & Engineering /Network Security. The student will submit a synopsis at the beginning of the semester for approval from the departmental committee in a specified format. The student will have to present the progress of the work through seminars. An assigned teacher will evaluate the performance of the students & marks will be awarded accordingly.

MT-CS-204 Laboratory 3 (Based on Core Subjects)

L	T	P
-	-	4

Total Credits: 2
External Marks: 40
Internal Marks: 10

Duration of Exam: Hrs.

At least 20 exercises related to the core subjects (i.e.10 exercises from each subject) should be given by the teacher concerned.

MT-CS-205 Laboratory 4 (Based on Electives)

L	T	P
-	-	4

Total Credits: 2
External Marks: 40
Internal Marks: 10

Duration of Exam: Hrs.

At least 20 exercises related to the elective subjects (i.e.10 exercises from each subject) should be given by the teacher concerned.

SEMESTER III

MT-NS-303 Data Warehousing & Mining (Elective V)

L T P
3 0 -

Total Credits: 3
External Marks: 80
Internal Marks: 20

Duration of Exam: 3 Hrs.

Pre-Requisites Databases. Probability

Course Objective

1. The objective of this course is to introduce data warehousing and mining techniques. Application of data mining in web mining, pattern matching and cluster analysis is included to aware students of broad data mining areas.

UNIT-I

Module-1:

Introduction to Data Warehousing: Data Mining: Mining frequent patterns. association and correlations; Sequential Pattern Mining concepts. primitives. scalable methods:

UNIT-II

Module-2:

Classification and prediction: Cluster Analysis – Types of Data in Cluster Analysis. Partitioning methods. Hierarchical Methods: Transactional Patterns and other temporal based frequent patterns.

Module-3:

Mining Time series Data. Periodicity Analysis for time related sequence data. Trend analysis. Similarity search in Time-series analysis:

UNIT-III

Module-4:

Mining Data Streams. Methodologies for stream data processing and stream data systems. Frequent pattern mining in stream data. Sequential Pattern Mining in Data Streams.

Classification of dynamic data streams, Class Imbalance Problem; Graph Mining; Social Network Analysis;

UNIT-IV

Module-5:

Web Mining, Mining the web page layout structure, mining web link structure, mining multimedia data on the web, Automatic classification of web documents and web usage mining; Distributed Data Mining.

Module-6:

Recent trends in Distributed Warehousing and Data Mining, Class Imbalance Problem; Graph Mining; Social Network Analysis

Course Outcomes

After completion of course, students would be:

a. Study of different sequential pattern algorithms
b. Study the technique to extract patterns from time series data and it application in real world.
c. Can extend the Graph mining algorithms to Web mining
d. Help in identifying the computing framework for Big Data

References:

1. Jiawei Han and M Kamber , Data Mining Concepts and Techniques, , Second Edition, Elsevier Publication, 2011.
2. Vipin Kumar, Introduction to Data Mining - Pang-Ning Tan, Michael Steinbach, Addison Wesley, 2006.
3. G Dong and J Pei, Sequence Data Mining, Springer, 2007.

Note: Nine questions will be set in all by the examiners taking two questions from each unit and one question containing short answer type questions from entire syllabus. Students will be required to attempt five questions, selecting one question from each unit. Question No.1 is compulsory which is from entire syllabus.

MT-NS-304 Web Search and Information Retrieval (Elective V)

L	T	P
3	0	-

Total Credits: 3

External Marks: 80
Internal Marks: 20

Duration of Exam: 3 Hrs.

Pre-Requisites Probability Theory, Database Management, Web Programming

Course Objective

1. The objective of the course is to introduce information retrieval models and query languages. Application of web search and information retrieval in social networks is also included.

UNIT-I

Module-1:

Information retrieval model, Information retrieval evaluation, Searching the Web

Module-2:

Document Representation, Query languages and query operation, Meta-data search,

UNIT-II

Module-3:

Indexing and searching, Scoring and ranking feature vectors.

UNIT-III

Module-4:

Ontology, domain specific search, parallel and distributed information retrieval.

[illegible]. Integrating RBAC with enterprise IT infrastructures: RBAC for WFMSs, RBAC for UNIX and JAVA environments Case study: Multi line Insurance Company.

UNIT-IV

Module-5:

Smart Card based Information Security, Smart card operating system fundamentals, design and implantation principles, memory organization, smart card files, file management, atomic operation, smart card data transmission ATR,PPS Security techniques- user identification , smart card security, quality assurance and testing , smart card life cycle-5 phases, smart card terminals.

Module-6:

Recent trends in Database security and access control mechanisms. Case study of Role-Based Access Control (RBAC) systems.

Course Outcomes

After completion of course, students would be:

a. In this course, the students will be enabled to understand and implement classical models and algorithms.
b. They will learn how to analyze the data, identify the problems, and choose the relevant models and algorithms to apply.
c. They will further be able to assess the strengths and weaknesses of various access control models and to analyze their behaviour.

References:

1. Role Based Access Control: David F. Ferraiolo, D. Richard Kuhn, RamaswamyChandramouli.
2. http://www.smartcard.co.uk/tutorials/sct-itsc.pdf : Smart Card Tutorial.

Note: Nine questions will be set in all by the examiners taking two questions from each unit and one question containing short answer type questions from entire syllabus. Students will be required to attempt five questions, selecting one question from each unit. Question No.1 is compulsory which is from entire syllabus.

NS-305 Database Security and Access Control (Elective V)

L T P

3 0 -

Total Credits: 3

External Marks: 80
Internal Marks: 20

Duration of Exam: 3 Hrs.

Pre-Requisites Database Management

Course Objective

a. The objective of the course is to provide fundamentals of database security. Various access control techniques mechanisms were introduced along with application areas of access control techniques.

UNIT-I

Module-1:

Introduction to Access Control. Purpose and fundamentals of access control, brief history.

Module-2:

Policies of Access Control. Models of Access Control, and Mechanisms, Discretionary Access Control (DAC), Non- Discretionary Access Control. Mandatory Access Control (MAC). Capabilities and Limitations of Access Control Mechanisms: Access Control List (ACL) and Limitations, Capability List and Limitations.

UNIT-II

Module-3:

Role-Based Access Control (RBAC) and Limitations. Core RBAC, Hierarchical RBAC. Statically Constrained RBAC, Dynamically Constrained RBAC, Limitations of RBAC. Comparing RBAC to DAC and MAC Access control policy.

UNIT-III

Module-4:

Biba'sintrigity model, Clark-Wilson model. Domain type enforcement model. mapping the enterprise view to the system view. Role hierarchies- inheritance schemes. hierarchy structures and inheritance forms. using SoD in real system. Temporal Constraints in RBAC. MAC AND

Module-5:

Periodic and preventive maintenance: Periodic inspection-concept and need, degreasing, cleaning and repairing schemes, overhauling of mechanical components, overhauling of electrical motor, common troubles and remedies of electric motor, repair complexities and its use, definition, need, steps and advantages of preventive maintenance. Steps/procedure for periodic and preventive maintenance of: I. Machine tools, ii. Pumps, iii. Air compressors, iv. Diesel generating (DG) sets, Program and schedule of preventive maintenance of mechanical and electrical equipment, advantages of preventive maintenance. Repair cycle concept and importance.

References

1. Maintenance Engineering Handbook, Higgins & Morrow, Da Information Services.
2. Maintenance Engineering, H. P. Garg, S. Chand and Company.
3. Pump-hydraulic Compressors, Audels, Mcgrew Hill Publication
4. Foundation Engineering Handbook, Winterkorn, Hans, Chapman & Hall London.

Note: Nine questions will be set in all by the examiners taking two questions from each unit and one question containing short answer type questions from entire syllabus. Students will be required to attempt five questions, selecting one question from each unit. Question No.1 is compulsory which is from entire syllabus.

X -CS-305 Business Analytics (Open Elective)

L T P

3 0 -

Total Credits: 3

External Marks: 80
Internal Marks: 20

Duration of Exam: 3 Hrs.

Course Objectives:

1. Understand the role of business analytics within an organization.
2. Analyze data using statistical and data mining techniques and understand relationships between the underlying business processes of an organization.
3. To gain an understanding of how managers use business analytics to formulate and solve business problems and to support managerial decision making.
4. To become familiar with processes needed to develop, report, and analyze business data.
5. Use decision-making tools/Operations research techniques.
6. Mange business process using analytical and management tools.
7. Analyze and solve problems from different industries such as manufacturing, service, retail, software, banking and finance, sports, pharmaceutical, aerospace etc.

UNIT-I

Module-1:

Business analytics: Overview of Business analytics, Scope of Business analytics, Business Analytics Process, Relationship of Business Analytics Process and organisation, competitive advantages of Business Analytics.
Statistical Tools: Statistical Notation, Descriptive Statistical methods, Review of probability distribution and data modelling, sampling and estimation methods overview.

Module-2:

Trendiness and Regression Analysis: Modelling Relationships and Trends in Data, simple Linear Regression.
Important Resources, Business Analytics Personnel, Data and models for Business analytics, problem solving, Visualizing and Exploring Data, Business Analytics Technology

UNIT-II

Module-3:

Organization Structures of Business analytics, Team management, Management Issues, Designing Information Policy, Outsourcing, Ensuring Data Quality, Measuring contribution of Business analytics, Managing Changes.

Descriptive Analytics, predictive analytics, predicative Modelling, Predictive analytics analysis, Data Mining, Data Mining Methodologies, Prescriptive analytics and its step in the business analytics Process, Prescriptive Modelling, nonlinear Optimization.

UNIT-III

Module-4:

Forecasting Techniques: Qualitative and Judgmental Forecasting, Statistical Forecasting Models, Forecasting Models for Stationary Time Series, Forecasting Models for Time Series with a Linear Trend, Forecasting Time Series with Seasonality, Regression Forecasting with Casual Variables, Selecting Appropriate Forecasting Models.

Monte Carlo Simulation and Risk Analysis: Monte Carle Simulation Using Analytic Solver Platform, New-Product Development Model, Newsvendor Model, Overbooking Model, Cash Budget Model.

UNIT-IV

Module-5:

Decision Analysis: Formulating Decision Problems, Decision Strategies with the without Outcome Probabilities, Decision Trees, The Value ofInformation, Utility and Decision Making.

Module-6:

Recent Trends in: Embedded and collaborative business intelligence, Visual data recovery, Data Storytelling and Data journalism.

Course Outcomes:

After completion of course, students would be able to:

a. Students will demonstrate knowledge of data analytics.
b. Students will demonstrate the ability of think critically in making decisions based on data and deep analytics.
c. Students will demonstrate the ability to use technical skills in predicative and prescriptive modeling to support business decision-making.
d. Students will demonstrate the ability to translate data into clear, actionable insights.

References

1. Business analytics Principles, Concepts, and Applications by Marc J. Schniederjans, Dara G. Schniederjans, Christopher M. Starkey, Pearson FT Press.
2. Business Analytics by James Evans, persons Education.

Note: Nine questions will be set in all by the examiners taking two questions from each unit and one question containing short answer type questions from entire syllabus. Students will be required to attempt five questions, selecting one question from each unit. Question No.1 is compulsory which is from entire syllabus.

MT-CS-306 Industrial Safety (Open Elective)

L T P

3 0 -

Total Credits: 3

External Marks: 80
Internal Marks: 20

Duration of Exam: 3 Hrs.

UNIT-I

Module-1:

Industrial safety: Accident. causes. types, results and control, mechanical and electrical hazards. types. causes and preventive steps/procedure, describe salient points of factories act 1948for health and safety. wash rooms. drinking water layouts. light. cleanliness. fire. guarding. pressure vessels, etc, Safety color codes. Fire prevention and firefighting. equipment and methods

Module-2:

Fundamentals of maintenance engineering: Definition and aim of maintenance engineering. Primary and secondary functions and responsibility of maintenance department. Types of maintenance, Types and applications of tools used for maintenance. Maintenance cost & its relation with replacement economy. Service life of equipment.

UNIT-II

Module-3:

Wear and Corrosion and their prevention: Wear- types. causes. effects. wear reduction methods. lubricants-types and applications. Lubrication methods. general sketch. working and applications. i. Screw down grease cup. ii. Pressure grease gun. iii. Splash lubrication. iv. Gravity lubrication. v. Wick feed lubrication vi. Side feed lubrication. vii. Ring lubrication. Definition. principle and factors affecting the corrosion. Types of corrosion. corrosion prevention methods

UNIT-III

Module-4:

Fault tracing: Fault tracing-concept and importance. decision tree concept. need and applications. sequence of fault finding activities. show as decision tree. draw decision tree for problems in machine tools. hydraulic. pneumatic. automotive. thermal and electrical equipment's like. I. Any one machine tool. ii. Pump iii. Air compressor. iv. Internal combustion engine. v. Boiler.vi. Electrical motors. Types of faults in machine tools and their general causes.

Module-5:

Text and multimedia languages, Social networks

Module-6:

Recent trends in Web search and Information retrieval techniques.

Course Outcomes

After completion of course, students would be:

a. To identify basic theories and analysis tools as they apply to information retrieval.
b. To develop understanding of problems and potentials of current IR systems.
c. To learn and appreciate different retrieval algorithms and systems.
d. To apply various indexing, matching, organizing, and evaluating methods to IR problem.
e. To become aware of current experimental and theoretical IR research.

References:

1. C. D. Manning, P. Raghavan and H. Schütze, Introduction to Information Retrieval, Cambridge University Press, 2008 (available at http://nlp.stanford.edu/IR-book).
2. Chakrabarti, S. (2002). Mining the web: Mining the Web: Discovering knowledge from hypertext data. Morgan-kaufman.
3. B. Croft, D. Metzler, T. Strohman, Search Engines: Information Retrieval in Practice, Addison- Wesley, 2009 (available at http://ciir.cs.umass.edu/irbook/).
4. R. Baeza-Yates, B. Ribeiro-Neto, Modern Information Retrieval, Addison-Wesley, 2011 (2nd Edition).

Note: Nine questions will be set in all by the examiners taking two questions from each unit and one question containing short answer type questions from entire syllabus. Students will be required to attempt five questions, selecting one question from each unit. Question No.1 is compulsory which is from entire syllabus.

MT-CS-307 Operations Research (Open Elective)

L	T	P
3	0	-

Total Credits: 3

External Marks: 80
Internal Marks: 20

Duration of Exam: 3 Hrs.

UNIT-I

Module-1:

Optimization Techniques, Model Formulation, models, General L.R Formulation, Simplex Techniques, Sensitivity Analysis, Inventory Control Models

UNIT-II

Module-2:

Formulation of a LPP - Graphical solution revised simplex method - duality theory - dual simplex method - sensitivity analysis - parametric programming.

UNIT-III

Module-3:

Nonlinear programming problem - Kuhn-Tucker conditions min cost flow problem - max flow problem - CPM/PERT

Module-4:

Scheduling and sequencing - single server and multiple server models - deterministic inventory models - Probabilistic inventory control models - Geometric Programming.

UNIT-IV

Module-5:

Competitive Models,Single and Multi-channel Problems, Sequencing Models, Dynamic Programming, Flow in Networks, Elementary Graph Theory, Game Theory Simulation

Course Outcomes:

After completion of course, students would be able to:

a. Students should able to apply the dynamic programming to solve problems of discreet and continuous variables.
b. Students should able to apply the concept of non-linear programming.
c. Students should able to carry out sensitivity analysis.
d. Student should able to model the real world problem and simulate it.

References

1. H.A. Taha, Operations Research, An Introduction, PHI, 2008
2. H.M. Wagner, Principles of Operations Research, PHI, Delhi, 1982.
3. J.C. Pant, Introduction to Optimisation: Operations Research, Jain Brothers, Delhi, 2008
4. Hitler Libermann Operations Research: McGraw Hill Pub. 2009
5. Pannerselvam, Operations Research: Prentice Hall of India 2010
6. Harvey M Wagner, Principles of Operations Research: Prentice Hall of India 2010

Note: Nine questions will be set in all by the examiners taking two questions from each unit and one question containing short answer type questions from entire syllabus. Students will be required to attempt five questions, selecting one question from each unit. Question No.1 is compulsory which is from entire syllabus.

IT-CS-308 Cost Management of Engineering Projects (Open Elective)

L T P

3 0 -

Total Credits: 3

External Marks: 80
Internal Marks: 20

Duration of Exam: 3 Hrs.

UNIT-I

Module-1:

Introduction and Overview of the Strategic Cost Management Process

Module-2:

Cost concepts in decision-making; Relevant cost, Differential cost, Incremental cost and Opportunity cost. Objectives of a Costing System; Inventory valuation; Creation of a Database for operational control; Provision of data for Decision-Making

UNIT-II

Module-3:

Project: meaning, Different types, why to manage, cost overruns centres, various stages of project execution: conception to commissioning. Project execution as conglomeration of technical and nontechnical activities. Detailed Engineering activities, Pre project execution main clearances and documents Project team: Role of each member. Importance Project site: Data required with significance. Project contracts, Types and contents. Project execution Project cost control. Bar charts and Network diagram. Project commissioning: mechanical and process.

UNIT-III

Module-4:

Cost Behavior and Profit Planning Marginal Costing; Distinction between Marginal Costing and Absorption Costing; Break-even Analysis. Cost-Volume-Profit Analysis. Various decision-making problems. Standard Costing and Variance Analysis. Pricing strategies: Pareto Analysis. Target costing, Life Cycle Costing. Costing of service sector. Just-in-time approach. Material Requirement Planning. Enterprise Resource Planning. Total Quality Management and Theory of constraints. Activity-Based Cost Management. Bench Marking; Balanced Score Card and Value-Chain Analysis.. Budgetary Control; Flexible Budgets; Performance budgets; Zero-based budgets.. Measurement of Divisional profitability pricing decisions including transfer pricing.

UNIT-IV

Module-5:

Quantitative techniques for cost management, Linear Programming, PERT/CPM, Transportation problems, Assignment problems, Simulation, Learning Curve Theory.

References

1. Cost Accounting A Managerial Emphasis, Prentice Hall of India, New Delhi
2. Charles T. Horngren and George Foster, Advanced Management Accounting
3. Robert S Kaplan Anthony A. Alkinson, Management & Cost Accounting
4. Ashish K. Bhattacharya, Principles & Practices of Cost Accounting A. H. Wheeler publisher
5. N.D. Vohra, Quantitative Techniques in Management, Tata McGraw Hill Book Co. Ltd.

Note: Nine questions will be set in all by the examiners taking two questions from each unit and one question containing short answer type questions from entire syllabus. Students will be required to attempt five questions, selecting one question from each unit. Question No.1 is compulsory which is from entire syllabus.

T-CS-309 Composite Materials (Open Elective)

L T P

3 0 -

Total Credits: 3

External Marks: 80
Internal Marks: 20

Duration of Exam: 3 Hrs.

UNIT-I

Module-1: Introduction

Definition – Classification and characteristics of Composite materials. Advantages and application of composites. Functional requirements of reinforcement and matrix. Effect of reinforcement (size, shape, distribution, volume fraction) on overall composite performance.

Module-2: Reinforcements

Preparation-layup, curing, properties and applications of glass fibers, carbon fibers, Kevlar fibers and Boron fibers.Properties and applications of whiskers, particle reinforcements. Mechanical Behavior of composites: Rule of mixtures, Inverse rule of mixtures. Isostrain and Isostress conditions

UNIT-II

Module-3: Manufacturing Of Metal Matrix Composites

Casting – Solid State diffusion technique, Cladding – Hot isostatic pressing, Properties and applications. Manufacturing of Ceramic Matrix Composites: Liquid Metal Infiltration – Liquid phase sintering. Manufacturing of Carbon – Carbon composites: Knitting, Braiding, Weaving. Properties and applications

UNIT-III

Module-4: Manufacturing Of Polymer Matrix Composites

Preparation of Moulding compounds and prepregs – hand layup method – Autoclave method – Filament winding method – Compression moulding – Reaction injection moulding. Properties and applications

UNIT-IV

Module-5: Strength

Laminar Failure Criteria-strength ratio, maximum stress criteria, maximum strain criteria, interacting failure criteria, hygrothermal failure. Laminate first play failure-insight strength: Laminate strength-ply discount truncated maximum strain criterion: strength design using caplet plots; stress concentrations.

xt Books:

1. Material Science and Technology – Vol 13 – Composites by R.W.Cahn – VCH, West Germany.
2. Materials Science and Engineering, An introduction. WD Callister, Jr., Adapted by RBalasubramaniam, John Wiley & Sons, NY. Indian edition, 2007.

References

1. Hand Book of Composite Materials-ed-Lubin.
2. Composite Materials – K.K.Chawla.
3. Composite Materials Science and Applications – Deborah D.L. Chung.
4. Composite Materials Design and Applications – Danial Gay, Suong V. Hoa, and Stephen W.Tasi.

Note: Nine questions will be set in all by the examiners taking two questions from each unit and one question containing short answer type questions from entire syllabus. Students will be required to attempt five questions, selecting one question from each unit. Question No.1 is compulsory which is from entire syllabus.

T-CS-310 Waste to Energy (Open Elective)

L T P

3 0 -

Total Credits: 3

External Marks: 80
Internal Marks: 20

Duration of Exam: 3 Hrs.

UNIT-I

Module-1: Introduction To Energy From Waste

Waste: Classification of waste as fuel – Agro based, Forest residue.Industrial waste - MSW – Conversion devices – Incinerators, gasifiers, digestors.

Module-2: Biomass Pyrolysis

Pyrolysis – Types, slow fast – Manufacture of charcoal – Methods – Yieldsand application – Manufacture of pyrolytic oils and gases, yields and applications

UNIT-II

Module-3: Biomass Gasification

Gasifiers – Fixed bed system – Downdraft and updraft gasifiers –Fluidized bed gasifiers – Design, construction and operation – Gasifier burner arrangement for thermalheating – Gasifier engine arrangement and electrical power – Equilibrium and kinetic consideration ingasifier operation.

UNIT-III

Module-4: Biomass Combustion

Biomass stoves – Improved chullahs, types, some exotic designs, Fixedbed combustors, Types, inclined grate combustors, Fluidized bed combustors, Design, construction andoperation - Operation of all the above biomass combustors.

UNIT-IV

Module-5: Biogas

Biogas: Properties of biogas (Calorific value and composition) - Biogas plant technology andstatus - Bio energy system - Design and constructional features - Biomass resources and theirclassification - Biomass conversion processes - Thermo chemical conversion – Directcombustion -biomass gasification - pyrolysis and liquefaction - biochemical conversion - anaerobic digestion – Typesof biogas Plants – Applications - Alcohol production from biomass - Bio diesel production - Urban wasteto energy conversion - Biomass energy programme in India

References

1. Non Conventional Energy, Desai, Ashok V., Wiley Eastern Ltd., 1990.

2. Biogas Technology - A Practical Hand Book - Khandelwal, K. C. and Mahdi, S. S., Vol. I & II, TataMcGraw Hill Publishing Co. Ltd., 1983.

3. Food, Feed and Fuel from Biomass, Challal, D. S., IBH Publishing Co. Pvt. Ltd., 1991.

4. Biomass Conversion and Technology, C. Y. WereKo-Brobby and E. B. Hagan, John Wiley & Sons,1996.

Note: Nine questions will be set in all by the examiners taking two questions from each unit and one question containing short answer type questions from entire syllabus. Students will be required to attempt five questions, selecting one question from each unit. Question No.1 is compulsory which is from entire syllabus.

MT-NS-301 Dissertation-I /Industrial Project

L	T	P
0	0	16

Total Credits: 8
External Marks: 130
Internal Marks: 30

Duration of Exam: Hrs.

Dissertation phase-I mainly focus on the problem defining and literature survey specific to the problem. The student will submit a synopsis at the beginning of the semester for the approval from the project committee in a specified format that clearly define the problem.

MT-NS-302 Industrial Training

L	T	C
0	0	2

Total Credits: 2
External Marks: 50
Internal Marks: --

Practical training conducted after second semester will be evaluated in the third semester based on Viva-Voce.

MT-NS-401 Dissertation Phase-II

L T P
0 0 32

Total Credits: 16
External Marks: 400
Internal Marks: 100

The student will submit a synopsis at the beginning of the semester for the approval from the project committee in a specified format. Synopsis must be submitted within a two weeks. The first defence, for the dissertation work. should be held with in a one month. Dissertation Report must be submitted in a specified format to the project committee for evaluation purpose.

Bhagat Phool Singh Mahila Vishwavidyalaya, Khanpur Kalan (Sonepat), Haryana-131305

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Minutes of the meeting of Faculty of Engineering and Technology held on 18.05.2018 at 3.30 p.m. in the office of Dean, Faculty of Engineering and Technology, BPSMV, Khanpur Kalan.

The following were present:-

1.	Prof. Vijay Nehra, Dean, Faculty of Engineering & Technology,	Chairperson
2.	Prof. Ajit Singh, Chairperson, Deptt of CSE/IT	Member
3.	Prof. Lalit Jajpura, Chairperson, Deptt of F.T.	Member
4.	Ms. Priyanka, Asstt. Prof., Deptt. of ECE	Member
5.	Ms. Manju Saroha, Asstt. Prof., Deptt. of CSE/IT	Member

After detailed discussion and deliberation, the following decisions were taken:-

Agenda No. 1: Considered and Approved.
The AICTE model curriculum of B.Tech. Electronics and Communication Engineering as resolved by Under Graduate Board of Studies in Department of Electronics and Communication Engineering held on 9/4/2018 and subsequently on17/5/2018 was considered and approved.

Agenda No. 2: Considered and Approved.
The AICTE model curriculum of M.Tech. Electronics and Communication Engineering M.Tech. ICT as resolved by Post Graduate Board of Studies of Department of Electronics and Communication Engineering held on 5/5/2018 was considered and approved.

Agenda No. 3: Considered and Approved.
The syllabi and scheme of examination of pre Ph.D course work in Electronics and Communication Engineering of Department of Electronics and Communication Engineering held on 5/5/2018 was considered and approved.

Agenda No.4: Considered and Approved.
The recommendations of Under Graduate and Post Graduate Board of Studies of Department of Fashion Technology held on 22/2/2018 was considered and approved to start integrated B.Sc. and M.Sc. (Fashion and Apparel Design). However the members of were opinion that suitable faculty may be assigned for the course as the same cannot started in Faculty of Engineering and Technology. Further, all the detail pertaining to Departments submitted on AICTE web portal may be taken into consideration before starting the course in department of Fashion Technology.

18/5/2018

Agenda No.5: Considered and Approved.
The request of Ms. Sonia Tyagi to pursue her dissertation work after expiry of regular time period is considered and approved for further discussion and approval from Academic Council for condone of time limit for submission of dissertation.

Agenda No.6: Considered and approved the recommendation of the PGBOS held on 28/3/2018 in the Department of Computer Science & Engineering and Information Technology.

Agenda No.7: Considered and approved the recommendation of the PGBOS held on 16/5/2018 in the Department of Computer Science & Engineering and Information Technology.

Agenda No.8: Considered and approved the recommendation of the UGBOS held on 16/5/2018 in the Department of Computer Science & Engineering and Information Technology.

(Vijay Nehra) (Ajit Singh) 16/5/2018 (Lalit Jajpura) 12.5.18 (Priyanka) (Manju Saroha)

Dean, FET

Endst. No. BPSMV/ECE/ 18/ 665-75 22/5/18 Date:-

A Copy of the above is forwarded to the following for information and necessary action:-

1. PA to Vice-Chancellor (For kind information of the Hon'ble Vice-Chancellor).
2. PA to Registrar (For kind information of the Worthy Registrar)
3. AR(Academic), BPSMV, Khanpur Kalan, Sonipat.
4. Chairperson, Department of CSE/IT, BPSMV, Khanpur Kalan, Sonipat.
5. Chairperson, Department of Fashion Technology, BPSMV, Khanpur Kalan, Sonipat.
6. Chairperson, Department of ECE, BPSMV, Khanpur Kalan, Sonipat.
7. Concerned faculty members.

Vijay Nehra
Dean, FET
21/5/2018

PG BoS.

Department of Electronics and Communication Engineering
Bhagat Phool Singh Mahila Vishwavidyalaya,
Khanpur Kalan (Sonepat), Haryana-131305
Office No. 01263-283124, www.bpswomenuniversity.ac.in

Proceeding of the PG Board of Studies of Electronics and Communication Engineering meeting:-

A meeting of the PGBOS of Electronics and Communication Engineering was held on 05/05/2018 at 10:00am in the office of Chairperson, Department of Electronics and Communication Engineering.

The following members were present:-

1. Prof. Vijay Nehra, Chairperson, ECE
   BPSMV, Khanpur Kalan, Sonipat
2. Prof. Brahmjit Singh, Outside Expert
   Department of Electronics and Communication Engineering
   NIT, Kurukshetra
3. Prof. Amit Garg , Outside Expert
   Department of Electronics and Communication Engineering
   DURST&T, Murthal
4. Dr. Sandeep Dahiya, Assistant Professor, Member
   Department of Electronics and Communication Engineering
5. Mr. Rajender Kumar, Assistant Professor, Member
   Department of Electronics and Communication Engineering

At the outset, Chairperson welcome all the members of PGBOS and further the points were discussed at length and following decisions were taken:-

Agenda No. (a):- Considered and approved.

The panel of examiners submitted by supervisor of Mrs. Deepti Ahlawat having registration No. 11010605 was considered and approved.

Agenda No. (b):- Considered and approved.

Syllabi and Scheme of examination of pre-Ph.D course work in Electronics and Communication Engineering was considered and approved after detailed deliberation and discussion.

Agenda No. (c):- The Model Curriculum of AICTE is implemented in toto w.e.f. 2018-19 for M.Tech(ECE). The contact/credits/course title/hours per week will implemented the same as incorporated in the model curriculum of AICTE. Moreover, there is no model curriculum for M.Tech(ICT) Innovative programme granted by UGC. The structure of AICTE curriculum will be followed for M.Tech (ICT).

Prof. Brahmjit Singh Prof. Amit Garg Prof. Vijay Nehra 5/5/2018 Dr. Sandeep Dahiya 5/5/18

Mr. Rajender Kumar

ECENo.BPSMV/ECE/18/1471-79 Dated: 21.5.18

Copy to:-

1. P.A to VC for kind information of the Vice-Chancellor, BPSMV, Khanpur Kalan.
2. P.A to Registrar for kind information of the Registrar, BPSMV, Khanpur Kalan.
3. All members of PG BOS for information.
4. Assistant Registrar (Academic) for information and necessary action.
5. Assistant Registrar(R&S) for information and necessary action.

Vijay Nehra

Course Curriculum

and

Scheme of Examination

for

Pre-Ph.D

in

Electronics and Communication Engineering

(w.e.f academic session 2018-19)

Offered by

Department of Electronics and Communication Engineering

1st Semester to 4th Semester

Bhagat Phool Singh Mahila Vishwavidyalaya

Khanpur Kalan (Sonepat), Haryana-131305

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413 412

Department of Electronics and Communication Engineering
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Course Curriculum and Scheme of Examination
Of Pre-Ph.D in
Electronics and Communication Engineering

Scheme of studies and Examination for pre-Ph.D. Course Work
In
Electronics and Communication Engineering

The structure of Pre-Ph.D programme course for the award of Ph.D. degree in Electronics and Communication Engineering at Faculty of Engineering and Technology, B P S Mahila Vishwavidyalaya, Kalan is as follows:

S. No	Code	Course Title	Hrs/Week			Total Credit	Marks		Total Marks
			L	T	P		Internal Marks	External Marks	
1.	ECL-701	Research Methodology	4	-	-	4	20	80	100
2.	ECL-703	Departmental Elective (Any one out of given)	4	-	-	4	20	80	100
3	ECP- 721	Literature Survey and Seminar	-	-	8	4	20	80#	100
4	ECP- 722	Scientific Communication	-	-	6	3	20	80#	100
5	ECP- 723	Computational Software Packages Lab		-	4	2	10	40	50
Total			8	-	18	17	90	360	450

List of Departmental Elective Course Floated by Department
The following Elective Courses are identified by the Department:

S.No.	Course Code	Course Title
1.	ECL-703	Design and Simulation Tools
2.	ECL-703	ICT in Agriculture Development
3.	ECL-703	ICT in Rural Development
4.	ECL-703	Solar Photovoltaic System and Technology
5.	ECL-703	Advanced Data Communications
6.	ECL-703	Advanced Digital Signal processing
7.	ECL-703	Coding Theory and Techniques
8.	ECL-703	Embedded Real Time Operating Systems
9.	ECL-703	Device Modeling
10.	ECL-703	Digital System Design
11.	ECL-703	Embedded Real Time Operating Systems

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12.	ECL-703	Micro Electromechanical Systems
13.	ECL-703	Microcontrollers for Embedded system Design
14.	ECL-703	Network security & cryptography
15.	ECL-703	Neural Networks And Fuzzy Systems
16.	ECL-703	VLSI Technology and Design
17.	ECL-703	Wireless Sensors Networks/ Adhoc Wireless & Sensor Networks
18.	ECL-703	Algorithms for VLSI Design Automation
19.	ECL-703	CMOS Analog & Mixed Signal Design
20.	ECL-703	Design for Testability
21.	ECL-703	Hardware Software Co-Design
22.	ECL-703	Image & yideo Processing
23.	ECL-703	Mobile Computing Technologies
24.	ECL-703	Optional Communications Technology
25.	ECL-703	Optional Network
26.	ECL-703	Proportion models For Wireless Communications
27.	ECL-703	System Modeling and Simulation
28.	ECL-703	System On Chip Architecture
29.	ECL-703	VLSI Signal Processing
30.	ECL-703	Microcontrollers For Embedded Systems Design
31.	ECL-703	Microwave Antennas

General Note:

- The duration of the Pre-Ph.D. course will be of one semester in Electronics and Communication Engineering.
- Each student will have to opt one Departmental Elective Course out of the list of Department Electives as per suitability related to the topic and area of research and domain of the study as suggested by supervisor. Moreover, the Supervisor in consultation with Chairperson and DRC may offer other Departmental Elective Course not included in the list of Department Electives as per suitability related to the area of research chosen by students and domain of the study as approved by DRC & PGBOS.
- Each theory paper will be of 100 marks having 20 internal and 80 external marks. There will be nine questions in total from all four units. Question number one is compulsory and set from all four units. Students have to attempt five questions in all selecting at least one question from each four units including compulsory Question. The duration of theory as well as practical exam will be of 3 hrs. The all question will carry equal marks.
- The qualifying marks in each paper of the pre-Ph.D course work shall be 50%.
- Only on satisfactory completion of Pre-Ph.D Programme, which shall be an essential part and parcel of the Ph.D. programme that a candidate shall be eligible to apply for registration in Ph.D. Programme.
- The students will be allowed to use non-programmable scientific calculator. However, sharing/ exchange of calculator is prohibited in the examination.
- Electronic gadgets including cellular phones are not allowed in the examination
- After successful, completion of pre- Ph. D course works, the Department will conduct the DRC for the registration of respective candidate with next six months.

Research Methodologies

ECL- 701

L T P — Total Credits: 4

4- 0- 0

External Marks: - 80 — Total Marks: 100

Internal Marks: - 20

Course Objectives:

- To understand the role of research methodology in engineering
- To understand literature review process and formulation of a research problem
- To understand data collection methods and basic instrumentation
- To learn various statistical tools for data analysis
- To learn technical writing and communication skills required for research
- To create awareness about intellectual property rights and patents

Unit –I: Introduction to Engineering Research

Definition of research, Characteristics of research, Types of research- Descriptive *vs.* Analytical, Applied *vs.* Fundamental, Quantitative *vs.* Qualitative, Conceptual *vs.* Empirical, Overview of research methodology in various areas of engineering, Introduction to problem solving, basic research terminology such as proof, hypothesis, lemma etc., Role of Information and Communication Technology (ICT) in research.

Unit –II: Research Problem Formulation and Methods

Literature review, sources of literature, various referencing procedures, maintain literature data using Endnote, Identifying the gap areas from the literature review and research database, Problem Formulation, Identifying variables to be studied, determine the scope, objectives, limitations and or assumptions of the identified research problem, Justify basis for assumption, Formulate time plan for achieving targeted problem solution.

Important steps in research methods: Observation and Facts, Laws and Theories, Development of Models.

Developing a research plan: Exploration, Description, Diagnosis and Experimentation.

Unit-III: Data Collection and Analysis

Data Collection: Static and dynamic characteristics of instruments used in experimental set up, calibration of various instruments, sampling methods, methods of data collection, Selection of Appropriate Method for Data Collection, Data collection using a digital computer system, case studies of data collection.

Data Analysis: Data processing, data analysis strategies and tools, data analysis with statistical packages, Basic Concepts concerning testing of hypotheses, procedures of hypothesis testing, generalization and interpretation

Applied statistics: Regression analysis, Parameter estimation, Multivariate statistics, Principal component analysis

Software tools for modeling, Simulation and analysis

Unit-IV: Research Reports and Thesis Writing, IPR and Publishing

Research Reports and Thesis Writing:

Introduction: Structure and components of scientific reports, types of report, developing research proposal.

Thesis writing: different steps and software tools in the design and preparation of thesis, layout, structure and language of typical reports, Illustrations and tables, bibliography, referencing and footnotes, word processing tools such as Latex, ward, etc.

Oral presentation: planning, software tools, creating and making effective presentation, use of visual aids, importance of effective communication.

Research Ethics, IPR and Publishing

Ethics: ethical issues.

IPR: intellectual property rights and patent law, techniques of writing a Patent, filing procedure, technology transfer, copy right, royalty, trade related aspects of intellectual property rights in context research and innovation Publishing: design of research paper, citation and acknowledgement, plagiarism tools, reproducibility and accountability.

Reference/Text Books:

1. Wayne Goddard, Stuart Melville, Research Methodology: An Introduction, Juta and Company Ltd, 2004
2. Ranjit Kumar, Research Methodology: A Step by Step Guide for Beginners, SAGE publications Ltd., 2011.
3. C R Kothari, Research Methodology: Methods and Trends, New Age International, 2004
4. S.D. Sharma , Operational Research, Kedar Nath Ram Nath & Co.,1972
5. B.L. Wadehra, Law relating to patents, trademarks, copyright designs and geographical indications, Universal Law Publishing, 2014.
6. Stuart Melville and Wayne Goddard, Research Methodology: An Introduction For Science & Engineering Students.
7. Research Methodology: An Introduction' by Wayne Goddard and Stuart Melvill.
8. Donald Cooper, Pamela Schindler, Business Research Methods, McGraw-Hill publication, 2005.

Literature Survey and Seminar

ECP- 721
L T P
- - 8

Credits:-4

Internal Marks: 100
External Marks:

Total Marks: 100

Course Objectives:

- Literature Survey and Seminar is preliminary steps towards research problem formulation. developing a research plan and preparation of draft synopsis. Each student will carry out the exhaustive literature survey and the review of the work done earlier on the topic of research under the guidance of supervisor. It also focuses on important steps in research methods and developing a research plan.

Literature Survey

- Overview – What is literature survey, Functions of literature survey, sources of literature, various referencing procedures, developing a Bibliography, maintain literature data using Endnote, Identifying the gap areas from the literature review and research database, Searching for publications – Publication databases, search engines and patent databases, Find some/all of the references for a given paper, including those that are not on the web Online tools – google, CiteSeer, ACM Digital Library, IEEE, The on-line Computer Science bibliography, Survey papers,Searching patents.

Formulating Problem Statement

- Overview of research process: Formulating the Research Problem, Extensive Literature Review, Developing the objectives, preparing the Research Design Problem Formulation, Identifying variables to be studied, determine the scope, objectives, limitations and or assumptions of the identified research problem, Justify basis for assumption, Formulate time plan for achieving targeted problem solution including Sample Design, Collecting the Data, Analysis of Data, Generalization and Interpretation, preparation of the Report or Presentation of Results-Formal write-ups of conclusions reached.
- Problem statement – Conditions and steps in selecting a research problem, Understanding the Key research area of interest, How to get new ideas (Criticizing a paper), Finding a good problem: Top-down and Bottom-up approach, Creative thinking techniques, Coming up with a problem statement
- Defining objectives – How to find objectives, characteristics of objectives.

Developing a research plan: Exploration, Description, Diagnosis and Experimentation.

- Developing a Research Proposal: Format of research proposal, Individual research proposal, Institutional proposal, Proposal of a student

Note:

Internal assement will be carried out by the involved respective faculty members on the basis of student's progress in literature review and problem formulation. External Assessment/ evaluation of the candidate will be carried out by internal board of examiner on the basis of literature review, proposal, presentation and viva voce. Candidates have to give two presentations based on the literature survey, which will carry 40 marks each. The candidate shall submit the three copies of presentation to the office of department through the respective supervisor. First presentation will be conducted in the middle of semester during which the candidate is admitted. The second presentation having drafted synopsis involving problem formulation, literature review, research gap, plan of the

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research work related to the topic of research and will be conducted in the presence of Supervisor, Chairperson, External examiner as appointed by the university and open to all students and faculty members of the department. Other faculty members may attend and give suggestions relevant to topic of research. The student will submit review of literature as well as drafted synopsis at the end of semester in a specified format duly signed by supervisor.

ECP- 722 Scientific Communications

L T P Total Credits: 2

0- 0- 4

Internal Marks: 100

External Marks: Total Marks: 100

Course Objective

Candidates is required to prepare a concept paper/working paper/review paper by covering exhaustive literature survey involving research papers / references books / unpublished doctoral dissertations / other reports etc. To qualify the paper the research student is required either to present the prepared paper in an International Conference/Seminar/Workshop or publish in a research journal or present the same paper internal departmental committee. Acceptance for publication or presentation will be considered as published/ presented. A duly constituted committee of three teachers of the department by the Chairperson shall evaluate the completion of the paper.

Paper Writing and Report Generation

Basic concepts of paper writing and report generation, review of literature, concepts of bibliography and references, significance of report writing, steps of report writing, types of research reports, methods of presentation of report.

List of important journals in subject area, impact factor, research articles, research papers, reviews, scientific popular articles, process of reviewing, literature review, Identification and formulation of problem, Research design, Sampling techniques, Data Collection, Statistical and sensitive analysis of data, Interpretation of result.

Summarizing paper – Reading abstracts and finding ideas, conclusion, Advantages of their approach, the drawbacks of the papers (What is lacking – can be found in the sections such as future work) Generalize results from a research paper to related research problems Comparing the approach - Identify weaknesses and strengths in recent research articles in the subject.

Research paper writing: Concept of title, author-line, address, abstract, summary, hypothesis, keywords, introduction, methodology, observations, recording of observations, statistical treatment, discussion, conclusion.

Finding and citing relevant work of others, styles of references, Copyright Act (in brief), plagiarism, cheating/ academic frauds.

Report Writing: Contents of report- Tabulation, Coding, Editing, Summary Writing, Bibliography Format.

Publishing a paper

How to write scientific paper - Structure of a conference and journal paper, how (and How Not) to write a Good systematic Paper: Abstract writing, chapter writing, discussion, conclusion, references, bibliography, and In-class discussion of technical writing examples, Poster papers, review papers, how to organize thesis/ Project report, How to write a research proposal? How research is funded?

Research ethics – Legal issues, copyright, plagiarism

General advice about writing technical papers in English - Tips for writing correct English

How to present scientific paper

Talk structure, basic presentations skills

Documentation and presentation tools – LATEX, Microsoft office, PowerPoint and SLITHY

Communication with the Editor, Handling Referees' Comments, Galey Proofs?

Preparing and Delivering of Oral and Poster Presentations
Avoiding Plagiarism, introduction to intellectual property rights i.e. patent and copy right, etc.

Note:

Assessment/ evaluation internal as well as external in terms of submission of scientific communication article in journal by internal board of examiner consisting of supervisor, Chairperson and one faculty member from the department on the basis of literature review, proposal, presentation and viva voce. Other faculty members may attend and give suggestions relevant to topic of research.

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ECP- 723 Computational Software Packages Lab

L T P

0- 0- 4

Total Credits: 2

Internal Marks: 10

External Marks: 40

Total Marks: 50

Problem solving based on General Purpose Scientific Computing software or other related software/experimentation/survey/testing as per suitability related to the topic of research and domain of the study.

Note: Evaluation/assessment of the candidate in terms of practical exam and viva voce conducted in the presence of Supervisor, Chairperson, External examiner appointed by the university.

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Bhagat Phool Singh Mahila Vishwavidyalaya Khanpur Kalan

ORDINANCE NO. BPSMV/CBCS/2016/1

CHOICE BASED CREDIT SYSTEM ORDINANCE

(w e.f. July 2018)

Applicable To All the Post Graduate and Undergraduate Programmes being run in the University Teaching Departments, and constituent college at BPS Mahila Vishwavidyalaya, Khanpur Kalan Campus (Excluding L.L.B., , B.A.M.S., B.Ed., M.Ed., M.P.Ed., B.P.Ed., Programmes offered at BPSMV, Khanpur Kalan Campus, Programmes offered at South Campus Bhainswal Kalan and programmes offered at regional centres Lula Ahir, Rewari and Kharal, Narwana)

Notwithstanding anything contained in any rule for Post Graduate and Undergraduate Programmes this ordinance shall apply to every student/programme of 2&1year/3-year PG/UG programme running by the University and its constituent college at BPS Mahila Vishwavidyalaya, Khanpur Kalan Campus.

1. **Definitions :**

1.1.1.1 **Academic Year:** Two consecutive (one odd + one even) semesters constitute one academic year.

1.1.1.2 **Choice Based Credit System (CBCS):** The CBCS provides choice for students to select from the prescribed courses (core, elective or minor or soft skill courses).

1.1.1.3 **Course:** Usually referred to, as 'papers' is a component of a programme. All courses need not carry the same weight. The courses should define learning objectives and learning outcomes. A course may be designed to comprise lectures/ tutorials/laboratory work/ field work/ outreach activities/ project work/ vocational training/viva/ seminars/ term papers/assignments/ presentations/ self-study etc. or a combination of some of these.

1.1.1.4 **Credit Based Semester System (CBSS):** Under the CBSS, the requirement for awarding a degree or diploma or certificate is prescribed in terms of number of credits to be completed by the students.

1.1.1.5 **Credit Point:** It is the product of grade point and number of credits for a course.

1.1.1.6 **Credit:** A unit by which the course work is measured. It determines the number of hours of instructions required per week. One credit is equivalent to one hour of teaching (lecture or tutorial) or two hours of practical work/field work per week.

1.1.1.7 **Cumulative Grade Point Average (CGPA):** It is a measure of overall cumulative performance of a student over all semesters. The CGPA is the ratio of total credit points secured by a student in various courses in all semesters and the sum of the total credits of all courses in all the semesters. It is expressed up to two decimal places.

1.1.1.8 **Grade Point:** It is a numerical weight allotted to each letter grade on a 10-point scale.

1.1.1.9 **Letter Grade:** It is an index of the performance of students in a said course. Grades are denoted by letters O, A+, A, B+, B, C, P and F.

1.1.1.10 **Programme:** An educational programme leading to award of a Degree, diploma or certificate.

1.1.1.11 **Semester Grade Point Average (SGPA):** It is a measure of performance of work done in a semester. It is ratio of total credit points secured by a student in various courses registered in a semester and the total course credits taken during that semester. It shall be expressed up to two decimal places.

1.1.1.12 **Semester:** Each semester will consist of 15-18 weeks of academic work equivalent to 90 actual teaching days. The odd semester may be scheduled from July to December and even semester from January to June.

1.1.1.13 **Transcript or Grade Card or Certificate:** Based on the grades earned, a grade certificate shall be issued to all the registered students after every semester. The grade certificate will display the course details (code, title, number of credits, grade secured) along with SGPA of that semester and CGPA earned till that semester.

2. **Types of Courses:**

Courses in a programme may be of three kinds: Core, Elective and Foundation.

2.1 Core Course: There may be a Core Course in every semester. This is the course which is to be compulsorily studied by a student as a core requirement to complete the requirement of a programme in a said discipline of study.

2.2 **Elective Course:** Elective course is a course which can be chosen from a pool of papers. It may be:

- Supportive to the discipline of study
- Providing an expanded scope
- Enabling an exposure to some other discipline/domain
- Nurturing student's proficiency/skill.

An elective may be "Generic Elective" focusing on those courses which add generic proficiency to the students. An elective may be "Discipline centric" or

Good (B+)	07	55-64
Above Average (B)	06	50-54
Average (C)	05	41-49
Pass (P)	04	40
Fail (F)	00	Less than 40
Absent (AB)	00	Absent

These grade points have been set keeping in view the UGC requirements of Grade B and B+ to be not less than 50 and 55 percent, respectively.

3.1.3 A student obtaining Grade F shall be considered failed and will be required to reappear in the examination.

3.1.4 For non credit courses 'Satisfactory' or "Unsatisfactory' shall be indicated instead of the letter grade and this will not be counted for the computation of SGPA/CGPA.

3.2 **Assessment :**

3.2.1 In case of at least 50% of core courses offered in different programmes across the disciplines, the assessment of the theoretical component towards the end of the semester should be undertaken by external examiners from outside the university conducting examination, who may be appointed by the competent authority. In such courses, the question papers will be set as well as assessed by external examiners.

3.2.2 In case of the assessment of practical component of such core courses, the team of examiners should be constituted on 50 – 50 % basis. i.e. half of the examiners in the team should be invited from outside the university conducting examination.

3.2.3 In case of the assessment of project reports / thesis / dissertation etc. the work should be undertaken by internal as well as external examiners.

3.2.4 The ratio of external and internal evaluation will be 80:20, respectively. However, keeping in view the norms of the respective regulatory bodies i.e. AICTE, BCI, CCIM, PCI, NCTE etc. the external and internal evaluation range may be changed by the University.

3.2.5 The grade points awarded to a student in any particular course/paper will be based on the performance of the student in the internal assessment (sessional tests, attendance and assignments/presentations etc.) and the external assessment (end semester examination) taken together. The distribution of internal marks shall be as per the respective programme ordinances.

4. Computation of SGPA and CGPA:

4.1 The following procedure to compute the Semester Grade Point Average (SGPA) and Cumulative Grade Point Average (CGPA) shall be used :

4.1.1 The SGPA is the ratio of sum of the product of the number of credits with the grade points scored by a student in all the courses taken by a student and the sum of the number of credits of all the courses undergone by a student, i.e

$$SGPA\ (Si) = \Sigma(Ci \times Gi) / \Sigma Ci$$

where Ci is the number of credits of the ith course and Gi is the grade point scored by the student in the ith course.

4.1.2 The CGPA is also calculated in the same manner taking into account all the courses undergone by a student over all the semesters of a programme, i.e.

$$CGPA = \Sigma(Ci \times Si) / \Sigma Ci$$

where Si is the SGPA of the ith semester and Ci is the total number of credits in that semester.

4.1.3 The SGPA and CGPA shall be rounded off to 2 decimal points and reported in the transcripts.

4.2 Illustration of Computation of SGPA and CGPA and Format for Transcripts Computation of SGPA and CGPA

Illustration for SGPA

Course	Credit	Grade letter	Grade point	Credit Point (Credit x Grade
Course 1	3	A	8	3 X 8 = 24
Course 2	4	B+	7	4 X 7 = 28
Course 3	3	B	6	3 X 6 = 18
Course 4	3	O	10	3 X 10 = 30
Course 5	3	C	5	3 X 5 = 15
Course 6	4	B	6	4 X 6 = 24
	20			139

Thus, SGPA =139/20 =6.95

Illustration for CGPA

Semester 5	Semester 6		
Credit : 26 SGPA:6.3	Credit : 25 SGPA: 8.0		

Semester 1	Semester 2	Semester 3	Semester 4
Credit : 20 SGPA:6.9	Credit : 22 SGPA:7.8	Credit : 25 SGPA: 5.6	Credit : 26 SGPA:6.0

Thus, **CGPA** = $\frac{20 \times 6.9 + 22 \times 7.8 + 25 \times 5.6 + 26 \times 6.0 + 26 \times 6.3 + 25 \times 8.0}{144} = 6.73$

5 General Guidelines:

5.1 The Teaching Methodology of the Open elective courses shall be as per requirement of the offered Course.

5.2 The gap of one/two semesters missed by the student(s), as the case may be, will count towards the total duration of the programme permissible under the regulations.

5.3 Grace marks shall be awarded in the Open Elective course as per the norms of University.

5.4 In case of student's migration from another University to BPSMV, the equivalence of the Open Elective/Foundation Elective Course shall be decided by the Equivalence Committee of the University.

5.5 All academic problems of the students other than those affecting the University rules and regulations framed from time to time may be looked into by a committee constituted by the Dean Academic Affairs.

5.6 Where this document is silent about any rule, the related Programme Ordinance, University Ordinance, calendar and regulations as framed from time to time shall be applicable.

B. P. S. MahilaVishwavidyalaya, KhanpurKalan
Department of Laws
SCHEME OF EXAMINATIONS OF LL.M. (CBCS Syste)
(W.e.f.2018-19)

1st Semester

S.No.	Code	Course Title	Hours per Week			Total Credits	Max Marks		
			Lect	Tut	Total		Internal Marks	External Marks	Total Marks
1	LAW 2001	Research Methods & Legal Writings	5	1	6	3	20	80	100
2	LAW 2003	Comparative Public Law	5	1	6	3	20	80	100
3		Opt-1*	4	1	5	2	20	80	100
4		Opt-2*	4	1	5	2	20	80	100
5		Opt-3*	4	1	5	2	20	80	100
6	**	Open Elective under CBCS	4	-	4	4	20	80	100
Total Contact Hours/Credits/marks			26	5	31	16	120	480	600

2nd Semester

The S.No.	Code	Course Title	Hours per Week			Total Credits	Max Marks		
			Lect	Tut	Total		Internal Marks	External Marks	Total Marks
4	LAW 2005	Law & Justice in Globalizing World	5	1	6	3	20	80	100
5		Opt-4*	4	1	5	2	20	80	100
6		Opt-5*	4	1	5	2	20	80	100
7		Opt-6*	4	1	5	2	20	80	100
8	LAW 2051	Dissertation				5	30	120	150
9	**	Open Elective under CBCS	4	-	4	4	20	80	100
Total Contact Hours/Credits/marks			21	4	25	18	130	520	650

* Minimum pass marks are 50% in external and internal and external assessment combined in each course .

** The student has to opt this paper from the any groups of optional papers given in annex. A.*

7.5.16

** *open elective under CBCS means students will opt one course in each semester as an open elective from the pool of open elective courses to be decided by the university CBCS Board.*

Consolidate Programme Details

S. No.	Semester	Total Credits	Total Marks
1	1st	16	600
2	2nd	18	650
Total Credits/Marks		24	1250

7.5.18

MINUTES OF THE MEETING OF P.G. B.O.S. IN LAW HELD ON 24th APRIL 2018 AT 11.00 A.M. IN THE OFFICE OF THE CHAIRPERSON DEPARTMENT OF LAWS

The meeting of the PGBOS in Law was held on 24th April 2018 at 11.00 A.M. in the office of the Chairperson. The following were present-

1. Prof. (Dr.) Vimal Joshi, BPSMV — Chairperson
2. Prof. (Dr.) Naresh Kumar, MDU, Rohtak — Subject Expert
3. Prof. (Dr.) J.S.Jhakar, CDLU, Sirsa, — do
4. Dr. Sandhya, Astt. Prof, BPSMV — Member
5. Dr. Kritika, Astt. Prof., BPSMV — do

The PGBOS after detailed discussion resolved and approved as under-

1) The topic of Ph.D. and names of the supervisors .already approved by D.R.C. in its meeting dated 09/11/2017 has been approved by PGBOS as under-

Sr.	Candidate	Topic	Supervisor
1	Ms. Navya Gupta	Law Relating to Differently Abled Persons: A Critical Study.	Prof. Vimal Joshi
2	Ms. Annu	Women Centric Laws vis-a-vis Reverse Discrimination : Recent Judicial Trends.	Dr. Ashok Kumar
3	Ms. Rekha	Sustainable Development and Human Rights: In National Perspectives.	Dr. Kritika

2) The panel of examiners for the evaluation of Ph.D. thesis was approved to evaluate the Ph.D. thesis of Ms. Neelima and Ms. Pooja and forwarded to C.O.E. for further necessary action.

3) The PGBOS has approved the implementation of CBCS system in LL.M. course and approved to include one paper each to be included in LL.M. 1st and 2nd semester and a choice be given to students to choose the paper from the pool of papers offered by university for CBCS system.

4) The scheme of examination of LL.M. with CBCS system has been approved.
5) The board authorized the Chairperson .to provide panel of experts in urgency.

The meeting ended with a thanx to the chair.

Chairperson

CC to-

1. All members of the PGBOS.
2. A.R. Academic, BPSMV, Khanpur Kalan.

24.9.16
Chairperson

ANNEXURE – 52

MINUTES OF THE MEETING OF FACULTY OF LAW HELD ON 15 th MAY 2018 AT 11.00 A.M.

The meeting of the Faculty of Law was held on 15th May 2018 at 11.00 A.M.. The following were present-

1. Prof. (Dr.) Vimal Joshi, Dean, BPSMV — Chairperson
2. Dr. (Mrs). Archna Malik, Astt. Prof (Law), BPSMV — Member
3. Mr. Kuldeep Singh, Supt- in- Charge, Academic nominee of the Registrar, BPSMV, — Secretary

The Faculty after detailed discussion resolved and approved as under-

1. The topic of Ph.D. and names of the supervisors .already approved by D.R.C. in its meeting dated 09/11/2017 and PGBOS in its meeting 24/04/2018 has been approved by Faculty as under-

Sr.	Candidate	Topic	Supervisor
1	Ms. Navya Gupta	Law Relating to Differently Abled Persons: A Critical Study.	Prof. Vimal Joshi
2	Ms. Annu	Women Centric Laws vis-a-vis Reverse Discrimination : recent Judicial Trends.	Dr. Ashok Kumar
3	Ms. Rekha	Sustainable Development and Human Rights: In National Perspective.	Dr. Kritika

2. The Faculty has approved the implementation of CBCS system in LL.M. course and approved to include one paper each to be included in LL.M. 1st and 2nd semester and a choice be given to students to choose the paper from the pool of papers offered by university for CBCS system.
3. The scheme of examination of LL.M. with CBCS system has been approved.

15.5.18

15/5/18

15/5

4. The Faculty appreciated and approved the proposal of the Department to initiate the LL.B. three year course w.e.f. 2019-20 after getting affiliation by Bar Council of India and recommends for creation of two posts of Assistant Professors in Law for this course.
5. The Faculty approved the ordinance of LL.B. three year course.
6. The Faculty approved the Scheme of examination and syllabus of 1st and 2nd semester of LL.B. three year course.
7. The Faculty approved the amended syllabus of B.A. LL.B. and B.B.A. LL.B. 3rd and 4th semester applicable to the students admitted on 2017-18 onwards as per the guidelines issued by Bar Council of India time to time.

The meeting ended with a thanks to the chair.

15/5/18
(Archna Malik)

15.5.18
(Vimal Joshi)

15/5
(Kuldeep Singh)

CC to-

1. All members of the Faculty.
2. P.A. to Registrar for the information of the Registrar.
3. A.R. Academic, BPSMV, Khanpur Kalan.

Chairperson

JYOTI ARORA
IAS

D.O. No. 33 Dated 26/3/18

Principal Secretary to Govt. Haryana,

Technical Education Department, Chandig

Dated 8-3-2018

Subject: Regarding Implementing the Model Curriculum of All India Council for Technical Education (AICTE), New Delhi including Induction program, Teacher's Training and Internshala.

Sir/Madam,

I am glad to inform you that Sh. Parkash Javadekar, Hon'ble Minister of Human Resource Development has launched the model curriculum of AICTE on 24.01.2018 for UG/PG Programme in Engineering and Management. Haryana is the first State to take this initiative for implementing the model curriculum of AICTE which wil be a mile-stone in improving the quality of Technical Education in the State. A workshop in this connection was conducted by the YMCA University of Science an Technology, Faridabad on 15.02.2018 with the initiative of State Govt. in which th representatives from various Universities of State and their affiliated Colleges hav participated. I would like that the Vice-Chancellors of other affiliating universities Technical Institutions may organized such workshops to sensitize the functionaries affiliating institutions and all concerned. The model curriculums developed by AICTE a available on the Website https://www.aicte-india.org/education/model-syllabus.

Vice-Chancellors are requested to ensure the proper implementation Model Curriculum of AICTE including the preparation of action plan for succes conducting of Induction program in their University and affiliated colleges from year.

AICTE has signed an MOU with Internshala for providing the interns counseling and guidance to the students enrolled in AICTE approved Institut Therefore, Vice-Chancellor may ensure that the students may register on Interns portal as per procedure mentioned.

AICTE has introduced the concept of Virtual Lab in its model curric that provides the facility of remote access to the labs in various disciplines for Scie Engineering. The students can register themselves to avail this facility. In addit above, Vice-Chancellor may ensure the teacher training for Induction Program to it successful and the proper implementation of Proficiency Modules for students to them compatible with the improved academic standards of the University/Colle achieve their goals in this competitive environment.

Chairperson
Yashwin Techn
Electronics &
Engg. for Co

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I hope you will deliberate this issue in your Academic Council and will take appropriate decision regarding the implementation of model curriculums developed by the All India Council for Technical Education, New Delhi from the next Academic session. Department of Technical Education may be apprised about the action into the matter.

Warm regards.

Yours sincerely,

(Jyoti Arora)

Prof. S. P. Bansal,
Vice Chancellor,
Bhagat Phool Singh Mahila Vishavidyalaya,
Khanpur Kalan (Sonepat).

...Education Department,
Bays No. 7-12, Sec-4, Panchkula, Haryana.

The Registrar(s),

1. DeenbandhuChhotu Ram University of Science & Technology, Murthal (Sonepat).
2. YMCA University of Science & Technology, Faridabad.
3. Guru Jambheshwar University of Science & Technology, Hisar
4. Indira Gandhi University, Meerpur, Rewari.
5. Ch. Bansi Lal University, Bhiwani.
6. Bhagat Phool Singh Mahila vishavidyalaya, Khanpur Kalan, Sonepat
7. Ch. Ranbir Singh University, Jind
8. Ch. Devi Lal University, Sirsa
9. Maharishi Dayanand University, Rohtak.
10. Kurukshetra University, Kurukshetra.

Memo No.: 431-40 /Univ. Dated: 22-3-18

Subject: **Regarding Implementing the Model Curriculum of All India Council for Technical Education (AICTE), New Delhi including Induction program, Teacher's Training and Internshala.**

Kindly refer to D.O. no. 327 to 336 dated 08.03.2018 of Principal Secretary to Govt. Haryana, Technical Education Department on the subject cited above sent to the Vice-Chancellor(s) of all the affiliating Universities of Technical Institutions.

Vide said D.O letters Vice-Chancellor(s) were requested to ensure the proper implementation of model Curriculum of AICTE including the preparation of action plan for successful conducting of induction program in these universities and affiliated colleges from this year. It was also requested to get the students of the universities to be registered on the internshala portal, for the utilization of the facilities created by AICTE.

As the next academic session i.e. 2018-19 is going to be commenced very soon and it is expected that your university would have taken the initiatives, regarding the implementation of model curriculum of AICTE.

I have been directed by the competent authority to request you to send the action taken report. I, therefore, request your good self to intimate about the action taken by your university for the implementation of the model curriculum of AICTE as well as for conducting the induction programme. This report may please be sent to this office latest by 10.04.2018 through email on dduniv.dte@gmail.com, so that the competent authority could be apprised accordingly.

Deputy Director
For Director General Technical Education
Panchkula, Haryana

Endst. No. 441-50 /Univ. dated: 22-3-18

A Copy of the above is forwarded to the Vice-Chancellor(s) of the following Universities with the request to take immediate necessary action.

1. DeenbandhuChhotu Ram University of Science & Technology, Murthal (Sonepat).
2. YMCA University of Science & Technology, Faridabad.
3. Guru Jambheshwar University of Science & Technology, Hisar
4. Indira Gandhi University, Meerpur, Rewari.
5. Ch. Bansi Lal University, Bhiwani.

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6. Bhagat Phool Singh Mahila vishavidyalaya, Khanpur Kalan, Sonepat
7. Ch. Ranbir Singh University, Jind
8. Ch. Devi Lal University, Sirsa
9. Maharishi Dayanand University, Rohtak.
10. Kurukshetra University, Kurukshetra.

Deputy Director
For Director General Technical Education
Panchkula, Haryana

Endst. No. 451-52 /Univ. dated: 22-3-2018

A Copy of the above is forwarded to PS to (i) W/PSTE and (ii) W/DGTE for information of W/PSTE and DGTE.

Deputy Director
For Director General Technical Education
Panchkula, Haryana

Department of Electronics and Communication Engineering
Bhagat Phool Singh Mahila Vishwavidyalaya,
Khanpur Kalan (Sonepat), Haryana-131305
Office No. 01263-283124, www.bpswomenuniversity.ac.in

Proceeding of the PG Board of Studies of Electronics and Communication Engineering meeting:-

A meeting of the PGBOS of Electronics and Communication Engineering was held on 05/05/2018 at 10:00am in the office of Chairperson, Department of Electronics and Communication Engineering.

The following members were present:-

1. Prof. Vijay Nehra, Chairperson, ECE
   BPSMV, Khanpur Kalan, Sonipat
2. Prof. Brahmjit Singh, Outside Expert
   Department of Electronics and Communication Engineering
   NIT, Kurukshetra
3. Prof. Amit Garg , Outside Expert
   Department of Electronics and Communication Engineering
   DURST&T, Murthal
4. Dr. Sandeep Dahiya, Assistant Professor, Member
   Department of Electronics and Communication Engineering
5. Mr. Rajender Kumar, Assistant Professor, Member
   Department of Electronics and Communication Engineering

At the outset, Chairperson welcome all the members of PGBOS and further the points were discussed at length and following decisions were taken:-

Agenda No. (a):- Considered and approved.

The panel of examiners submitted by supervisor of Mrs. Deepti Ahlawat having registration No. 11010605 was considered and approved.

Agenda No. (b):- Considered and approved.

Syllabi and Scheme of examination of pre-Ph.D course work in Electronics and Communication Engineering was considered and approved after detailed deliberation and discussion.

Agenda No. (c):- The Model Curriculum of AICTE is implemented in toto w.e.f. 2018-19 for M.Tech(ECE). The contact/credits/course title/hours per week will implemented the same as incorporated in the model curriculum of AICTE. Moreover, there is no model curriculum for M.Tech(ICT) Innovative programme granted by UGC. The structure of AICTE curriculum will be followed for M.Tech (ICT).

Prof. Brahmjit Singh Prof. Amit Garg Prof. Vijay Nehra 5/5/2018 Dr. Sandeep Dahiya 5/5/18

Mr. Rajender Kumar

ECENo.BPSMV/ECE/18/437-39 Dated: 8/5/18

Copy to:-

1. P.A to VC for kind information of the Vice-Chancellor, BPSMV, Khanpur Kalan.
2. P.A to Registrar for kind information of the Registrar, BPSMV, Khanpur Kalan.
3. All members of PG BOS for information.
4. Assistant Registrar (Academic) for information and necessary action.
5. Assistant Registrar(R&S) for information and necessary action.

Vijay Nehra

Bhagat Phool Singh Mahila Vishwavidyalaya, Khanpur Kalan (Sonepat), Haryana-131305

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Minutes of the meeting of Faculty of Engineering and Technology held on 18.05.2018 at 3.30 p.m. in the office of Dean, Faculty of Engineering and Technology, BPSMV, Khanpur Kalan.

The following were present:-

1.	Prof. Vijay Nehra, Dean, Faculty of Engineering & Technology,	Chairperson
2.	Prof. Ajit Singh, Chairperson, Deptt of CSE/IT	Member
3.	Prof. Lalit Jajpura, Chairperson, Deptt of E.T.	Member
4.	Ms. Priyanka, Asstt. Prof., Deptt. of ECE	Member
5.	Ms. Manju Saroha, Asstt. Prof., Deptt. of CSE/IT	Member

After detailed discussion and deliberation, the following decisions were taken:-

Agenda No. 1: Considered and Approved.
The AICTE model curriculum of B.Tech. Electronics and Communication Engineering as resolved by Under Graduate Board of Studies in Department of Electronics and Communication Engineering held on 9/4/2018 and subsequently on17/5/2018 was considered and approved.

Agenda No. 2: Considered and Approved.
The AICTE model curriculum of M.Tech. Electronics and Communication Engineering M.Tech. ICT as resolved by Post Graduate Board of Studies of Department of Electronics and Communication Engineering held on 5/5/2018 was considered and approved.

Agenda No. 3: Considered and Approved.
The syllabi and scheme of examination of pre Ph.D course work in Electronics and Communication Engineering of Department of Electronics and Communication Engineering held on 5/5/2018 was considered and approved.

Agenda No.4: Considered and Approved.
The recommendations of Under Graduate and Post Graduate Board of Studies of Department of Fashion Technology held on 22/2/2018 was considered and approved to start integrated B.Sc. and M.Sc. (Fashion and Apparel Design). However the members of were opinion that suitable faculty may be assigned for the course as the same cannot started in Faculty of Engineering and Technology. Further, all the detail pertaining to Departments submitted on AICTE web portal may be taken into consideration before starting the course in department of Fashion Technology.

18/5/2018

Agenda No.5: Considered and Approved.
The request of Ms. Sonia Tyagi to pursue her dissertation work after expiry of regular time period is considered and approved for further discussion and approval from Academic Council for condone of time limit for submission of dissertation.

Agenda No.6: Considered and approved the recommendation of the PGBOS held on 28/3/2018 in the Department of Computer Science & Engineering and Information Technology.

Agenda No.7: Considered and approved the recommendation of the PGBOS held on 16/5/2018 in the Department of Computer Science & Engineering and Information Technology.

Agenda No.8: Considered and approved the recommendation of the UGBOS held on 16/5/2018 in the Department of Computer Science & Engineering and Information Technology.

(Vijay Nehra) (Ajit Singh) (Lalit Jajpura) (Priyanka) (Manju Saroha)

Dean, FET

Endst. No. BPSMV/ECE/ 18/665-75 Date:- 22/5/18

A Copy of the above is forwarded to the following for information and necessary action:-

1. PA to Vice-Chancellor (For kind information of the Hon'ble Vice-Chancellor).
2. PA to Registrar (For kind information of the Worthy Registrar)
3. AR(Academic), BPSMV, Khanpur Kalan, Sonipat.
4. Chairperson, Department of CSE/IT, BPSMV, Khanpur Kalan, Sonipat.
5. Chairperson, Department of Fashion Technology, BPSMV, Khanpur Kalan, Sonipat.
6. Chairperson, Department of ECE, BPSMV, Khanpur Kalan, Sonipat.
7. Concerned faculty members.

Dean, FET
21/5/2018

Department of Electronics and Communication Engineering
Bhagat Phool Singh Mahila Vishwavidyalaya,
Khanpur Kalan (Sonepat), Haryana-131305
Office No. 01263-283124, www.bpswomenuniversity.ac.in

Course Curriculum and Scheme of Examination
of
Master of Technology
in
Information and Communication Technology
(w.e.f academic session 2018-19)
First Semester

M.Tech(ICT) : 1st Sem									
S No.	Code	Course Title	Hrs/Week			Total Credits	Internal Marks	External Marks	Total Marks
			L	T	P				
Theory Papers									
1.	ECL2611A	Advance Computer Network	3	-	-	3	20	80	100
2.	ECL2613A	ICT in Agriculture Development	3	-	-	3	20	80	100
3.	ECL2617A	PC Interfacing and Data Acquisition	3	-	-	3	20	80	100
4.	----------	**Elective-I**	3	-	-	3	20	80	100
5.	----------	**Elective-II**	3	-	-	3	20	80	100
6.	RMI2611A	Research Methodology and IPR	2	-	-	2	10	40	50
7.	----------	Audit Course 1	2	--	--	-	20*	80*	100*
Laboratory									
1	ECP2611A	Advance Communication Lab	-	-	2	1	10	40	50
2.	ECP2613A	PC Interfacing and Data Acquisition Lab	-	-	2	1	10	40	50
3	ECP2615A	#Case Study of ICT in Agriculture and Rural Development	-	-	2	1	50	-	50
Total			19	-	6	20	180	520	700

Total Contact Hours = 25 **Total Credits =21**

Elective-I

(1) EPE2601A---- Wireless Sensor Network
(2) EPE2602A-----Optional Network
(3) EPE2603A-----Statistical Information Processing
(4) EPE2607A-----Analysis & modeling of digital system

Elective-II

1. EPE2608A: Telecommunication System Modelling and Simulation
2. EPE2609A: Modelling and Simulation of Dynamic System
3. EPE2610A: Satellite Communication & Broadcasting
4. EPE2611A: Modern Radar System
5. EPE2612A: Management Information System

Case Study of ICT in Agriculture & Rural Development will have internal evaluation by departmental board of panel. Case Study of ICT in Agriculture & Rural Development coordinator will be assigned the load of 2 hour per week excluding his/her own guiding load. However, the Case Study of ICT in Agriculture & Rural Development guiding teacher will be assigned a load of one hour per week.
*The marks will not be counted in total being audit course

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Department of Electronics and Communication Engineering

Bhagat Phool Singh Mahila Vishwavidyalaya, Khanpur Kalan (Sonepat), Haryana-131305

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Second Semester

(w.e.f academic session 2018-19)

M.Tech(ICT): 2nd Sem

Sr. No.	Code	Course Title	Hrs/Week L	T	P	Total Credits	Internal Marks	External Marks	Total Marks
Theory Papers									
	ECL2622A	Wireless and mobile communication	3	-	-	3	20	80	100
	ECL2624A	ICT in Rural Development	3	-	-	3	20	80	100
	ECL2626A	Digital Image Processing	3	-	-	3	20	80	100
		Elective -III	3	-	-	3	20	80	100
		Elective-IV	3	-	-	3	20	80	100
	----------	Audit Course 2	2	-	-	-	-	-	-
Laboratory									
	ECP2622A	Advanced Wireless Communication Lab	-	-	2	1	10	40	50
	ECP2624A	Minor Project	-	-	4	2	10	40	50
	ECP2626A	Digital Image Processing Lab	-	-	2	1	10	40	50
Total			**17**	**-**	**8**	**19**	**130**	**520**	**650**

Total Contact Hours = 25 **Total Credits =19**

Elective-III

(1) EPE2621A---- Satellite Communication
(2) EPE2622A---- Internet of Things
(3) EPE2623A---- Voice and data networks
(4) EPE2627A----Remote sensing & GIS

Elective-IV

1. EPE2628A----Multimedia Systems Design and Development
2. EPE2629A----Agri-electronics
3. EPE2630A----Instrumentation for Agriculture
4. EPE2631A----Telemedicine
5. EPE2632A----Modeling and Simulation of Wireless Communication System

Note: Minimum passing marks for any subject (paper) shall be 40% in the external examination and 40 % in the aggregate of internal and external examinations of that subject.

Seminar will have internal evaluation by departmental board of panel. Seminar coordinator will be assigned the load of 2 hour per week excluding his/her own guiding load.

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Department of Electronics and Communication Engineering
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Third Semester
(wef academic session 2018-19)

M.Tech ICT: 3rd Semester

S. No.	Code	Course Title	Hrs/Week			Total Credits	Internal Marks	External Marks	Total Marks
			L	T	P				
Theory Papers									
1.	----------	Elective-V	3	-	-	3	20	80	100
2.	----------	Open Elective	3	-	-	3	20	80	100
3.	ECL2635A	Dissertation phase-I	0	-	20	10	20	80	200
Total			06	-	20	16	60	240	400

Total Contact Hours = 26 **Total Credits =16**

Elective-V

(1) EPE2636A--: Real Time and Embedded System
(2) EPE2637A--: Wireless Sensor Networks
(3) EPE2638A--: Bio-informatics
(4) EPE2639A--: Bio-electronics
(5) EPE2640A--: Advanced Sensor

Open Elective-II

(1) EOE2631A---:Business Analytics
(2) EOE2632A---:Industrial Safety
(3) EOE2633A---:Operations Research
(4) EOE2634A---:Cost management of Engineering Projects
(5) EOE2635A---:Composite Materials
(6) EOE2636A---:Waste to Energy

Note: Any other subject offered in the department shall be taken as Elective with the consent of course Coordinator/ Faculty.

Review article to be submitted on the basis of literature survey followed by a seminar clearly stating the objectives and the methodology to be opted to achieve the objectives of dissertation phase-I.

Note:

Minimum passing marks for any subject (paper) shall be 40% in the external examination and 40 % in the aggregate of internal and external examinations of that subject.

Minor Project/Dissertation Phase-I will have internal evaluation by departmental board of panel. Minor Project/Dissertation Phase-I coordinator will be assigned the load of 2 hour per week excluding his/her own guiding load. However, the Minor Project/Dissertation Phase-I guiding teacher will be assigned a load of one hour per week.

Department of Electronics and Communication Engineering
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Fourth Semester
(w.e.f academic session 2018-19)

M.Tech (ICT): 4th Semester									
S.No	Paper Code	Course Title Phase- II	Hrs /week			Credits	Internal Marks	External Marks	Total Marks
			L	T	P				
1.	ECL2640A	Dissertation*	-	-	32	16	80	320	400
Total						16	80	320	400

A student will be allowed to submit M. Tech. Thesis (Dissertation) only after presenting one paper in a national/ international conference and another accepted/published in a refereed journal. A proof for the same is to be submitted by each student.

The students will have to present the two progress report of dissertation work through seminars at the regular interval of six weeks. The Coordinator Dissertation Phase–II ensures the conduct of same and each progress report has its own independent marks. The Coordinator Dissertation Phase–II submits the consolidated marks at the end of semester.

Audit course 1 & 2

1. EAU2601A--English for Research Paper Writing
2. EAU2602A--Disaster Management
3. EAU2603A--Sanskrit for Technical Knowledge
4. EAU2604A--Value Education
5. EAU2605A--Constitution of India
6. EAU2606A--Pedagogy Studies
7. EAU2607A--Stress Management by Yoga
8. EAU2608A-Personality Development through Life Enlightenment Skills.

Department of Electronics and Communication Engineering
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Course Curriculum and Scheme of Examination of Master of Technology in Electronics and Communication Engineering First Semester (w.e.f academic session 2018-19)

M.Tech Electronics and Communication Engineering: 1st Semester									
S. No.	Code	Course Title	Hrs/Week			Total Credits	Internal Marks	External Marks	Total Marks
			L	T	P				
Theory Papers									
1.	ECL2611A	Advance communication network	3	-	-	3	20	80	100
2.	ECL2613A	Wireless and Mobile Communication	3	-	-	3	20	80	100
3.		**Elective-I**	3	-	-	3	20	80	100
4.		**Elective-II**	3	-	-	3	20	80	100
Laboratory									
1.	ECP2611A	Advance Communication Network Lab	-	-	4	4	10	40	50
2.	ECP2613A	Wireless and Mobile Communication	-	-	4	4	10	40	50
3	ECP2619A	Research Methodology and IPR	2	-	0	2	50	.....	50
		Audit Course 1	2		0	2			
Total			**16**	-	**8**	**24**	**150**	**400**	**550**

Elective-1
(1) EPE2601A---- Wireless Sensor Network
(2) EPE2602A-----Optional Network
(3) EPE2603A-----Statistical Information Processing
Elective-II
(1) EPE2604A------Cognitive Radio
(2) EPE2605A -----RF and Microwave Circuit Design
(3) EPE2606A------DSP Architecture

Department of Electronics and Communication Engineering
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Office No. 01263-283124, www.bpswomenuniversity.ac.in

Second Semester
(w.e.f academic session 2018-19)

M.Tech Electronics and Communication Engineering: 2nd Semester									
S. No.	Code	Course Title	Hrs/Week			Total Credits	Internal Marks	External Marks	Total Marks
			L	T	P				
Theory Papers									
1.	ECL2620A	Antennas and Radiating Systems	3	-	-	3	20	80	100
2.	ECL2622A	Advanced Digital Signal Processing	3	-	-	3	20	80	100
3.		**Elective-III**	3	-	-	3	20	80	100
4.		**Elective-IV**	3	-	-	3	20	80	100
Laboratory									
1.	ECP2620A	Antennas and Radiating Systems	-	-	4	2	10	40	50
2.	ECP2622A	Advanced Digital Signal Processing	-	-	4	2	10	40	50
3.	ECP2624A	Minor Project	-	-	4	2	10	40	50
4.		Audit course 2	2		0	0			
Total			**14**	**-**	**12**	**18**	**110**	**440**	**550**

Elective-III

(1) EPE2621A---- Satellite Communication
(2) EPE2622A---- Internet of Things
(3) EPE2623A---- Voice and data networks

Elective –IV

(1) EPE2624A----- Markov Chain and Queuing Systems
(2) EPE2625A----- MIMO System
(3) EPE2626A----- Programmable network Systems

Department of Electronics and Communication Engineering
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Third Semester
(w.e.f academic session 2018-19)

M.Tech Electronics and Communication Engineering : 3rd Semester									
S. No.	Code	Course Title	Hrs/Week			Total Credits	Internal Marks-	External Marks	Total Marks
			L	T	P				
Theory Papers									
1.	----------	Elective-V	3	-	-	3	20	80	100
2.	----------	Open elective	3	-	-	3	20	80	100
3.	ECL2635A	Dissertation phase-I	0	-	20	10	20	80	100
Total			06	-	20	16	60	240	300

Elective- V

(1) EPE2633A---High Performance Networks
(2) EPE2634A---Pattern Recognition and Machine Learning
(3) EPE2635A---Remote Sensing

Open elective

(1) EOE2631A---:Business Analytics
(2) EOE2632A---:Industrial Safety
(3) EOE2633A---:Operations Research
(4) EOE2634A---:Cost management of Engineering Projects
(5) EOE2635A---:Composite Materials
(6) EOE2636A---:Waste to Energy

Note: Any other subject offered in the department shall be taken as Elective with the consent of Course coordinator/Faculty.

Department of Electronics and Communication Engineering

Bhagat Phool Singh Mahila Vishwavidyalaya, Khanpur Kalan (Sonepat), Haryana-131305

Office No. 01263-283124, www.bpswomenuniversity.ac.in

Fourth Semester
(w.e.f academic session 2018-19)

M.Tech Electronics and Communication Engineering: 4th Semester									
S.No	Paper Code	Course Title	Hrs /week			Credits	Internal Marks	External Marks	Total Marks
			L	T	p				
1.	ECL2640A	Dissertation Phase -II	-	-	32	16	80	320	400
Total						16	80	320	400

Audit course 1 & 2

1. EAU2601A--English for Research Paper Writing
2. EAU2602A--Disaster Management
3. EAU2603A--Sanskrit for Technical Knowledge
4. EAU2604A--Value Education
5. EAU2605A--Constitution of India
6. EAU2606A--Pedagogy Studies
7. EAU2607A--Stress Management by Yoga
8. EAU2608A-Personality Development through Life Enlightenment Skills..

Department of Electronics and Communication Engineering
Bhagat Phool Singh Mahila Vishwavidyalaya,
Khanpur Kalan (Sonepat), Haryana-131305
Office No. 01263-283124, www.bpswomenuniversity.ac.in

Proceeding of the UG Board of Studies of Electronics and Communication Engineering meeting:-

A meeting of the UGBOS of Electronics and Communication Engineering was held on 17/05/2018 at 10:00AM in the office of Chairperson, Department of Electronics and Communication Engineering.

The following members were present:-

1 Prof. Vijay Nehra
Chairperson of the Department

2 Prof. Manoj Duhan,
Department of Electronics and Communication Engineering
DCRUS&T, Murthal
Email: duhan_manoj@rediffmail.com
Contact: 9355628366

3 Prof. Sandeep Arya
Department of Electronics and Communication Engineering
GJUS&T, Hisar
Email:arya1sandeep@gmail.com
Contact: 9416397567

4 Mr. Krishan Kumar
Department of Electronics and Communication Engineering
Bhagat Phool Singh Mahila Vishwavidyalaya,
Khanpur Kalan (Sonepat), Haryana-131305

At the outset, Chairperson welcome all the members of UGBOS and further the points were discussed at length and following decisions were taken:-

Regarding instructions for the student for attempting question paper following as approved:-

1 A student has to attempt five questions in all. Each question paper consists of two parts, first question is compulsory and consists of eight parts, carrying a two marks each covering the entire syllabus and part B consists of seven questions of sixteen marks each covering the entire syllabus, out of which students has to attempt four questions only.
2 Codes for open elective begins with EOE and for program elective begins with EPE.
3 Scheme for 1 to 8 semester is approved and syllabus for 1st year is finalized and syllabus for 3rd to 8th semester needs deliberations which Chairperson(ECE) will do in due course of time through workshop/meetings and will be approved in the forthcoming Board of Studies.
4 Syllabus for 1st year is adopted as it is from AICTE model curriculum.

Prof. Vijay Nehra Prof. Manoj Dhuhan Prof. Sandeep Arya Mr. Krishan Kumar

ECENo.BPSMV/ECE/18/..533-40. Dated: 17/5/18.

Copy to:-

1 P.A to VC for kind information of the Vice-Chancellor, BPSMV, Khanpur Kalan.
2 P.A to Registrar for kind information of the Registrar, BPSMV, Khanpur Kalan.
3 All members of PG BOS for information.
4 Assistant Registrar (Academic) for information and necessary action.
5 Assistant Registrar(R&S) for information and necessary action.

Chairperson

Department of Electronics and Communication Engineering
Bhagat Phool Singh Mahila Vishwavidyalaya,
Khanpur Kalan (Sonepat), Haryana-131305
Office No. 01263-283124, www.bpswomenuniversity.ac.in

Proceedings of the meeting of the UG Board of Studies of the Department of Electronics and Communication Engineering was held on 09/04/2018 at 2:30p.m in the office of Chairperson. The following members of UG BOS were present:-

1	Prof. Vijay Nehra,	Chairperson & Dean, FET
2	Prof. Sandeep Arya	Outside Expert
3	Prof. Manoj Duhan	Outside Expert
4	Mr. Krishan Kumar	Assistant Professor

Item No. (a):- Adoption and implementation of model Curriculum of AICTE in B.Tech(ECE), In this regard following decisions were taken:-

(1) It is proposed to make exhaustive list of programme elective (PE) courses, open elective (OE)courses by adding few new courses to the existing AICTE syllabus list of PE's and OE's.

(2) It is proposed, 5% to 10% minor variation in syllabus and scheme of examination may be incorporated as required. In addition to this, professional training after 4th and 6th semester may be included. Chairperson (ECE) is authorized for the same.

(3) It is also resolved that if the students request to add some more new courses that will be further added in the existing list of program elective and or open elective as per need of the students.

(4) It is resolved to start five years integrated M.Sc, physics (with specialization in Electronics) with intake of 30 students as it will utilize utmost existing infrastructure in terms of instruments and equipments.

Item No.(b) The panel for UG is drawn and approved.

9/4/18 9/4/18 9/4/18 9/4/18

Prof. Vijay Nehra Prof. Sandeep Arya Prof. Manoj Duhan Mr. Krishan Kumar

BPSMV/ECE/18/350-61 Dated: 10/4/18

Copy to:-

i) P.A to VC for kind information of the Vice-Chancellor, BPSMV, Khanpur Kalan.
ii) P.A to Registrar for kind information of the Registrar, BPSMV, Khanpur Kalan.
iii) All members of UGBOS for information.
iv) Assistant Registrar(Academic) for information and necessary action.
v) Assistant Registrar(R&S) for information and necessary action.

Chairperson

Course Curriculum

and

Scheme of Examination

for

Bachelor of Technology

in

Electronics and Communication Engineering

Choice Based Credit System

(w.e.f academic session 2018-19)

Offered by

Department of Electronics and Communication Engineering

1st Semester to 8th Semester

Bhagat Phool Singh Mahila Vishwavidyalaya

Khanpur Kalan (Sonepat), Haryana-131305

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Department of Electronics and Communication Engineering
Bhagat Phool Singh Mahila Vishwavidyalaya,
Khanpur Kalan (Sonepat), Haryana-131305
Office No. 01263-283124, www.bpswomenuniversity.ac.in

First Semester
(Choice Based Credit System w.e.f academic session 2018-19)

The Bachelor of Technology in Electronics and Communication is a four year full time programme. The course structure of the programme is as follows:

B.Tech Electronics and Communication Engineering 1st Year (ECE 1st Sem)							Marks		
S.No.	Code	Course Title	Hrs/Week			Total Credits	Internal Marks	External Marks	Total Marks
			L	T	P				
1.	--	Physics	3	1	-	4	20	80	100
2.	BSC106A	Maths-1	3	1	-	4	20	80	100
3.	ESC101A	Basic Electrical Engineering	3	1	-	4	20	80	100
4.	ESC102A	Engineering Graphics & Design	1	-	4	3	20	80	100
5.	ESC161A	Basic Electrical Engineering Lab	-	-	2	1	10	40	50
6.	BSC 161A	Physics Lab	-	-	3	1.5	10	40	50
		Induction Training	-	-	-	-	-	-	-
Total			10	3	9	17.5	100	400	500

Options for Physics

BSC101A	Introduction to Electromagnetic Theory
BSC102A	Mechanics
BSC103A	Optics, fibre optics, magnetism and quantum mechanics
BSC104A	Waves ,optics and quantum mechanics
BSC105A	Semiconductor physics

Note:

1. Every student has to participate in the **Mandatory Induction Program of Three Week Duration** consisting of Physical activity, Creative Arts, Universal Human Values, Literary proficiency Modules, Lectures by Eminent People, Visits to local Areas, Familiarization to Dept./Branch & Innovations at the start of regular teaching of first semester.

Department of Electronics and Communication Engineering
Bhagat Phool Singh Mahila Vishwavidyalaya,
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Second Semester
(Choice Based Credit System w.e.f academic session 2018-19)

B.Tech Electronics and Communication Engineering 1st Year (ECE 2nd Sem)							Marks		
S.No.	Code	Course Title	Hrs/Week			Total Credits	Internal Marks	External Marks	Total Marks
			L	T	P				
1.	BSC107A	Chemistry-I	3	1	-	4	20	80	100
2.	BSC108A	Maths –2	3	1	-	4	20	80	100
3.	ESC103A	Programming for Problem Solving	3	-	-	3	20	80	100
4	HUM 101 A	English	2	-	-	2	20	80	100
5.	HUM 161 A	Language Lab	-	-	2	1	20	80	100
6.	ESC163A	Programming for Problem Solving Lab	-	-	4	2	10	40	50
7.	BSC167A	Chemistry Lab	-	-	3	1.5	10	40	50
8.	ESC164A	Workshop/Manufacturing Practices	1	-	4	3	20	80	100
9.		Environmental Science or Indian Constitution	3	-	3	-	20*	80*	100*
Total			**12**	**2**	**13**	**20.5**	**140**	**560**	**700**

Note:

1 * Marks will not be added in grand total.
2 Minimum passing marks for any subject (paper) shall be 40% in the external examination and 40 % in the aggregate of internal and external examinations of that subject.
3 The students will be allowed to use non-programmable scientific calculator. However, sharing/exchange of calculator is prohibited in the examination.
4 Electronic gadgets including cellular phones are not allowed in the examination.

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Third Semester
(Choice Based Credit System w.e.f academic session 2018-19)

B.Tech Electronics and Communication Engineering 2nd Year (ECE 3rd Sem)							Marks		
S.No.	Code	Course Title	Hrs/Week			Total Credits	Internal Marks	External Marks	Total Marks
			L	T	P				
1.	ECL-101A	Electronic Devices	3	-	-	3	20	80	100
2.	ECL-103A	Digital System Design	3	-	-	3	20	80	100
3.	ECL-105A	Signals and Systems	3	-	-	3	20	80	100
4.	ECL-107A	Network Theory	3	-	-	3	20	80	100
5.	----------	BS/ES/HS course	3	-		3	20	80	100
6.	----------	BS/ES/HS course	3	-		3	20	80	100
7.	ECP-101A	Electronic Devices Lab	-	-	2	1	10	40	50
8.	ECP-103A	Digital System Design Lab	-	-	2	1	10	40	50
		*Constitution of India/Essence of Indian Traditional Knowledge (Non-Credit)							
Total			18	-	4	20	140	560	700

Note: For University Department (*) means

S.No.	Code	Course Title	Hrs/Week			Total Credits	Internal Marks	External Marks	Total Marks
			L	T	P				
1.		Principal of Management	3	-	-	3	20	80	100
2.		German/Russian/French Language	3	-	-	3	20	80	100
3		Biology	2	1	-	3	20	80	100

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Fourth Semester
(Choice Based Credit System w.e.f academic session 2018-19)

B.Tech Electronics and Communication Engineering 2nd Year (ECE 4th Sem)							Marks		
S. No	Code	Course Title	Hrs/Week			Total Credits	Internal Marks	External Marks	Total Marks
			L	T	P				
1.	ECL202A	Analog and Digital Communication	3	-	-	3	20	80	100
2.	ECL204A	Analog Circuits	3	-	-	3	20	80	100
3.	ECL206A	Microcontrollers	3	-	-	3	20	80	100
4.		Slot for BS/ES/HS courses	4	-	-	4	20	80	100
5.		Slot for BS/ES/HS courses	4	-	-	4	20	80	100
6.	ECP202A	Analog and Digital Communication Lab	-	-	2	1	10	40	50
7.	ECP204A	Analog Circuits Lab	-	-	2	1	10	40	50
8.	ECP206A	Microcontrollers Lab	-	-	2	1	10	40	50
Total			17	-	6	20	130	520	650

Note: For University Department (*) means

Code	Course Title	Hrs/Week			Total Credits	Internal Marks	External Marks	Total Marks
		L	T	P				
--------	Entrepreneurship	4	-	-	4	20	80	100
--------	German/Russian/French Language.	4	-	-	4	20	80	100
--------	Engineering Mechanics	3	1	-	4	20	80	100
--------	Maths-3	3	1	-	4	20	80	100

Note

1. Each student has to enroll for INTERNSHALA as prescribed by the AICTE. At the end of 4th semester each student has to undergo Professional Training of 4 weeks in an Industry/ Institute/ Professional Organization/ Research Laboratory/ training centre etc. and submit a typed report along with a certificate in the department after completing the same from the organization and its evaluation shall be carried out in the 5th Semester.

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Fifth Semester
(Choice Based Credit System w.e.f academic session 2018-19)

B.Tech Electronics and Communication Engineering 3rd Year (ECE 5th Sem)							Marks		
S. No	Code	Course Title	Hrs/Week			Total Credits	Internal Marks	External Marks	Total Marks
			L	T	P				
1.	ECL301A	Electromagnetic Waves	3	-	-	3	20	80	100
2.	ECL303A	Computer Architecture	3	-	-	3	20	80	100
3.	ECL305A	Probability Theory and Stochastic Process	3	-	-	3	20	80	100
4.	ECL307A	Digital Signal Processing	3	-	-	3	20	80	100
5.	--------	*Program Elective-1	3	-	-	3	20	80	100
6.	--------	Open Elective-1	3	-	-	3	20	80	100
7.	ECP301A	Electromagnetic Wave Lab	-	-	2	2	20	80	100
8.	ECP307A	Digital Signal Processing Lab	-	-	2				
9		***Professional Training**	-	-	-	-	-	-	-
Total			18	-	4	20	140	560	700

Note:

1 Students will be permitted to opt for any two elective courses prescribed in the list of **PROGRAM ELECTIVES.** Program Elective–1 will be offered among the specified list of program electives **for V/VI Sem,** if, atleast one third (20) of the total students opt for the same.

2 Assessment of Professional training will be based on seminar, viva-voce, report and certificate of professional training obtained by the student from the industry / institute / research lab / training centre etc.

3 Students will be permitted to opt for any one elective run by the other department. However, the department shall offer those elective for which they have expertise. The choice of the students for any elective shall not be binding for the department to offer, if the department does not have expertise. The minimum strength of the students should be 20 to run an elective course.

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Sixth Semester
(Choice Based Credit System w.e.f academic session 2018-19)

B.Tech Electronics and Communication Engineering 3rd Year (ECE 6th Sem)							Marks		
S. No	Code	Course Title	Hrs/Week			Total Credits	Internal Marks	External Marks	Total Marks
			L	T	P				
1.	ECL302A	Control System	3	-	-	3	20	80	100
2.	ECL304A	Computer Network	3	-	-	3	20	80	100
3.	--------	*Program Elective-2	3	-	-	3	20	80	100
4.	--------	Open Elective-2	3	-	-	3	20	80	100
5.	--------	Slot for HS/BS	3	-	-	3	20	80	100
6.	ECP304A	Computer Network Lab	-	-	4	2	20	80	100
7.	ECP306A	Electronic Measurement Lab	-	-	2	1			
8.	ECP308A	Mini Project/ Electronic Design Workshop	-	-	4	2	20	80	100
Total			15	-	10	20	140	560	700

Note:

1 At the end of 6th semester each student has to undergo Professional Training of 4 weeks in an Industry/ Institute/ Professional Organization/ Research Laboratory/ training centre etc. and submit a typed report along with a certificate in the department after completing the same from the organization and its evaluation shall be carried out in the 7th Semester.

2 Students will be permitted to opt for any two elective courses prescribed in the list of **PROGRAM ELECTIVES.** Program Elective–2 will be offered among the specified list of program electives **for V/VI Sem,** if, if atleast one third of the total students opt for the same.

Program Elective Courses for V/VI Sem:

S.No	Course Code	Course Title	Hrs/week	Credits	Preferred Sem
1	EPE301A	Information Theory and Coding	3:0:0	3	V/VI
2	EPE302A	Speech and Audio Processing	3:0:0	3	V/VI
3	EPE303A	Introduction to MEMS	3:0:0	3	V/VI
4	EPE304A	Bio-Medical Electronics	3:0:0	3	V/VI
5	EPE305A	CMOS Design	3:0:0	3	V/VI
6	EPE306A	Power Electronics	3:0:0	3	V/VI
7	EPE307A	Nano electronics	3:0:0	3	V/VI
8	EPE308A	Scientific Computing	3:0:0	3	V/VI

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Seventh Semester
(Choice based Credit System w.e.f academic session 2018-19)

B.Tech Electronics and Communication Engineering 4th Year (ECE 7th Sem)							Marks		
S.No.	Code	Course Title	Hrs/Week			Total Credits	Internal Marks	External Marks	Total Marks
			L	T	P				
1.	---------	Program Elective – 3	3	-	-	3	20	80	100
2.	---------	Program Elective – 4	3	-	-	3	20	80	100
1.	---------	Program Elective – 5	3	-	-	3	20	80	100
3.	---------	Open Elective-3	3	-	-	3	20	80	100
4.	ECP401A	Project Stage -II	-	-	10	5	20	80	100
5.		Slot for HS/BS	4	-	-	4	20	80	100
Total			16	-	10	21	120	480	600

Note:

1 Students will be permitted to opt for any two elective courses prescribed in the list of **PROGRAM ELECTIVES.** Program Elective–3, 4 papers will be offered among the specified list of program electives, if atleast one third of the total students opt for the same.

2 Students will be permitted to opt for any one elective run by the other department. However, the department shall offer those elective for which they have expertise. The choice of the students for any elective shall not be binding for the department to offer, if the department does not have expertise. The minimum strength of the students should be 20 to run an elective course.

3 Project coordinator and other assisting co-coordinators will be assigned the project load of, maximum of 10 hrs. per week including their own guiding load of one hourr. However, the guiding teacher will be assigned maximum of one period of teaching load irrespective of number of students/groups under him/her. Project involving design, fabrication, testing, computer simulation, case studies etc., will be commenced by students in VII semester and will be completed in VIII semester.

4 The students will be allowed to use non-programmable scientific calculator. However, sharing/ exchange of calculator is prohibited in the examination.

5 Electronic gadgets including cellular phones are not allowed in the examination.

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Eight Semester
(Choice based Credit System w.e.f academic session 2018-19)

B.Tech Electronics and Communication Engineering 4th Year (ECE 8th Sem)							Marks		
S. No	Code	Course Title	Hrs/Week			Total Credits	Internal Marks	External Marks	Total Marks
			L	T	P				
1.	---------	Program Elective – 6	3	-	-	3	20	80	100
2.	---------	Program Elective – 7	3	-	-	3	20	80	100
3.	---------	Open Elective-4	3	-	-	3	20	80	100
4.	---------	Open Elective-5	3	-	-	3	20	80	100
5.	ECP-402A	Project Stage -II	-	-	18	9	20	80	100
6.	GFP-404A	*General Fitness for Profession	-	-	-	-	-	-	-
Total			12	-	18	21	100	400	500

Note:

1. **General Fitness for Profession** is a compulsory and qualifying course under which student will be evaluated for his performance in all types of activities like Academics, Cultural, Sports, NSS, organisation of camps, social activities etc., during his all eight semesters, at the end of 8th semester. Regarding this course student will be motivated during the induction programme at the time of admission, so that she will be vigilant for motivation towards these activities.The evaluation of the student for her General Fitness for Profession shall be carried out by a internal board consisting of Chairperson of the Department; One outside expert, Two faculty of the University other than the department
2. Project coordinator and other assisting co-coordinators will be assigned the project load of, maximum of 18 hours per week including his own guiding load of one hour. However, the guiding teacher will be assigned maximum of one hour of teaching load irrespective of number of students/groups under him/her. However, the guiding teacher will be assigned maximum of one period of teaching load irrespective of number of students/groups under him/her. Project involving design, fabrication, testing, computer simulation, case studies etc., which has been commenced by students in VII semester will be completed in VIII semester.
3. Students will be permitted to opt for any two elective courses prescribed in the list of PROGRAM ELECTIVES. Program Elective– 6, 7 paper will be offered among the specified list of program electives, if atleast one third of the total students opt for the same.
4. Students will be permitted to opt for any two elective courses run by the other department. However, the department shall offer those elective for which they have expertise. The choice of the students for any elective shall not be binding for the department to offer, if the department does not have expertise. The minimum strength of the students should be atleast one third (20) of the total intake to run an elective course.

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Program Elective Courses for VII & VIII Sem:

S. No.	Course Code	Course Title	Hrs. /Week L: T: P	Credits	Preferred Semester
1	EPE401A	Microwave Theory and Techniques	3:0:0	3	VII/VIII
2	EPE402A	Fiber Optic Communications	3:0:0	3	VII/VIII
3	EPE403A	Adaptive Signal Processing	3:0:0	3	VII/VIII
4	EPE404A	Antennas and Propagation	3:0:0	3	VII/VIII
5	EPE405A	Mobile Communication and Networks	3:0:0	3	VII/VIII
6	EPE406A	Digital Image & Video Processing	3:0:0	3	VII/VIII
7	EPE407A	Mixed Signal Design	3:0:0	3	VII/VIII
8	EPE408A	Wireless Sensor Networks	3:0:0	3	VII/VIII
9	EPE409A	Satellite Communication	3:0:0	3	VII/VIII
10	EPE410A	High Speed Electronics	3:0:0	3	VII/VIII
11	EPE411A	Wavelets	3:0:0	3	VII/VIII
12	EPE412A	Embedded systems	3:0:0	3	VII/VIII
13	EPE413A	Error Correcting Codes	3:0:0	3	VII/VIII

List of Open Elective Courses Floated by Dept.:

The following Open Elective Courses are identified by the department.

Open Elective Course offered in Even and odd Semester							Marks		
S.No.	Course Code	Course Title	Hrs/Week			Total Credits	Internal Marks	External Marks	Total Marks
			L	T	P				
1.	EOE101A	ICT for Education and Research	3	-	-	3	20	80	100
2.	EOE102A	ICT in Rural Development	3	-	-	3	20	80	100
3.	EOE103A	ICT in Agricultural Development	3	-	-	3	20	80	100
4.	EOE104A	Agri-electronics	3	-	-	3	20	80	100
5.	EOE105A	Renewable Energy Sources	3	-	-	3	20	80	100
6.	EOE106A	Solar Photovoltaic System and Technology	3	-	-	3	20	80	100
7.	EOE107A	Simulation Tools in Education and Research	3	-	-	3	20	80	100
8.	EOE108A	Scientific Computing Using MATLAB	3	-	-	3	20	80	100
9	EOE109A	Remote Sensing & GIS	3	-	-	3	20	80	100
10	EOE110A	Design and Simulation Tools	3	-	-	3	20	80	100

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List of Humanities and Social Sciences Courses/Engineering Science Course

The following Humanities and Social Sciences Courses/Engineering Science Courses are identified by the departments as offered by the University under the Choice Based Credit System. The list of offered subjects may be changed time to time as per the Choice Based Credit System course floated by the respective departments.

Open Elective Course offered in odd Semester							Marks		
S.No.	Course Code	Course Title	Hrs/Week			Total Credits	Internal Marks	External Marks	Total Marks
			L	T	P				
1		Indian Economy	3	-	-	3	20	80	100
2		Elements of Economics	3	-	-	3	20	80	100
3		Principal of Management	3	-	-	3	20	80	100
4		Biomedical, Hazardous and E-Waste Management	3	-	-	3	20	80	100
5		Environmental Preventive Health Issues	3	-	-	3	20	80	100
6		German/French/Russian	3	-	-	3	20	80	100
7		Environmental Pollution	3	-	-	3	20	80	100
8		Numerical Method	3	-	-	3	20	80	100
Open Elective Course offered in Even Semester									
1		Entrepreneurship	3	-	-	3	20	80	100
2		German/French/Russian	3	-	-	3	20	80	100
3		Environmental Science	3	-	-	3	20	80	100

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Minutes of the meeting of Faculty of Engineering and Technology held on 18.05.2018 at 3.30 p.m. in the office of Dean, Faculty of Engineering and Technology, BPSMV, Khanpur Kalan.

The following were present:-

1.	Prof. Vijay Nehra, Dean, Faculty of Engineering & Technology,	Chairperson
2.	Prof. Ajit Singh, Chairperson, Deptt of CSE/IT	Member
3.	Prof. Lalit Jajpura, Chairperson, Deptt of F.T.	Member
4.	Ms. Priyanka, Asstt. Prof., Deptt. of ECE	Member
5.	Ms. Manju Saroha, Asstt. Prof., Deptt. of CSE/IT	Member

After detailed discussion and deliberation, the following decisions were taken:-

Agenda No. 1: Considered and Approved.
The AICTE model curriculum of B.Tech. Electronics and Communication Engineering as resolved by Under Graduate Board of Studies in Department of Electronics and Communication Engineering held on 9/4/2018 and subsequently on17/5/2018 was considered and approved.

Agenda No. 2: Considered and Approved.
The AICTE model curriculum of M.Tech. Electronics and Communication Engineering M.Tech. ICT as resolved by Post Graduate Board of Studies of Department of Electronics and Communication Engineering held on 5/5/2018 was considered and approved.

Agenda No. 3: Considered and Approved.
The syllabi and scheme of examination of pre Ph.D course work in Electronics and Communication Engineering of Department of Electronics and Communication Engineering held on 5/5/2018 was considered and approved.

Agenda No.4: Considered and Approved.
The recommendations of Under Graduate and Post Graduate Board of Studies of Department of Fashion Technology held on 22/2/2018 was considered and approved to start integrated B.Sc. and M.Sc. (Fashion and Apparel Design). However the members of were opinion that suitable faculty may be assigned for the course as the same cannot started in Faculty of Engineering and Technology. Further, all the detail pertaining to Departments submitted on AICTE web portal may be taken into consideration before starting the course in department of Fashion Technology.

18/5/2018

Agenda No.5: Considered and Approved.
The request of Ms. Sonia Tyagi to pursue her dissertation work after expiry of regular time period is considered and approved for further discussion and approval from Academic Council for condone of time limit for submission of dissertation.

Agenda No.6: Considered and approved the recommendation of the PGBOS held on 28/3/2018 in the Department of Computer Science & Engineering and Information Technology.

Agenda No.7: Considered and approved the recommendation of the PGBOS held on 16/5/2018 in the Department of Computer Science & Engineering and Information Technology.

Agenda No.8: Considered and approved the recommendation of the UGBOS held on 16/5/2018 in the Department of Computer Science & Engineering and Information Technology.

(Vijay Nehra) (Ajit Singh) (Lalit Jajpura) (Priyanka) (Manju Saroha)

Dean, FET

Endst. No. BPSMV/ECE/ 18/665-75 Date:-22/5/18

A Copy of the above is forwarded to the following for information and necessary action:-

1. PA to Vice-Chancellor (For kind information of the Hon'ble Vice-Chancellor).
2. PA to Registrar (For kind information of the Worthy Registrar)
3. AR(Academic), BPSMV, Khanpur Kalan, Sonipat.
4. Chairperson, Department of CSE/IT, BPSMV, Khanpur Kalan, Sonipat.
5. Chairperson, Department of Fashion Technology, BPSMV, Khanpur Kalan, Sonipat.
6. Chairperson, Department of ECE, BPSMV, Khanpur Kalan, Sonipat.
7. Concerned faculty members.

Vijay Nehra
Dean, FET
21/5/2018

BSC-101A PHYSICS

L T P
3 1 -

Total Credits: 4

External Marks: 80
Internal Marks: 20

Total Marks: 100

I Introduction to Electromagnetic

Theory Prerequisite: Mathematics course with vector calculus

Module 1: Electrostatics in vacuum (8)

Calculation of electric field and electrostatic potential for a charge distribution; Divergence and curl of electrostatic field; Laplace's and Poisson's equations for electrostatic potential and uniqueness of their solution and connection with steady state diffusion and thermal conduction; Practical examples like Farady's cage and coffee-ring effect; Boundary conditions of electric field and electrostatic potential; method of images; energy of a charge distribution and its expression in terms of electric field.

Module 2: Electrostatics in a linear dielectric medium (4)

Electrostatic field and potential of a dipole. Bound charges due to electric polarization; Electric displacement; boundary conditions on displacement; Solving simple electrostatics problems in presence of dielectrics – Point charge at the centre of a dielectric sphere, charge in front of a dielectric slab, dielectric slab and dielectric sphere in uniform electric field.

Module 3: Magnetostatics (6)

Bio-Savart law, Divergence and curl of static magnetic field; vector potential and calculating it for a given magnetic field using Stokes' theorem; the equation for the vector potential and its solution for given current densities.

Module 4: Magnetostatics in a linear magnetic medium (3)

Magnetization and associated bound currents; auxiliary magnetic field $\vec{H}$; Boundary conditions on $\vec{B}$ and $\vec{H}$. Solving for magnetic field due to simple magnets like a bar magnet; magnetic susceptibility and ferromagnetic, paramagnetic and diamagnetic materials; Qualitative discussion of magnetic field in presence of magnetic materials.

Module 5: Faraday's law (4)

Faraday's law in terms of EMF produced by changing magnetic flux; equivalence of Faraday's law and motional EMF; Lenz's law; Electromagnetic breaking and its applications; Differential form of Faraday's law expressing curl of electric field in terms of time-derivative of magnetic field and calculating electric field due to changing magnetic fields in quasi-static approximation; energy stored in a magnetic field.

Module 6: Displacement current, Magnetic field due to time-dependent electric field and Maxwell's equations (5)

Continuity equation for current densities; Modifying equation for the curl of magnetic field to satisfy continuity equation; displace current and magnetic field arising from time-dependent electric field; calculating magnetic field due to changing electric fields in quasi-static approximation.

Maxwell's equation in vacuum and non-conducting medium; Energy in an electromagnetic field; Flow of energy and Poynting vector with examples. Qualitative discussion of momentum in electromagnetic fields.

Module 7: Electromagnetic waves (8)

The wave equation; Plane electromagnetic waves in vacuum, their transverse nature and polarization; relation between electric and magnetic fields of an electromagnetic wave; energy carried by electromagnetic waves and examples. Momentum carried by electromagnetic waves and resultant pressure. Reflection and transmission of electromagnetic waves from a non-conducting medium-vacuum interface for normal incidence.

Text Book:

(i) David Griffiths, Introduction to Electrodynamics

Reference books:

1. Halliday and Resnick, Physics
2. W. Saslow, Electricity, magnetism and light

BSC-102A

L T P
3 1 -

Total Credits: 4

External Marks: 80
Internal Marks: 20

Total Marks: 100

Prerequisites: (i) High-school education

Module 1: (8)

Transformation of scalars and vectors under Rotation transformation; Forces in Nature; Newton's laws and its completeness in describing particle motion; Form invariance of Newton's Second Law; Solving Newton's equations of motion in polar coordinates; Problems including constraints and friction; Extension to cylindrical and spherical coordinates

Module 2: (7)

Potential energy function; F = - Grad V, equipotential surfaces and meaning of gradient; Conservative and non-conservative forces, curl of a force field; Central forces; Conservation of Angular Momentum; Energy equation and energy diagrams; Elliptical, parabolic and hyperbolic orbits; Kepler problem; Application: Satellite manoeuvres;

Module 3: (5)

Non-inertial frames of reference; Rotating coordinate system: Five-term acceleration formula-Centripetal and Coriolis accelerations; Applications: Weather systems, Foucault pendulum;

Module 4: (6)

Harmonic oscillator; Damped harmonic motion – over-damped, critically damped and lightly-damped oscillators; Forced oscillations and resonance

Module 5: (5)

Definition and motion of a rigid body in the plane; Rotation in the plane; Kinematics in a coordinate system rotating and translating in the plane; Angular momentum about a point of a rigid body in planar motion; Euler's laws of motion, their independence from Newton's laws, and their necessity in describing rigid body motion; Examples

Module 6: (7)

Introduction to three-dimensional rigid body motion — only need to highlight the distinction from two-dimensional motion in terms of (a) Angular velocity vector, and its rate of change and Moment of inertia tensor; Three-dimensional motion of a rigid body wherein all points move in a coplanar manner: e.g. Rod executing conical motion with center of mass fixed — only need to show that this motion looks two-dimensional but is three-dimensional, and two-dimensional formulation fails.

Reference books:

1. Engineering Mechanics, 2nd ed. — MK Harbola
2. Introduction to Mechanics — MK Verma
3. An Introduction to Mechanics — D Kleppner & R Kolenkow
4. Principles of Mechanics — JL Synge & BA Griffiths
5. Mechanics — JP Den Hartog
6. Engineering Mechanics - Dynamics, 7th ed. - JL Meriam
7. Mechanical Vibrations — JP Den Hartog
8. Theory of Vibrations with Applications — WT Thomson

Introduction to Quantum Mechanics for Engineers

BSC-103A

L T P
3 1 -

Total Credits: 4

External Marks: 80
Internal Marks: 20

Total Marks: 100

Prerequisite: Mathematics course on differential equations and linear algebra

Module 1: Wave nature of particles and the Schrodinger equation (8)

Introduction to Quantum mechanics, Wave nature of Particles, Time-dependent and time-independent Schrodinger equation for wavefunction, Born interpretation, probability current, Expectation values, Free-particle wavefunction and wave-packets, Uncertainty principle

Module 2: Mathematical Preliminaries for quantum mechanics (4)

Complex numbers, Linear vector spaces, inner product, operators, eigenvalue problems, Hermitian operators, Hermite polynomials, Legendre's equation, spherical harmonics.

Module 3: Applying the Schrodinger equation (15)

Solution of stationary-state Schrodinger equation for one dimensional problems– particle in a box, particle in attractive delta-function potential, square-well potential, linear harmonic oscillator.

Numerical solution of stationary-state Schrodinger equation for one dimensional problems for different potentials

Scattering from a potential barrier and tunneling; related examples like alpha-decay, field-ionization and scanning tunneling microscope

Three-dimensional problems: particle in three dimensional box and related examples, Angular momentum operator, Rigid Rotor, Hydrogen atom ground-state, orbitals, interaction with magnetic field, spin

Numerical solution stationary-state radial Schrodinger equation for spherically symmetric potentials

Module 4: Introduction to molecular bonding (4)

Particle in double delta-function potential, Molecules (hydrogen molecule, valence bond and molecular orbitals picture), singlet/triplet states, chemical bonding, hybridization

Module 5: Introduction to solids (7)

Free electron theory of metals, Fermi level, density of states, Application to white dwarfs and neutron stars, Bloch's theorem for particles in a periodic potential, Kronig-Penney model and origin of energy bands

Numerical solution for energy in one-dimensional periodic lattice by mixing plane waves.

Text book: Eisberg and Resnick, Introduction to Quantum Physics

Reference Books:

1. D. J. Griffiths, Quantum mechanics Richard Robinett, Quantum
2. Mechanics Daniel Mc Quarrie, Quantum Chemistry

Oscillations, waves and optics

BSC-104A

L T P
3 1 -

Total Credits: 4

External Marks: 80
Internal Marks: 20

Total Marks: 100

Prerequisites:

1. Mathematics course on Differential equations
   Introduction to Electromagnetic theory

Module 1: Simple harmonic motion, damped and forced simple harmonic oscillator (7)
Mechanical and electrical simple harmonic oscillators, complex number notation and phasor representation of simple harmonic motion, damped harmonic oscillator – heavy, critical and light damping, energy decay in a damped harmonic oscillator, quality factor, forced mechanical and electrical oscillators, electrical and mechanical impedance, steady state motion of forced damped harmonic oscillator, power absorbed by oscillator

Module 2: Non-dispersive transverse and longitudinal waves in one dimension and introduction to dispersion (7)

Transverse wave on a string, the wave equation on a string, Harmonic waves, reflection and transmission of waves at a boundary, impedance matching, standing waves and their eigenfrequencies, longitudinal waves and the wave equation for them, acoustics waves and speed of sound, standing sound waves.

Waves with dispersion, water waves, superposition of waves and Fourier method, wave groups and group velocity.

Module 3: The propagation of light and geometric optics (10)

Fermat's principle of stationary time and its applications e.g. in explaining mirage effect, laws of reflection and refraction, Light as an electromagnetic wave and Fresnel equations, reflectance and transmittance, Brewster's angle, total internal reflection, and evanescent wave.

Mirrors and lenses and optical instruments based on them, transfer formula and the matrix method

Module 4: Wave optics (6)

Huygens' principle, superposition of waves and interference of light by wavefront splitting and amplitude splitting; Young's double slit experiment, Newton's rings, Michelson interferometer, Mach-Zehnder interferometer.

Farunhofer diffraction from a single slit and a circular aperture, the Rayleigh criterion for limit of resolution and its application to vision; Diffraction gratings and their resolving power

Module 5: Lasers (8)

Einstein's theory of matter radiation interaction and A and B coefficients; amplification of light by population inversion, different types of lasers: gas lasers (He-Ne, CO_2), solid-state lasers(ruby, Neodymium), dye lasers; Properties of laser beams: mono-chromaticity, coherence, directionality and brightness, laser speckles, applications of lasers in science, engineering and medicine.

Reference books:

1. Ian G. Main, Oscillations and waves in physics
2. H.J. Pain, The physics of vibrations and waves
3. E. Hecht, Optics
4. Ghatak, Optics
5. O. Svelto, Principles of Lasers

Semiconductor Physics

BSC-105A

L T P
3 1 -

Total Credits: 4

External Marks: 80
Internal Marks: 20

Total Marks: 100

Prerequisite: Semiconductor physics

Module 1: Review of semiconductor physics (10) E-k diagram, Density of states, Occupation probability, Fermi level and quasi-Fermi level (variation by carrier concentration and temperature); p-n junction, Metal-semiconductor junction (Ohmic and Schottky); Carrier transport, generation, and recombination; Semiconductor materials of interest for optoelectronic devices, bandgap modification, heterostructures; Light-semiconductor interaction: Rates of optical transitions, joint density of states, condition for optical amplification.

Module 2: Semiconductor light emitting diodes (LEDs) (6)

Rate equations for carrier density, Radiative and non-radiative recombination mechanisms in semiconductors, LED: device structure, materials, characteristics, and figures of merit.

Module 3: Semiconductor lasers (8)

Review of laser physics; Rate equations for carrier- and photon-density, and their steady state solutions, Laser dynamics, Relaxation oscillations, Input-output characteristics of lasers. Semiconductor laser: structure, materials, device characteristics, and figures of merit; DFB, DBR, and vertical-cavity surface-emitting lasers (VECSEL), Tunable semiconductor lasers.

Module 4: Photo detectors (6)

Types of semiconductor photo detectors -p-n junction, PIN, and Avalanche --- and their structure, materials, working principle, and characteristics, Noise limits on performance; Solar cells.

Module 5: Low-dimensional optoelectronic devices (6) Quantum-well, -wire, and -dot based LEDs, lasers, and photo detectors.

References:

1. J. Singh, Semiconductor Optoelectronics: Physics and Technology, McGraw-Hill Inc. (1995).
2. B. E. A. Saleh and M. C. Teich, Fundamentals of Photonics, John Wiley & Sons,
3. S. M. Sze, Semiconductor Devices: Physics and Technology, Wiley (2008).
4. A. Yariv and P. Yeh, Photonics: Optical Electronics in Modern Communications, Oxford University Press, New York (2007).
5. P. Bhattacharya, Semiconductor Optoelectronic Devices, Prentice Hall of India (1997).
6. Online course: "Semiconductor Optoelectronics" by M R Shenoy on NPTEL
7. Online course: "Optoelectronic Materials and Devices" by Monica Katiyar and Deepak Gupta on NPTEL

BSC-106A MATHEMATICS – I

L T P
3 1 -

Total Credits: 4

External Marks: 80
Internal Marks: 20

Total Marks: 100

OBJECTIVES:

The objective of this course is to familiarize the prospective engineers with techniques in calculus, multivariate analysis and linear algebra. It aims to equip the students with standard concepts and tools at an intermediate to advanced level that will serve them well towards tackling more advanced level of mathematics and applications that they would find useful in their disciplines. More precisely, the objectives are:

To introduce the idea of applying differential and integral calculus to notions of curvature and to improper integrals. Apart from some applications it gives a basic introduction on Beta and Gamma functions.

To introduce the fallouts of Rolle's Theoremthat is fundamental to application of analysis to Engineering problems.

To develop the tool of power series and Fourier series for learning advanced Engineering Mathematics.

To familiarize the student with functions of several variables that is essential in most branches of engineering.

To develop the essential tool of matrices and linear algebra in a comprehensive manner.

Module 1: Calculus: (6 hours)

Evolutes and involutes; Evaluation of definite and improper integrals; Beta and Gamma functions and their properties; Applications of definite integrals to evaluate surface areas and volumes of revolutions.

Module 2: Calculus: (6 hours)

Rolle's Theorem, Mean value theorems, Taylor's and Maclaurin theorems with remainders; indeterminate forms and L'Hospital's rule; Maxima and minima.

Module 3: Sequences and series: (10 hours)

Convergence of sequence and series, tests for convergence; Power series, Taylor's series, series for exponential, trigonometric and logarithm functions; Fourier series: Half range sine and cosine series, Parseval's theorem.

Module 4: Multivariable Calculus (Differentiation): (8 hours)

Limit continuity and partial derivatives, directional derivatives, total derivative; Tangent plane and normal line; Maxima, minima and saddle points; Method of Lagrange multipliers; Gradient, curl and divergence.

Module 5: Matrices (10hours)

Inverse and rank of a matrix, rank-nullity theorem; System of linear equations; Symmetric, skew-symmetric and orthogonal matrices; Determinants; Eigen values and eigenvectors; Diagonalization of matrices; Cayley-Hamilton Theorem, and Orthogonal transformation.

Textbooks/References:

1. G.B. Thomas and R.L. Finney, Calculus and Analytic geometry, 9th Edition, Pearson, Reprint, 2002.
2. Erwin kreyszig, Advanced Engineering Mathematics, 9th Edition, John Wiley & Sons. 2006.
3. Veerarajan T., Engineering Mathematics for first year, Tata McGraw-Hill, New Delhi, 2008.
4. Ramana B.V., Higher Engineering Mathematics, Tata McGraw Hill New Delhi, 11th Reprint, 2010.
5. D. Poole, Linear Algebra: A Modern Introduction, 2nd Edition, Brooks/Cole, 2005.
6. N.P. Bali and Manish Goyal, A text book of Engineering Mathematics, Laxmi Publications, Reprint, 2008.
7. B.S. Grewal, Higher Engineering Mathematics, Khanna Publishers, 36th Edition, 2010.

L T P
3 1 -

Total Credits: 4

External Marks: 80
Internal Marks: 20

Total Marks: 100

Detailed contents :

Module 1 : DC Circuits (8 hours)

Electrical circuit elements (R, L and C), voltage and current sources, Kirchoff current and voltage laws, analysis of simple circuits with dc excitation, Superposition, Thevenin and Norton Theorems, Time-domain analysis of first-order RL and RC circuits.

Module 2: AC Circuits (8 hours)

Representation of sinusoidal waveforms, peak and rms values, phasor representation, real power, reactive power, apparent power, power factor, Analysis of single-phase ac circuits consisting of R, L, C, RL, RC, RLC combinations (series and parallel), resonance, Three-phase balanced circuits, voltage and current relations in star and delta connections.

Module 3: Transformers (6 hours)

Magnetic materials, BH characteristics, ideal and practical transformer, equivalent circuit, losses in transformers, regulation and efficiency, Auto-transformer and three-phase transformer connections.

Module 4: Electrical Machines (8 hours)

Generation of rotating magnetic fields, Construction and working of a three-phase induction motor, Significance of torque-slip characteristic, Loss components and efficiency, starting and speed control of induction motor, Single-phase induction motor, Construction, working, torque-speed characteristic and speed control of separately excited dc motor, Construction and working of synchronous generators.

Module 5: Power Converters (6 hours)

DC-DC buck and boost converters, duty ratio control, Single-phase and three-phase voltage source inverters; sinusoidal modulation.

Module 6: Electrical Installations (6 hours)

Components of LT Switchgear: Switch Fuse Unit (SFU), MCB, ELCB, MCCB, Types of Wires and Cables, Earthing, Types of Batteries, Important Characteristics for Batteries, Elementary calculations for energy consumption, power factor improvement and battery backup.

Suggested Text / Reference Books

1. D. P. Kothari and I. J. Nagrath, "Basic Electrical Engineering", Tata McGraw Hill, 2010.
2. D. C. Kulshreshtha, "Basic Electrical Engineering", McGraw Hill, 2009.
3. L. S. Bobrow, "Fundamentals of Electrical Engineering", Oxford University Press, 2011.E. Hughes, "Electrical and Electronics Technology", Pearson, 2010
4. V. D. Toro, "Electrical Engineering Fundamentals", Prentice Hall India, 1989.

L	T	P
-	-	3

Total Credit: 1.5

External Marks: 40

Internal Marks: 10

Total Marks: 50

COURSE OBJECTIVES:

The purpose of this laboratory is to develop scientific temper and analytical capability among the engineering students.

LIST OF EXPERIMENTS:

1. To determine the wavelength of sodium light by Newton's rings experiment.
2. To find the specific rotation of sugar solution by using Polarimeter.
3. To find the refractive of a material of a given prism using spectrometer.
4. To find the wavelength of sodium light using Fresnel Biprism
5. To find the capacity of an unknown capacitor by flashing and quenching potential of argon/neon.
6. To measure the band gap of a semiconductors.
7. To determine the Hall coefficient using Hall Effect.
8. To determine the resistivity of a semiconductor by four probe method.
9. To find the wavelength of various colours of white light with the help of a plane transmission diffracting grating
10. To convert given galvanometer into an ammeter of given range.
11. To find high resistance by leakage method.
12. To calibrate a voltmeter and an ammeter by using potentiometer.
13 Verification of laws of stretched string- Sonometer.
14. To find the Frequency of A.C. mains-Sonometer.
15. Study of characteristics of LED and LASER sources.
16. Study of characteristics of p-i-n and avalanche photo diode detectors.
17. To study the shunting effect of a voltmeter on voltage measurement.
18. Evaluation of numerical aperture of a given fiber.
19. Magnetic field along the axis of a current carrying coil-Stewart and Gee's method.
20. To study characteristic of a thermistor
21. To study I-V characteristic and rectification properties of a semiconductor.

NOTE:

At least 12 experiments are to be performed by students in the semester. Out of which at least ten experiments should be performed from the above list, remaining two experiments may either be performed from the above list or designed and set by the concerned faculty as per the scope of the syllabus .

ESC-102 A ENGINEERING GRAPHICS & DESIGN

L T P
1 - 4

Total Credit: 3

External Marks: 80

Total Marks: 100

Internal Marks: 20

Laboratory Outcomes

- To formulate the algorithms for simple problems
- To translate given algorithms to a working and correct program To be able to correct syntax errors as reported by the compilers
- To be able to identify and correct logical errors encountered at run time To be able to write iterative as well as recursive programs
- To be able to represent data in arrays, strings and structures and manipulate them through a program
- To be able to declare pointers of different types and use them in defining self referential structures.
- To be able to create, read and write to and from simple text files.

Tutorial and Lab: (total 4 contact hours per week) (outline of topics

Tutorial 1: Problem solving using computers: Lab1: Familiarization with programming environment

Tutorial 2: Variable types and type conversions: Lab 2: Simple computational problems using arithmetic expressions

Tutorial 3: Branching and logical expressions: Lab 3: Problems involving if-then-else structures

Tutorial 4: Loops, while and for loops: Lab 4: Iterative problems e.g., sum of series

Tutorial 5: 1D Arrays: searching, sorting: Lab 5: 1D Array manipulation

Tutorial 6: 2D arrays and Strings, memory structure: Lab 6: Matrix problems, String operations

Tutorial 7: Functions, call by value: Lab 7: Simple functions

Tutorial 8 &9: Numerical methods (Root finding, numerical differentiation, numerical integration): Lab 8 and 9: Numerical methods problems

Tutorial 10: Recursion, structure of recursive calls: Lab 10: Recursive functions

Tutorial 11: Pointers, structures and dynamic memory allocation Lab 11: Pointers and structures

Tutorial 12: File handling: Lab 12: File operations

Textbooks:

1. Byron Gottfried, Schaum's Outline of Programming with C, McGraw-Hill
2. E. Balaguruswamy, Programming in ANSI C, Tata McGraw-Hill

Reference Books:

1. Brian W. Kernighan and Dennis M. Ritchie, The C Programming Language, Prentice Hall of India

ESC-161 A BASIC ELECTRICAL ENGINEERING LAB

L T P

- - 2

Total Credits: 1

External Marks: 40

Internal Marks: 10

Total Marks: 50

LIST OF EXPERIMENTS:

1. Identification, Specifications, Testing of passive R, L, C Components (Colour Codes), Potentiometers, Switches (SPDT, DPDT, and DIP), Coils, Gang Condensers, Relays, Bread Boards.
2. Identification, Specifications and Testing of Active Devices, Diodes, BJTs.
3. Soldering practice–Simple Circuits using active and passive components.
4. Single layer and Multi layer PCBs (Identification and Utility).
5. Study and operation of:
   (a) Multimeters (Analog and Digital)
   (b) Function Generator
   (c) Regulated Power Supplies
6. C.R.O for Measurement of electrical quantities:
   (a) Voltage measurement.
   (b) Frequency measurement
   (c) Phase measurement
   (d) Component Testing
7. Familiarization of PC hardware: function of different part of PC.
8. Study of different type of storage media: CDROM, CDRW, floppy disk, Zip drive, Hard Disks etc,
9. To study V-I characteristic of diode.
10. To study half wave and full wave rectifier.
11. To verify truth table of different logic gates.
12. To study operation of PA systems.

NOTE: Ten experiments are to be performed, out of which at least seven experiments should be performed from above list. Remaining three experiments may either be performed from the above list or designed and set by the concerned faculty as per the scope of the syllabus .

PHYSICS LAB

ANNEXURE-37

Ref. No BPSMV/CSE/IT/18/1423-1426
Dated ....27/01/18.....

Proceedings of the Meeting of Departmental Research Committee (DRC) of Computer Science & Engineering and Information Technology:

A meeting of the Departmental Research Committee of Computer Science & Engineering and Information Technology was held on 27/01/2018 at 11:00 A.M. in the office of Chairperson, Department of Computer Science & Engineering and Information Technology:

Agenda:

1. To examine the suitability of applicants for Pre-Ph.D course work in Computer Science & Engineering.
2. To consider the registration of the candidate who have completed the course work during academic session 2016-17.
3. To consider the progress report of Mrs. Reena for Ph.D (CSE)
4. To take the decision regarding admission of Ms. Jyoti in Ph.D (CSE) during session 2014-15.
5. Any other item with the permission of the chair.

The following members of DRC were present in the meeting:

1. Prof. Ajit Singh, Deptt. of CSE&IT, BPSMV, Khanpur Kalan, Sonipat. — Chairman
2. Prof. M.N. Hoda, Director, BVICAM, New Delhi — Outside Expert
3. Prof. Dharminder Kumar, Deptt. of CSE , GJUS&T, Hisar — Outside Expert

- Item No. 1

The Departmental Research Committee approved the following criteria in respect of clause 3.4 (sub clause 3.4.1.5.) of Ph.D to evaluate the performance of the candidate in the interview for preparation of merit list for admission to pre-Ph.D course work subject to the availability of vacant seat with the prospective supervisor in the area of research.:

1

Singh 27/01/2018

Presentation	Communication skill	Domain Knowledge	
3 Marks	3 Marks	7 Marks	7Marks

The following candidate appeared before the committee:

1. Pinki D/o Sh. Baljeet Singh

Ayushi Chahal D/o Sh. Kalyan Singh Chahal did not attend the meeting of the Departmental Research Committee.

The score of the candidate appeared in the interview, based on the performance in interview and the Research statement/board area of research for admission to Pre-Ph.D course are given below:

Sr. No.	Name	Interview (a)				Research Statement/ Board area of research (b)	Total Marks (a+b)
Weightage		20%				10%	30%
		Presentation (3 Marks)	Communication skill (3 Marks)	Domain Knowledge (7 Marks)	Research Ability (7 Marks)		
1	Pinki	2	2	5	5	8	22

- Item No. 02

The Departmental Research Committee considered the recommendations of the Department Staff Committee held on 25.01.2018 with regard to registration in Ph.D (CSE) and recommended the following candidates for registration in Ph.D programme along with their topic of research and their respective supervisor:

Sr. No.	Name of the Candidate	Research Topic	Name of the Supervisor	DRC Remarks/ Decision
1.	Ms. Anjana D/o Sh. Nafe Singh	Design & Analysis of ~~Efficient Hybrid~~ Effective Techniques for Information Security in Cloud Computing	Prof. Ajit Singh	Recommended for Registration
2.	Ms. Ekta D/o Sh. Beer Singh	Design & Analysis of Hybrid Technique for Information Security Based on Visual Cryptography & Steganography	Prof. Ajit Singh	Recommended for Registration

27/01/18

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- Item No. 03
  Mrs. Reena, Resarch Scholar, Ph. D (CSE) has not presented her progress report before the Departmental Research Committee.

- Item No. 04
  The observation/recommendation of Department Staff Committee meeting (Item no.3) held on 25.01.2018 and letter no. 472 dated, 21/09/2016 (Flag X' and 'Y') was considered by the Departmental Research Committee. The Departmental Research Committee unanimously is of the view as student seems non-serious, admission of Ms. Jyoti D/o Sh. Daljit Singh in Ph.D (CSE) programme may be treated as cancelled.

27/01/2018

Prof. M.N. Hoda

(Outside Expert)

27.1.18

Prof. Dharminder Kumar

(Outside Expert)

27/01/2018

Prof. Ajit Singh

Chairman, DRC Committee

Copy forwarded to the following for information and further necessary action:

1. PA to Hon'ble Vice-Chancellor (for kind information of Hon'ble Vice-Chancellor)
2. PA to Registrar (for kind information of Worthy Registrar)
3. Assistant Registrar (Academic) for necessary action.
4. Admission Committee for necessary action.

27/01/2018

Prof. Ajit Singh

Chairman, DRC Committee

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BPS Mahila Vishwavidyalaya Khanpur Kalan Sonipat

(A State University Established under the Legislative Act No. 31/2006)

Ref. No BPSMV/CSE/IT/18/15:19-1582

Dated 28/3/18.....

Minutes of the meeting of the PGBOS of Computer Science & Engineering of Department of Computer Science & Engineering and Information Technology, Bhagat Phool Singh Mahila Vishwavidyalaya, Khanpur Kalan (Sonipat), held on 28/03/2018 at 12:30 P.M. The following are the member of PGBOS:

1. Prof. Ajit Singh, Chairperson, Deptt. of CSE & IT, BPSMV, Khanpur Kalan — Chairman
2. Prof. M.N. Hoda, Director, BVICAM, New Delhi — Outside expert
3. Prof. Naseeb Singh Gill, Deptt. of CSA, MDU, Rohtak — Outside expert
4. Mrs. Manju Saroha, Assistant Prof. Deptt. of CSE/IT,BPSMV — Member
5. Mrs. Sunita, Assistant Prof. Deptt. of CSE/IT,BPSMV — Member

The aforesaid meeting is convened in the Department of Computer Science & Engineering and Information Technology, Bhagat Phool Singh Mahila Vishwavidyalaya, Khanpur Kalan, Sonepat. The agenda items were discussed in detail and following decisions have been taken:

1. Item No. 1: Drawn and Approved

   The panel for paper setters/examiners for theory & practical papers for even semester of M.Tech CSE for the academic session 2017-18 were resolved and approved. The previous panel of examiners may be considered for the supplementary examination only.

2. Item No. 2: Drawn and Approved

   The syllabus of entrance examinations of Ph.D(CSE) w.e.f. academic session 2018-19 were resolved and approved.

3. Item No. 3: Drawn and Approved

   The panel for paper setters/examiners for entrance examination of Ph.D(CSE) for the academic session 2018-19 were resolved and approved.

28/3/18

4. Item No. 4 : Resolved and approved

The committee members considered and approved the recommendations of DRC (Computer Science & Engineering) held on 27/1/2018 in the Department of CSE & IT.

The committee also authorized to the Chairman for minor changes needed, if any. With this the meeting ended with a vote of thank to the chair.

28/03/2018

Prof. M.N. Hoda

(Outside expert)

Prof. Naseeb Singh Gill

(Outside expert)

28/3/18

Mrs. Manju

(Member)

On Leave

Mrs. Sunita

(Member)

28/3/18

Prof. Ajit Singh

Chairman, BOS

A copy of the above is forwarded to the following for information:

1. PA to Hon'ble Vice- Chancellor (for kind information of Hon'ble Vice-Chancellor)
2. PA to Registrar (for kind information of Worthy Registrar)
3. Assistant Registrar (Academic) for information and necessary action.
4. Controller of Examinations for information and necessary action.

28/3/18

Prof. Ajit Singh

Chairman, BOS

Bhagat Phool Singh Mahila Vishwavidyalaya,
Khanpur Kalan (Sonepat), Haryana-131305
www.bpswomenuniversity.ac.in

Minutes of the meeting of Faculty of Engineering and Technology held on 18.05.2018 at 3.30 p.m. in the office of Dean, Faculty of Engineering and Technology, BPSMV, Khanpur Kalan.

The following were present:-

1.	Prof. Vijay Nehra, Dean, Faculty of Engineering & Technology,	Chairperson
2.	Prof. Ajit Singh, Chairperson, Deptt of CSE/IT	Member
3.	Prof. Lalit Jajpura, Chairperson, Deptt of F.T.	Member
4.	Ms. Priyanka, Asstt. Prof., Deptt. of ECE	Member
5.	Ms. Manju Saroha, Asstt. Prof., Deptt. of CSE/IT	Member

After detailed discussion and deliberation, the following decisions were taken:-

Agenda No. 1: Considered and Approved.
The AICTE model curriculum of B.Tech. Electronics and Communication Engineering as resolved by Under Graduate Board of Studies in Department of Electronics and Communication Engineering held on 9/4/2018 and subsequently on17/5/2018 was considered and approved.

Agenda No. 2: Considered and Approved.
The AICTE model curriculum of M.Tech. Electronics and Communication Engineering M.Tech. ICT as resolved by Post Graduate Board of Studies of Department of Electronics and Communication Engineering held on 5/5/2018 was considered and approved.

Agenda No. 3: Considered and Approved.
The syllabi and scheme of examination of pre Ph.D course work in Electronics and Communication Engineering of Department of Electronics and Communication Engineering held on 5/5/2018 was considered and approved.

Agenda No.4: Considered and Approved.
The recommendations of Under Graduate and Post Graduate Board of Studies of Department of Fashion Technology held on 22/2/2018 was considered and approved to start integrated B.Sc. and M.Sc. (Fashion and Apparel Design). However the members of were opinion that suitable faculty may be assigned for the course as the same cannot started in Faculty of Engineering and Technology. Further, all the detail pertaining to Departments submitted on AICTE web portal may be taken into consideration before starting the course in department of Fashion Technology.

Agenda No.5: Considered and Approved.
The request of Ms. Sonia Tyagi to pursue her dissertation work after expiry of regular time period is considered and approved for further discussion and approval from Academic Council for condone of time limit for submission of dissertation.

Agenda No.6: Considered and approved the recommendation of the PGBOS held on 28/3/2018 in the Department of Computer Science & Engineering and Information Technology.

Agenda No.7: Considered and approved the recommendation of the PGBOS held on 16/5/2018 in the Department of Computer Science & Engineering and Information Technology.

Agenda No.8: Considered and approved the recommendation of the UGBOS held on 16/5/2018 in the Department of Computer Science & Engineering and Information Technology.

(Vijay Nehra) (Ajit Singh) (Lalit Jajpura) (Priyanka) (Manju Saroha)

Dean, FET

Endst. No. BPSMV/ECE/ 18/ 665-75 Date:- 22/5/18

A Copy of the above is forwarded to the following for information and necessary action:-

1. PA to Vice-Chancellor (For kind information of the Hon'ble Vice-Chancellor).
2. PA to Registrar (For kind information of the Worthy Registrar)
3. AR(Academic), BPSMV, Khanpur Kalan, Sonipat.
4. Chairperson, Department of CSE/IT, BPSMV, Khanpur Kalan, Sonipat.
5. Chairperson, Department of Fashion Technology, BPSMV, Khanpur Kalan, Sonipat.
6. Chairperson, Department of ECE, BPSMV, Khanpur Kalan, Sonipat.
7. Concerned faculty members.

Vijay Nehra
Dean, FET
21/5/2018

BPS MAHILA VISHWAVIDYALAYA KHANPUR KALAN
DEPARTMENT OF LAWS
Recommendations of Topics and Name of Supervisors for Registration in Ph.D

Dated- 09/11/2017

Sr No.	Name of researcher	Title	Proposed !
1	Ms. Navya Gupta	Law Relating to Differently Abled Persons : A Critical Study.	Pro. Vimal Joshi
2	Ms. Anju	Women Centric Laws vis-a-vis Reverse Discrimination : Recent Judicial trends.	Dr. Ashok Kumar
3	Ms. Rekha	Sustainable Development and Human Rights:- In National Perspective	Dr. Kritika

Dr. Preet Singh

9-11-17
Dr. Raj Pal

Dr. Ashok Kumar

9-11-17
Dr. Vimal Joshi

MINUTES OF THE MEETING OF P.G. B.O.S. IN LAW HELD ON 24th APRIL 2018 AT 11.00 A.M. IN THE OFFICE OF THE CHAIRPERSON DEPARTMENT OF LAWS

The meeting of the PGBOS in Law was held on 24th April 2018 at 11.00 A.M. in the office of the Chairperson. The following were present-

1. Prof. (Dr.) Vimal Joshi, BPSMV — Chairperson
2. Prof. (Dr.) Naresh Kumar, MDU, Rohtak — Subject Expert
3. Prof. (Dr.) J.S.Jhakar, CDLU, Sirsa, — do
4. Dr. Sandhya, Astt. Prof, BPSMV — Member
5. Dr. Kritika, Astt. Prof., BPSMV — do

The PGBOS after detailed discussion resolved and approved as under-

1) The topic of Ph.D. and names of the supervisors .already approved by D.R.C. in its meeting dated 09/11/2017 has been approved by PGBOS as under-

Sr.	Candidate	Topic	Supervisor
1	Ms. Navya Gupta	Law Relating to Differently Abled Persons: A Critical Study.	Prof. Vimal Joshi
2	Ms. Anju	Women Centric Laws vis-a-vis Reverse Discrimination : Recent Judicial Trends.	Dr. Ashok Kumar
3	Ms. Rekha	Sustainable Development and Human Rights: In National Perspective.	Dr. Kritika

2) The panel of examiners for the evaluation of Ph.D. thesis was approved to evaluate the Ph.D. thesis of Ms. Neelima and Ms. Pooja and forwarded to C.O.E. for further necessary action.

3) The PGBOS has approved the implementation of CBCS system in LL.M. course and approved to include one paper each to be included in LL.M. 1st and 2nd semester and a choice be given to students to choose the paper from the pool of papers offered by university for CBCS system.

4) The scheme of examination of LL.M. with CBCS system has been approved.
5) The board authorized the Chairperson .to provide panel of experts in urgency.

The meeting ended with a thanx to the chair.

24.4.18
Chairperson

CC to-

3. All members of the PGBOS.
4. A.R. Academic, BPSMV, Khanpur Kalan.

24.4.18
Chairperson

O/C.

4. The Faculty appreciated and approved the proposal of the Department to initiate the LL.B. three year course w.e.f. 2019-20 after getting affiliation by Bar Council of India and recommends for creation of two posts of Assistant Professors in Law for this course.
5. The Faculty approved the ordinance of LL.B. three year course.
6. The Faculty approved the Scheme of examination and syllabus of 1st and 2nd semester of LL.B. three year course.
7. The Faculty approved the amended syllabus of B.A. LL.B. and B.B.A. LL.B. 3rd and 4th semester applicable to the students admitted on 2017-18 onwards as per the guidelines issued by Bar Council of India time to time.

The meeting ended with a thanks to the chair.

15/5/18
(Archna Malik)

15.5.18
(Vimal Joshi)

15/5
(Kuldeep Singh)

CC to-

1. All members of the Faculty.
2. P.A. to Registrar for the information of the Registrar.
3. A.R. Academic, BPSMV, Khanpur Kalan.

Chairperson

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MINUTES OF THE MEETING OF FACULTY OF LAW HELD ON 15 th MAY 2018 AT 11.00 A.M.

The meeting of the Faculty of Law was held on 15th May 2018 at 11.00 A.M.. The following were present-

1. Prof. (Dr.) Vimal Joshi, Dean, BPSMV — Chairperson
2. Dr. (Mrs). Archna Malik, Astt. Prof (Law), BPSMV — Member
3. Mr. Kuldeep Singh, Supt- in- Charge, Academic nominee of the Registrar, BPSMV, — Secretary

The Faculty after detailed discussion resolved and approved as under-

1. The topic of Ph.D. and names of the supervisors .already approved by D.R.C. in its meeting dated 09/11/2017 and PGBOS in its meeting 24/04/2018 has been approved by Faculty as under-

Sr.	Candidate	Topic	Supervisor
1	Ms. Navya Gupta	Law Relating to Differently Abled Persons: A Critical Study.	Prof. Vimal Joshi
2	Ms. Anju	Women Centric Laws vis-a-vis Reverse Discrimination : recent Judicial Trends.	Dr. Ashok Kumar
3	Ms. Rekha	Sustainable Development and Human Rights: In National Perspective.	Dr. Kritika

2. The Faculty has approved the implementation of CBCS system in LL.M. course and approved to include one paper each to be included in LL.M. 1st and 2nd semester and a choice be given to students to choose the paper from the pool of papers offered by university for CBCS system.
3. The scheme of examination of LL.M. with CBCS system has been approved.

15.5.18

ANNEXURE 89

MINUTES OF THE MEETING OF PGBOS HELD ON 20th FEBRUARY, 2018

A meeting of the Postgraduate Board of Studies was held in Room No. 115, Department of English on 20th February, 2018 at 11:00 A.M.

Members Present:

1.	Dr. Ashok Verma	Chairperson
2.	Dr. Ravi Bhushan	Member
3.	Dr. Himanshu Parmar	Member
4.	Dr. Shalini	Member
5.	Prof. V.P. Sharma	Outside Expert
6.	Prof. S.D. Sharma	Outside Expert

Special Invitee:

1.	Dr. Ajeet Singh	Assistant Professor, DoE

PROCEEDINGS:

The following agenda was discussed:

1. **To consider the synopses submitted by the candidates along with their respective supervisors for final registration to Ph.D.**

Sr. No.	Roll No.	Name	Topic	Supervisor
1.	14031003	Ms. Monika	Treatment of Myths in *Asura*: *The Tale of the Vanquished*, *Sita, The Palace of Illusions*, *Ajaya: The Roll of Dice*, and *The Rise of Kali*	Dr. Ajeet Singh
2.	16031001	Ms. Esha	Philosophical Tenets of the *Bhagavadgita* in Patrick White's *Voss*, William Golding's *Darkness Visible*, Arun Joshi's *The Last Labyrinth* and Saul Bellow's *Herzog*	Dr. Ravi Bhushan
3.	16031002	Ms. Sonia	Revisiting the *Mahabharata* in M.T. Vasudevan Nair's *Bhima: Lone Warrior*, Kavita Kane's *Karna's Wife*: *The Outcaste Queen* and Sivaji Sawant's *Mrityunjaya*	Dr. Shalini
4.	16031003	Ms. Swati Punia	Matrices of War in Select Short Stories of Ambrose Bierce, Ernest Hemingway, Roald Dahl, Saadat Hasan Manto, Tim O' Brien and Katey Schultz	Dr. Himanshu Parmar

Decision: Considered and Approved.

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2. Change of Ph.D. Supervisor

The request received from Ms. Meenakshi Sharma, Reg. No. 13030458 regarding change of supervisor from Dr. Ashok Verma to Dr. Ajeet Singh, recommended by the supervisor, DSC and DRC, is submitted to the PGBoS for consideration and approval.

Decision: Considered and Approved.

3. Panel of Examiners

The Panel of Examiners for paper setting of M.A. English Integrated Five Year Programme, M.A. English Two Year Progamme, M.Phil English and Pre-Ph.D. Coursework is submitted to the PGBoS for consideration and approval

Decision: Considered and Approved.

4. Modification/Updation in Syllabus

a. **Adding Instructions to the paper setter for 50-50 scheme.**

The syllabus of M.A. English Two Year Programme was updated w.e.f. July 2015 with 80:20 scheme. As the syllabus for both M.A. English Two Year Programme and M.A. English Integrated Five Year Programme remains the same, the only difference being the 50:50 scheme in M.A. English Integrated Five Year Programme, the instructions to the paper setter like number of questions and marks with respect to M.A. English Integrated Five Year Programme need to be updated.

b. **Change in number of papers/books/theses/project reports in Unit-I of Course-III (Critical Survey and Literature Review) of Ph.D. and Course-V of M.Phil (Critical Review and Assessment).**

The DSC, in its meeting held on 17.02.2018 recommended that the number be reduced to 10.

Decision: Considered and Approved.

5. Modification in Ordinance and Scheme of Examinations of M.Phil English 2015

The house considered a staff resolution no. 3 of DSC meeting held on 08.01.2018 regarding replacing the provision of 100 marks dissertation in M.Phil Ordinance 2015 with grading only and slight modification in the scheme of examination to reflect the grading of dissertation in the DMC.

Existing	Proposed
The dissertation will consist of 100 marks which shall be evaluated by an external examiner for which three names will be proposed by the Supervisor. The Chairperson will recommend the same to the Controller of Examinations	The dissertation will be evaluated by an external examiner for which three names will be proposed by the Supervisor. The Chairperson will recommend the same to the Controller of Examinations. A grade will be awarded for dissertation and the same shall be reflected in the DMC.

6. Suggestion in Ph.D. Ordinance

a.

Existing	Proposed
Clause 11: Appointment of Examiner A panel of at least six external examiners not below the rank of Professor to evaluate the thesis provided by the concerned supervisor	**Clause 11: Appointment of Examiner** A panel of at least six external examiners to evaluate the thesis provided by the concerned supervisor

b. The DSC, in its meeting held on 17.02.2018, decided that the students who have successfully completed their M.Phil from a recognized University be exempted from Pre-Ph.D. Coursework.

c. The DRC, in its meeting held on 17.12.2016, decided that a certificate regarding Plagiarism by the candidate should be integrated in the thesis before submission.

Decision: *PGBoS is of the view that the agenda "a" (Appointment of Examiners) be deferred as new guidelines from UGC are awaited and the rest is considered and approved.*

Dr. Ashok Verma
(Chairperson)

Dr. Ravi Bhushan
(Member)

Dr. Himanshu Parmar
(Member)

Dr. Shalini
(Member)

Prof. V.P. Sharma
(Outside Expert)

Prof. S.D. Sharma
(Outside Expert)

MINUTES OF THE MEETING OF DEPARTMENT RESEARCH COMMITTEE

A meeting of the Department Research Committee was held in Room No. 115, Department of English, BPSMV, Khanpur Kalan on 16th January, 2018 at 11:30 A.M.

The following members were present:

			Special Invitees
1.	Dr. Ashok Verma	Chairperson	Dr. Shalini
2.	Prof. Deepti Dharmani	Outside Expert	Dr. Ajeet Singh
3.	Dr. Ravi Bhushan	Member	Ms. Babita
4.	Dr. Geeta Phogat	Member	

PROCEEDINGS:

The following agenda was discussed:

1. **To Discuss the Tentative Research Proposals and Domain Knowledge of Candidates for Admission in Pre-Ph.D. Coursework:**

Sr. No.	Name	Title of the Statement/ Synopsis	Marks of Entrance Test (40%)	Marks in 10+2 (10%)	Marks in B.A./B.Sc. (10%)	Marks in M.A. (10%)	Marks in Viva Voce (20%)	Research Statement (10%)	JRF (10 Marks)/NET / SLET (5 Marks)	Total Score	Remarks
1.	Ms. Bhawna Singh	A Study of Social Activism in the Works of Arundhati Roy	22.4	6	7	6	12	6	--	59.4	
2.	Ms. Vandita Mor	Re (Representation) of Culture in Virtual Dimensions	22.8	6	6	6	11	5	----	56.8	

Decision: Ms. Preeti was called before the DRC on the basis of PUC moved as the Chairperson had interpreted the comment of the Hon'ble Vice-Chancellor as approval. However, the house went through the file comment and came to a unanimous decision that since the student had cleared the Entrance test for Ph. D. for the session 2016-17, it is not clear whether she can be considered for admission in 2017-18 or not especially considering Clause 3 of Ph.D. Ordinance which mandates admission through advertisement each year.

Signatures of the Members:

16/1/18 16/1/18 16/1/18

Therefore it is recommended that her case may be sent for the approval of the Hon'ble Vice-Chancellor for consideration for admission in 2017-18 on the basis of her performance in the Entrance Test for Ph.D. 2016-17.

The rest was considered and approved.

2. **To consider the Synopsis/Research Proposals submitted by the students for Registration to the Ph.D. Programme.**

The following candidates reported to face the DRC. The decision made is as under:

Sr. No.	Roll No.	Name	Title of the Synopsis	Name of the Supervisor	Remarks
1.	14031003	Ms. Monika	Treatment of Myths in *Asura*: *The Tale of the Vanquished*, *Sita, The Palace of Illusions*, *Ajaya: The Roll of Dice*, and *The Rise of Kali*	Dr. Ajeet	
2.	16031001	Ms. Esha	Philosophical Tenets of the *Bhagavadgita* in Patrick White's *Voss*, William Golding's *Darkness Visible*, Arun Joshi's *The Last Labyrinth* and Saul Bellow's *Herzog*	Dr. Ravi	
3.	16031002	Ms. Sonia	Revisiting the *Mahabharata* in M.T. Vasudevan Nair's *Bhima: Lone Warrior*, Kavita Kane's *Karna's Wife*: *The Outcaste Queen* and Sivaji Sawant's *Mrityunjaya*	Dr. Shalini	
4.	16031003	Ms. Swati Punia	Matrices of War in Select Short Stories of Ambrose Bierce, Ernest Hemingway, Roald Dahl, Saadat Hasan Manto, Tim O' Brien and Katey Schultz	Dr. Himanshu Parmar	

Decision: Considered and Approved.

Signatures of the Members:

16/1/18 16/1/18 16/1/18

16/1/18

3. **Change of Supervisor.**

PUC received from Ms. Meenakshi Sharma, Registration No. 13030458 regarding change of supervisor from Dr. Ashok Verma to Dr. Ajeet Singh

Decision: Considered and Approved.

4. **Modification in M. Phil. English Ordinance**

The house considered a staff resolution no. 3 of DSC meeting held on 08.01.2018 regarding replacing the provision of 100 marks dissertation in M.Phil Ordinance 2015 with grading only and slight modification in the scheme of examination to reflect the grading of dissertation in the DMC.

Decision: Considered and Approved.

The meeting ended with a vote of thanks from the chair.

Dr. Ashok Verma | Prof. Deepti Dharmani 16/1/18 | Dr. Ravi Bhushan 16/1/18 | Dr. Geeta Phogat

Dr. Shalini | Dr. Ajeet Singh | Ms. Babita

Signatures of the Members:

ANNEXURE 40

To,

The Principal,
MSM Institute of Ayurveda,
BPS Mahila Vishwavidyalaya,
Khanpur-Kalan, Sonepat.

Subject: Regarding proposal for one year Diploma in Ayurvedic Pharmacy.

Sir,

With reference to letter no BPSMV/Inst./Ayu/18/3494-3497 dt 01-05-18, please find the details as following:-

1. Name of course:- Diploma in Ayurvedic Pharmacy (D.Pharma (Ayu.)) (ordinance at F/A)
2. Duration:- 2 years (4 semesters)
3. Syllabus in detail along with examination scheme:- attached at F/B
4. Statutory requirement/permission:- BPSMV approval
5. Intake capacity:- 30 female students
6. Budget details

Income/revenue generated	**Expenditure per year**
Fees Rs.10000 per semester Total fees collected for full course of 4 semesters for 30 students 10000x4x30=1200000	Recurring expenses on a. Manpower:- 1 Clerk outsource/Govt policy @15700/- (DC rate) F/C:- 15700x12= *188400/-* b. Consumables:- a. Raw material for practical in pharmacy- *30000/-* b. LPG Fuel for practical- *15000/-* c. Remuneration to faculty for additional teaching work as per BPSMV rules (F/D) for total teaching of 870 hours in 4 semesters 870 hrsx250= *217500/-* **Total recurring charges**(188400+30000+15000+217500) = **450900/-**
	Non Recurring/One time expenditure at start of course- a. LED Laser Full HD projector with stand, screen and battery backup- *140000/-* (for teaching purpose) b. Student benches (for 2 batches 60 students)- 60x3000= *180000* (Presently benches are available only for BAMS students and no spares are available in Institute. The course includes regular theory classes. hence purchase of benches is mandatory.)

15/5/18

	Total non-recurring (at start)- (140000+180000)= 320000/-
Total fees from 1 batch (full course)= 1200000/- (twelve lakhs only)	**Total expenditure (Recurring + one-time non-recurring)**=450900+320000=770900/-

7. Manpower requirement, if any, with designation, qualification, experience, annual expenditure as per Haryana Govt/BPSMV norms/outsource policy- **One clerk** (Min. qualification- Graduate). This is a full time course which will cover examination every six months of 4 subjects each. Management of data of all students of the course, conduction of practical examination etc is required.
8. Any other details - This is a new course and the work load on faculty would increase as per statutory recommendations of CCIM. No new faculty is proposed to be recruited for the course. The teaching load would be distributed among the existing faculty of 14 different departments of MSM Institute of Ayurveda. Hence, a remuneration of Rs. 250/- per lecture is proposed as per University norms (resolution no. 15.7 of 18th EC held on 19.08.2009) (F/D)

Submitted for kind approval & further necessary action please.

4.5.18

Dr. Piyush Chaudhary,
Asstt. Proff.
Deptt. Of Rasa Shastra & Bhaishajya Kalpna,
Incharge, Gurukul Pharmacy.

Diploma in Ayurvedic Pharmacy

D.Pharma (Ayu.)

Course coordinator

Dr. Piyush Chaudhary

Co-Coordinator

Dr. Pankaj Rai

Head of Department

Dr. Vishnu Prasad Gautam

DEPARTMENT OF RAS SHASTRA & BHAISHAJYA KALPANA

MSM INSTITUTE OF AYURVEDA,

BHAGAT PHOOL SINGH MAHILA VISHWAVIDYALAYA,

KHANPUR KALAN, SONIPAT, HARYANA.

Note:

(i) Age will be determined on the basis of entries in the Matriculation Certificate/ Secondary School Certificate.

(ii) A candidate having D. Pharma (Ayu.) will not be eligible for admission to BAMS Course.

5. ELIGIBILITY FOR UNIVERSITY EXAMINATION

5.1 The Semester Examination shall be open to a regular student who

(a) Fulfills the minimum requirements as laid down in Clause 3 above; if she is a candidate for the First Semester Examination; or has passed/appeared in the preceding semester examination if she is a candidate for the 2nd, 3rd, 4th Semester Examination. This is, however, subject to Clause 6.6 to 6.8.

(b) has been on the rolls of a College admitted to the privileges of this University during the academic year of the examination concerned.

(c) has her name submitted to the Controller of Examinations by the Principal of the College and having attended not less than 75% of the full course of lectures delivered or prescribed in the Syllabus; whichever is minimum in each subject in Theory/Practical/Clinical and shall be counted up to 7 days before the commencement of the examination. The Principal of the College is empowered to condone the shortage in attendance up to 5% in each subject in Theory/Practical/Clinical in genuine cases to her satisfaction.

6. EXAMINATIONS

6.1. The semester examination shall ordinarily be held in the month of May/June or November/December or such dates as may be fixed by the Vice-Chancellor. For odd semester examination may be conducted in November/December and even semester in May/June. For failed/ reappear candidates, a supplementary examination shall be held along with the odd/even semester only, as per the case may be or on such other dates as may be fixed by the Vice-Chancellor.

6.2 The date fixed for the receipt of the admission forms and fees for examinations without and with late fee, as fixed by the Vice-Chancellor shall be notified and displayed on University website/notice board.

6.3 The examination shall consist of four parts entitled as First Semester, Second semester, third semester, fourth semester.

6.4 50% of the total marks in practical examination will be awarded by external examiner and 50 % by Internal Examiner. It shall be forwarded to the Controller of Examination directly by the teacher concerned or as per directions of CoE at least 7 days before the commencement of concerned examination. The Internal Assessment shall be calculated :-

(a) 50% on the basis of result/marks obtained in college class performance written/practical;

(b) 25% on the basis of attendance of the student: and

(c) 25% on the basis of certified Class/Practical Work.

6.5 The Internal Assessment marks, shall in case of a candidate who has failed in the examination, be carried forward to the subsequent examination(s) for which she is eligible, without attending a fresh course of study.

6.6 A student who has completed the prescribed course of instruction in the college for examination but does not appear in it, or, having appeared fails may be allowed on the recommendation of the Principal of the college to appear/re-appear in the examination/paper(s), as the case may be, as an ex-student without attending a fresh course of instruction, only twice within the period of four years of her admission to the course. While re-appearing in the examination the candidate shall be exempted from reappearing in the paper/subject(s) in which she has obtained at least 50%. The candidate shall be allowed to proceed from one semester to next semester class if she has got passed in at least one of subject papers of first year course. Subject to the number of chances as provided above, such a candidate unable to successfully clear an examination of any course shall be allowed to reappear in the remaining paper(s) of that semester, after six months, when the next odd/even semester may conducted by University. Provided further that if such a candidate fails to pass previous examination her result for final semester examination shall be withheld provisionally till she clears the examination.

6.7 The candidate will have to reappear and pass either theory or practical examination of the subject(s) during supplementary examination as per the case may be.

6.8 A candidate who fails to pass D. Pharma (Ayu) Examination within a period of four years of her admission to the course shall be required to pursue the course *ab initio*.

7. SCHEME OF SYLLABUS AND EXAMINATION.

The examination shall be held according to the scheme and syllabus prescribed by the Academic council on the pattern of guidelines issued by the University/Statutory body, if any, from time to time.

8. BOARD OF EXAMINERS

The practical examination shall be conducted by a Board of Examiners consisting of one internal and one external examiner. The external examiner shall be appointed by the Controller of Examinations from the panel of examiners recommended by the Institution. The external examiner should be from outside the institution imparting the training.

9. DECLARATION OF RESULT AND PASS PERCENTAGE

9.1 The minimum marks required to pass in each subject shall be 50% (theory and practical separately).

9.2 The Final result shall be declared after taking into account the marks obtained by the candidate in all subjects of all semester examinations. The candidates who obtain more than 75% in the aggregate and have passed all the examinations in the first attempt and with minimum duration of the course shall be declared to have passed with "Distinction".

9.3 As soon as possible, after the termination of the examination, the controller of Examinations shall publish a list of candidates who have passed the yearly examination.

9.4 Every successful candidate shall be granted a Certificate-cum-Detailed-Marks-card for each semester examination. Marks obtained shall be supplied to unsuccessful candidates also. Provided that a candidate who qualified all the subjects of the two yearly examinations (4 semesters) of D. Pharma (Ayu.) will be issued a Diploma in Ayurvedic pharmacy.

10. TRAINING

All the students passing both first year and second year examination (all semesters) shall undergo training of 3 months duration in MSM Institute of Ayurveda & Hospital in the following departments with each department training of 15 days as per following division.

1. Kayachiktsa
2. Shalya-shalakya
3. Dispensing room
4. Bal rog - Stri & Prasuti Roga
5. Panchkarma
6. swasthavritta

Training certificate shall be issued by Principal, MSM Institute of Ayurveda after verification by HOD concerned.

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11. Scheme of Examination

FIRST YEAR			Teaching Hours/Week		Credit	Marks		Total Marks
S.No.	Course code	Subject	Theory	Practical		Theory	Practical	
Semester -I								
1.	DAP-101	Ayurveda Siddhant Evam Itihas	3	-	3	50	-	50
2.	DAP-103	Sharir Rachna & Kriya Vigyan	4	2	5	60	40	100
3.	DAP-105	Dravya Guna Vigyana-1	4	2	5	60	40	100
4.	DAP-107	Ras Shastra & Bhaishajya Kalpana-1	4	2	5	60	40	100
Semester -II								
5.	DAP-102	Ras Shastra & Bhaishajya Kalpana-2	4	2	5	60	40	100
6.	DAP-104	Agad Tantra & Vyavhar Ayurveda	4	2	5	60	40	100
7.	DAP-106	Swasthavritta & Yoga	4	2	5	60	40	100
8.	DAP-108	Dravya Guna Vigyana-2	4	2	5	60	40	100
SECOND YEAR								
Semester -III								
9.	DAP-201	Ras Shastra & Bhaishajya Kalpana-3	4	2	5	60	40	100
10.	DAP-203	Vyadhi Nidana	4	2	5	60	40	100
11.	DAP-205	Vyadhi parichaya & Chikitsa	4	2	5	60	40	100
12.	DAP-207	Dispensing and Arrangement of Hospital	3	-	3	50 (evaluation by internal examiner only)		50
Semester -IV								
13.	DAP-202	Ras Shastra & Bhaishajya Kalpana-4	4	2	5	60	40	100
14.	DAP-204	Stri Prasuti & Bal Roga	4	2	5	60	40 (Internal examiner only)	100
15.	DAP-206	Shalya-Shalakya	4	2	5	60	40 (Internal examiner only)	100
16.	DAP-208	Project work/credit course	3 hours per week		3	50 (evaluation by internal examiner only)		50

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12. Examiners & departments responsible for teaching & examination:

S.No.	Course code	Subject	Departments responsible for teaching & examination
1.	DAP 101	Ayurveda Siddhant Evam Itihas	Maulik siddhant
2.	DAP 103	Sharir Rachna & Kriya Vigyan	Sharir Rachna & Kriya
3.	DAP 105, 108	Dravya Guna Vigyana	Dravya Guna
4.	DAP 107, 102, 201, 202	Ras Shastra & Bhaishajya Kalpana	Ras Shastra & Bhaishajya Kalpana
5.	DAP 104	Agad Tantra & Vyavhar Ayurveda	Agad Tantra
6.	DAP 106	Swasthavritta & Yoga	Swasthavritta
7.	DAP 203	Vyadhi Nidana	Rog nidana
8.	DAP 205	Vyadhi parichaya & Chikitsa	Kayachikitsa & Panchkarma
9.	DAP 206	Shalya-Shalakya	Shalya & Shalakya
10.	DAP 204	Stri Prasuti & Bal Roga	PTSR & Kaumarbhritya
11.	DAP 207	Dispensing and Arrangement of Hospital	Kayachikitsa
12.	DAP 208	Project	Ras Shastra & Bhaishajya Kalpna

1. The relevant part of each subject syllabus will be taken up by respective department involved in teaching & training of that department.

2. The duty for setting of theory question paper will be assigned by CoE, to any of the respective department undertaking teaching & training of that subject. E.g the theory question paper of DAP 103, (Sharir Rachna & Kriya Vigyan) may be given to either sharir rachna department or sharir kriya department. Similarly theory question paper of DAP 206 (Shalya-Shalakya) may be given either to Department of shalya or shalakya.

3. The internal examiners of the paper code DAP 103, DAP 204, DAP 205, DAP 206 will be rotated every year as per following schedule and the same may be recommended by Principal, MSM Institute of Ayurveda.

S.No.	Paper code	Name of subject	Rotation between
1.	DAP 103	Sharir Rachna & Kriya Vigyan	Deptt of Sharir Rachna & Deptt of Sharir Kriya
2.	DAP 205	Vyadhi parichaya & Chikitsa	Kayachikitsa & Panchkarma
3.	DAP 206	Shalya-Shalakya	Shalya & Shalakya
4.	DAP 204	Stri Prasuti & Bal Roga	Stri Prasuti & Kaumarbhritya

13. FEES

Fee for the course would be as decided by University and revised from time to time.

14. GENERAL

14.1 Notwithstanding the integrated nature of this course which is spread over more than one academic year, the ordinance in force at a time the student joins the course shall hold good for the whole course duration for that student.

14.2 And nothing in this ordinance shall be deemed to debar the University from amending the ordinance and the amended ordinance, if any shall apply to all students taking admission in the subsequent first academic year.

SYLLABUS OF DIPLOMA IN AYURVEDIC PHARMACY

Scheme of Examination

FIRST YEAR			Teaching Hours/Week		Credit	Marks		Total Marks
S.No.	Course code	Subject	Theory	Practical		Theory	Practical	
Semester -I								
1.	DAP-101	Ayurveda Siddhant Evam Itihas	3	-	3	50	-	50
2.	DAP-103	Sharir Rachna & Kriya Vigyan	4	2	5	60	40	100
3.	DAP-105	Dravya Guna Vigyana-1	4	2	5	60	40	100
4.	DAP-107	Ras Shastra & Bhaishajya Kalpana-1	4	2	5	60	40	100
Semester -II								
5.	DAP-102	Ras Shastra & Bhaishajya Kalpana-2	4	2	5	60	40	100
6.	DAP-104	Agad Tantra & Vyavhar Ayurveda	4	2	5	60	40	100
7.	DAP-106	Swasthavritta & Yoga	4	2	5	60	40	100
8.	DAP-108	Dravya Guna Vigyana-2	4	2	5	60	40	100
SECOND YEAR								
Semester -III								
9.	DAP-201	Ras Shastra & Bhaishajya Kalpana-3	4	2	5	60	40	100
10.	DAP-203	Vyadhi Nidana	4	2	5	60	40	100
11.	DAP-205	Vyadhi parichaya & Chikitsa	4	2	5	60	40	100
12.	DAP-207	Dispensing and Arrangement of Hospital	3	-	3	50 (evaluation by internal examiner only)		50
Semester -IV								
13.	DAP-202	Ras Shastra & Bhaishajya Kalpana-4	4	2	5	60	40	100
14.	DAP-204	Stri Prasuti & Bal Roga	4	2	5	60	40 (Internal examiner only)	100
15.	DAP-206	Shalya-Shalakya	4	2	5	60	40 (Internal examiner only)	100
16.	DAP-208	Project work/credit course	3 hours per week		3	50 (evaluation by internal examiner only)		50

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Ayurveda Siddhant Evam Itihas

1. Definition of Ayurveda.
2. Ashtanga Ayurveda – The eight specialized branches of Ayurveda, concept and definition.
3. Ayurvediya Padarth Vigyan and its importance. Characteristics and classification of Padarth.
4. Dravya Vigyaniyam. characteristics. number and classification of dravyas. The characteristics. guna and origin of Panchamahabhutas and their mutual micro-merging (Paraspara anupravesh).
5. Applied studies of dravyas from Ayurvedic perspective.
6. Guna Vigyaniyam : characteristics and types of Gunas as gurvadi guna. adhyatmika guna, vaisheshika guna. saamanya guna.
7. Karma vigyaniyam : characteristics and types of Karmas.
8. Saamanya. Vishesha. Samvaya Vigyaniyam – characteristics and types.
9. Pramaan Vigyaniyam: characteristics. importance and number of Pramaana. The Pramaanas accepted by Ayurveda–Pratyaksha. Anumaana. Aptopdesha and Yukti Pramaanas.
10. Karya. Karana Bhava : Description of Karya–Karana Bhava and various Vaadas. Features of cause (Kaarana) and types. Description of samavayi. asamavayi and nimitta karana in Ayurved. Satkaryavad. Asatkarya vada. Parmanu vada. Pilupaka. Pitharapaka etc.
11. Ayurvedavatarana : The Atreya (Charaka Samhita) and the Dhanvantari (Sushruta Samhita) traditions of Ayurveda.
12. Laghutrayi and Brihattrayi Parichaya.
13. Propagation of Ayurveda in foreign countries.

Sharir Rachna & Kriya Vigyan

Part A

1. Introduction to 'Sharira'. 'Shadanga Sharira' Lakshana of Aatma and Mana. Properties of Mana and Vishaya. Gyanendriya and their adhisthana. and the knowledge of their vishya grahana. karmendriya and their work.
2. Asthi Vigyan: No. of Asthi (Classic and Modern view) their work and introduction. knowledge of formation of bone from Taruna ashthi (Cartilages)
3. Manspeshi Vigyana: Introduction of types of muscle. number of *Peshi*. Specially Trishirska (Triceps). Anspindindiva (Deltoid). Nitamba Pindika (Glutial). Knowledge of Suchi Vedha. Knowledge of work of Peshi.
4. General Knowledge of Shira (Veins). Dhamniya (Arteries). Lasika Vahiniya (Lymphatics). Srotas. Karpristitika (Dorsa-Metacarpal). Madhyalahuka (Basalic). Dirghtana (Long Saphenous) Knowledge of sira suchivedha.
5. General knowledge of Twacha (skin) Kala (Membrane) Dhatu. Updhatu and Mala in classic and modern point of view.
6. Koshthang: Definition of Kostha, knowledge of structure and function of following Koshthanga – Hridya (Heart). Fuffusa (Lung). Yakrita (liver). Paliha (Spleen). Vrikka (Kidney). Vasti (Bladder). Amashaya (Stomach). Kshudrantra (Small intestine). Sthulantra (large intestine). Guda (Rectum). Agnashya (Pancrease). Knowledge of structure and function of male and female genital organs. No. of Aashya (Sapta and Astha Aashya).

Part B

1. Nistrota Granthiya (Endocrinal gland). General introduction of location of Nistrota Granthiya. General Introduction of their secretion and their effects.
2. Nadi Tantra (Nervous System): Mastishka (Brain). Sushumna (Spinal cord). Knowledge of the cranial nerves.
3. Dosha Vijyaniyam: Etymology of dosha. Number and their name. properties (Guna). normal function. Type and function of doshas on the basis of their location (Sthanabheda).
4. Dhatu Vigyaniyam: Etymology. name. number. functions in the body. vriddhi- kshaya lakshana.

5. Mala Vigyaniyam: Etymology, name, number, functions in the body, vriddhi- kshaya lakshana.
6. Oja: samanya rupa, types, brief introduction of immunity.
7. Anna Vighatana (Digestive System), Rakta Sancharan (Circulation of blood), Swashan Kriya (Respiration) knowledge of pravriti of mala evem mutra (Excretory System).

PRACTICAL

1. Identification of various body parts, organs and bones by study of models and charts.
2. Normal physiological process of body.
3. Instruments used in physiology lab with general knowledge of foolowing:-
    a. Study of microscope
    b. Hb estimation by Sahli's method
    c. Preparation & staining of blood smear
    d. Packed cell volume
    e. ESR
    f. pH & specific gravity of Urine
    g. To check sugar in Urine
    h. To check albumin in Urine
    i. To check bile salts in Urine

Dravya Guna Vigyana-1

Theory

1. Definition of Dravyaguna Vigyan and its importance.
2. Definition of Dravya and its importance.
3. Definition of Rasa, types and Panchbhautic composition of Rasa.
4. Definition, types and importance of Gunas, Vipaka, Veerya, Prabhav.
5. Introduction to Karmas (actions):- Deepan, Paachan, Graahi, stambhan, Bhedan, Rechan, Anuloman, Sramsana, Samshodhana, Rasayana, Vajikarana, Vyavai, Madakari, Vikasi.
6. Introduction to Mishrak Varga: Triphala, Madhuritriphala, Sugandhatriphala, Swalptriphala, Trijata, Chaturjata, Trikatu, Trimada, Panchkola, Shadushan, Panchawalkala, Chaturushana, Trikantaka, Panchapallav, Laghu Panchamool, Brihad Panchmoola, Vallipanchmoola, Trinpanchmoola, Ashtavarga.
7. Classification of Drugs according to Ayurvedic principles.
8. Collection, storage & preservation of drugs.

Practical

1. Method of Identification of Drugs.
2. Visit to herbal garden
3. Identification of drugs mentioned in Mishrak varga

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Ras Shastra & Bhaishajya Kalpana-1

1. Development of Ayurvediya Rasashastra & Bhaishajya Kalpana
2. Definition of Rasa Shastra, importance in Ayurveda and brief history of Rasa Shastra, its relevance in vedic era, Ayurvedic literature and in Modern science.
3. Define (Paribhasha) Shodhana, Sanskar, Marana, Satvapatan, Nirvap, Avap, Dhanvantaribhag, Rudrabhag, kajjali, Patanapishti, Dhanyabhrak, Bubhukshitparad, Hinguloth Parad.
4. Brief descriptions of Yantra, puta and Musha, Yantra – Dolayantra, Vidyadhar yantra, Taptakhalva yantra.
5. Musha – Samanya, Vajra, Vajradravani, Yog, Gar, Var, Varnya, Ropya, Bid, Gostani, Vrintaak, Gol, Malla, Pakva, Maha, Manduk, Musha.
6. Classification of drugs in Rasa Shastra.
7. Parada – Its synonyms, origin, its impurities, gatis, Samanya – Vishesh Shodhana, Shudh parad lakshana paradiya Kalpnana – Kajjali, Parpati, Pottali, Kupipakva rasayana and Kharliya Rasayana.
8. Maharasas – their synonyms, identification, types impurities shodhana, Marana, therapeutic doses and compound formulations, side effects and its antidote.
9. Aushadh Yogas: Their composition, properties and uses

1. Panchamrit Parpati 2. Shweta Parpati 3. .Abragarbha pottali 4. Hemagarbha pottali

5. Rasa Sindur 6. Mallasindur 7. Makardhwaj 8. Suvarnabang

9. Saptamrita loha 10 .Kamadudha rasa

Practical

1. Identification of instruments & equipments used in Pharmacy
2. Preparation of at least 20 yogas (formulations) from Rasa Shastra including purification processes.

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Semester -2

Ras Shastra & Bhaishajya Kalpana-2

1. Definition of Bhaishaja – Bhaishjya kalapna and its brief history in vedas Ayurvedic samhitas and in samgrah period.
2. Paribhashas – Deepana. Paachana. Rasayana. Vajikarna. Stambhana. Sransana. Virechak. Vamana.
3. Definition of Mana. Mana Gyan Paryojana. Drugs on the basis of present measurement (Mana). Knowledge of quantity (Matra). Knowledge of storage and preservation of drugs.
4. Panchavidha kashaya kalpna. their method of preparation and their uses.
5. Manufacturing process of: Manda. Peya. Vilepi. Odan. Kritakrit yush. Shaka. Phala. Mansa. Rash. Kshirpaka. Kanji. Udak Nirmana Shadangpaniya. Yavodak. Mantha. Parmathya. Tandulodak. Tarpana. Karshara. Veshwar. Rason. Takrabhed. Panak. Karchika. Saktu.
6. Preparation methods of Avaleha Kalpana. Churna. Vati. Guggula Kalpana.
7. Aushadh Yoga: Their composition. properties and uses.

1 .Dashamool Kwath 2 .Phalatrikadi Kwath 3. Pathyadi Kwath 4. Rasnasaptak Kwath

5. Vasavaleha 6 .Chyavanaprashavaleha 7. .Sitopaladi Churna 8 .Talisaadi Churna

9. Dashanasamskar Churna 10 .Lavanbhaskar Churna 11. Triphala Guggulu

12 .Abha Guggulu 13.Yograj Guggulu 14 .Bala Chaturbhadra Churna

Practical

1. Preparation of at least 20 yogas (formulations) from Rasa Shasura and Bhaishjya Kalpana. including purification processes.
2. Visit to nearby pharmacies.

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Agad Tantra & Vyavhar Ayurveda

1. Definition of poison (Visha). Ten properties of poison and their effect on body (Sharira).
2. Describe Sthavar visha. Jangam Visha & Dushi Visha. Symptoms of poison and treatment of snake. scorpion and Honey bee etc.
3. Treatment and symptoms of overdose or poisoning by Parada. Sankhiya. Ahiphen. Dhatura. Gunja. Bhanga. Vatsnabha and Jaiphal.
4. Identification of poisonous water. air. soil. food and the method of prevention of their poisoning.
5. Vishadata Lakshana.
6. Causes of death. living and identification of dead body.
7. General description of Vidhivaidhak and vyaharayurveda.
8. Responsibility of court and jurisprudence.

PRACTICAL

1. Minimum one visit of students in Madhuvana of Karnal.
2. Identification of poisons & weapons.

Swasthavritta & Yoga

1. Swasth purush lakshan. objective of Sharira raksha.
2. Adhisthana of Roga: Sharira & Mana. Swasthaya raksha hetu. Knowledge of natural utility of Sharira and Mana.
3. Knowledge of Kala & Ritusamdhi. Trayopastambha. Ahara. Sawapana and Brahmacharya explanation and their effect on sharira.
   Ahara: Main components of Shaka-ahara. Masha ahara. Phala ahara and Dugdha ahara. their effect on body. Ahara samrakshana vidhi. knowledge of special rules of Ahara sevana.
4. Complete description of Dharniya & Adharniya Vega.
5. Bhumi. Vayu & Jala: Their effect on health. Purification method of Jala and Vayu. Lakshana of Shudha Jala.
6. Health education to adolescents and general knowledge related to STD. family planning and knowledge of personal hygiene of females.
7. Communicable Disease: Koch's/Tuberculosis. Romanika. Mashurika. Kustha. Vishuchika. Rohini. Pashan Gadarbha. Kasha. Knowledge of vatashleshmik Jvara. General preventive & treatment guidelines. knowledge of Vaccination.
8. Occupational hazards/disease borne from them and their method of prevention.
9. Knowledge of vector borne diseases.
10. Knowledge of various national health programme.
11. Yoga Parichaya. yoga asana practice. knowledge of common yoga protocol.

PRACTICAL

1. Practical demonstration of yogasana. pranayama and shat karma
2. Ahardravya parichaya
3. Water treatment methods
4. Visit to nearby health centre

DRAVYAGUNA VIGYAN-2

1. Study of following drugs including Classification. Latin name. Family. Vernacular name. Synonyms. Botanical description. Varieties. Habitat. Chemical composition. Properties. Doshakarma. Actions. Uses. Parts used: Dosage. Formulations. Substitute and Adulteration.

1. Aragvadha	2. Ardraka	3. Apaamarga	4. Arjuna	5. Ashwagandha
6. Arka	7. Aamalaki	8. Ashok	9. Balaa	10. Bilva
11. Bhringraj	12. Dhatura	13. Ela	14. Gokshur	15. Guduchi
16. Guggulu	17. Chandan	18. Chitrak	19. Haritaki	20. Haridra
21. Jyotishmati	22. Jambu	23. Jataamansi	24. Kutaja	25. Khadira
26. Bhumyamalki	27. Nirgundi	28. Nimba	29. Marich	30. Madanphala
31. Pareesha	32. Punarnava	33. Pippali	34. Rohitak	35 .Rasona
36. Shirisha	37. Shatavari	38. Karanja	39. Kumari	40 . Shalmali
41 Sudarshan	42 . Tulsi	43. Tvak	44 .Udumbar	45. Vansh
46 . Vacha	47. Vibhitaki	48 . Lodhra	49. Vidang	50. Yashtimadhu
51. Katuka	52. Vasa	53. Sarpgandha	54. Sunthi	

2. Property, effect & uses of drugs of animal origin: Kasturi. Gorochan. praval. mukta. shambuka. shankh. varatika. mrigsringa

Practical

1. Preparation of 25 herbarium sheets.
2. Visit to herbal garden
3. Identification of drugs mentioned in theory

Semester-3

Ras Shastra & Bhaishajya Kalpana-3

1. Introduction, identification, types, impurities, shodhana, marana, therapeutic dose, adverse effects and antidotes of Uparasas. Sadharan Rasa. Dhatu. Ratna. sudha-kshar-sikta varga.
2. Introduction, shodhana, therapeutic dose, antidotes, toxicity of visha-upavisha varga.
3. Preparation of several Ayurvedic formulations like Bhasma, Sindooras, Netrabindu, Varti & Rasa preparations.
4. Aushadha Yoga: Manufacturing of Aushadhi, their characteristics and uses according to disease.

Jwara:	Mritunjaya rasa, Tribhuvankirti rasa, Sanjivni vati.
Atisara:	Gangadhar rasa, Karpura rasa
Grahini:	Loknath rasa, Rasakarpura
Arasha (Piles):	Arsha kuthar rasa, Kankayana vati
Pandu:	Punarnava mandur
Rakta Vikara:	Rakta pittantak rasa
Rajyayaksma:	Vasantmalti rasa
Kash:	Chandramrut rasa
Hikka:	Mayurpicha Bhasma
Shula:	Shulgajkesari rasa
Haridya roga:	Haridyarnav rasa, Naga arjunabhra, Chandrodaya
Sheet pitta:	Lilavilas rasa
Amal pitta:	Sutshekhar rasa
Aama vata:	Aamvatari rasa
Gandmala:	Gandmala Kandan rasa
Firang:	Sudhanidi rasa
Prameh:	Premhari rasa, Swaranvangeshwar rasa
Udar roga:	Narach rasa
Vaat vyadhi:	Vaatachintamani
Apasmara:	Smiritisagar rasa
Unmada:	Unmandgaj Keshari
Pratishyay:	Lakshmivilas, Mahalakshmi vilas rasa, Nardiya Lakshimivilas rasa

Practical:

1. Preparation of at least 20 yoga (Formulations) of different kalpanas.

Vyadhi Nidana

1. General knowledge of Nidana Panchaka. Explanation of stages of kriyakal.
2. Knowledge of Vyadhi Gyanaupaya. Ashthvidha Pariksha. Sadhyasadhya Lakshana. Upradrava (complications). Arishta and their importance in treatment. General description and importance of Nidana - panchaka
3. Definition and importance of Roga Vignan and Vikruti Vignan
4. Collection and laboratory examination of patient Mala-Mutra. Rakta. Nishtivana. Jalodar dravya, Pleural fluid and Puya (Pus)
5. Temperature. pulse and blood pressure measurement. general examination of mouth. nose, throat. eyes and ears.
6. Definition. General discussion and types of Vyadhi (disease).
7. Trividha Rogi pariksha vidhi (Darshana etc. three types of Methodology of investigating a patient).
8. Signs. Symptoms and diseases of ojovyapata. ojokshaya and ojochyuti.
9. Vyadhikshamatva (Immunity).
10. Astha mahagada and astha nindita

PRACTICAL

1. Sample collection methods & techniques.
2. Knowledge of instruments used in lab.
3. BP measurement
4. Hb estimation. TLC. DLC. ESR
5. Estimation of sugar. bile pigments. albumin in urine
6. Routine & microscopic urine examination.

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Vyadhi parichaya & Chikitsa

1. Clinical importance of Chikitsa Chatuspada. Tridosha. Dhatu. Mala. Siddhanta.
2. The importance of srotasa in the production of diseases.
3. The determination of the disorders of srotasa.
4. The causes and signs and symptoms of the vitiation of srotasa.
5. Definition. General discussion and types of Vyadhi (disease).
6. General description of Janapadodhvamasaka vyadhi (Epidemics) and Aupsargika Roga and Sansargaja Roga (Infectious and communicable diseases).
7. Objectives of Chikitsa. Knowledge of Chikitsa Chatuspad & Panchkarma.
8. General Diagnostic knowledge of vividh javara. Astha javara. Vishama javara. Fufushdah javara. Vatasleshmil javara. Aantrik javara. Atisara. Pravahika. Grahani. Pandu. Kamla. Krimi roga. Raktpitta. Rajyakshma. Kasa. Hikka. Shula. Gulma. Hridya roga. Medo roga. Shitpitta. Amalpitta. Aamvata. Vatarakta. Gandmala. Puymeh. Firang. Prameh. Udar roga. Ashmari. Mutrakricha and their general line of treatment. knowledge of Pathya-Aapthya and drug treatment.
9. Knowledge/Introduction to Pathya-Apathya and anupan according to various diseases.
10. General knowledge of emergency and first aid.
11. Panchkarma: General knowledge of Snehana. Svedana. Vasti. Vaman. Virechan. Niruh. Anvashana. Nashya.

PRACTICAL

Practical knowledge of panchkarma preedures.

First aid & emergency care.

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Dispensing and Arrangement of Hospital

1. Management of O.P.D. Dispensary room and its hygiene.
2. Maintain the hygiene of O.T. Medicine department and all the medicine with their name specially toxic medicine.
3. Assisting the doctor during patient examination. maintenance of code of conduct in O.P.D and O.P.D. management of patient.
4. Knowledge of Abbreviation used in O.P.D. AD. OD. TDS. BD and knowledge of Aushadh sevana kala.
5. Knowledge of maintenance of daily hospital record register.
6. Management of store and inventory registration of patient on the basis of their clinical complaints. Directions given to patient on the basis of prescription.
7. Care of I.P.D. patient and ward management including cleanliness of patient bed.
8. Concept of sterilization and its importance in hospital.

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Semester-4
Ras Shastra & Bhaishajya Kalpana-4

1. Preparatory methods of Sneha Kalpana and Sandhan Kalpana.
2. Definition and application of Bhojana. Bhavana. Samskara. Mardana.
3. Preparatory methods of ksheer pak. Satva. Ghana Kalpana. Kshar-lavan Nirmana. Malhar Kalpana.
4. Preparation of several Ayurvedic formulations : Asavas. Arishtha. Taila. Ghrita. etc.
5. Aushadha Yogas: Methods of preparation. properties. uses.

1. Panchatikta Ghrita	2. Jatyadi Ghrita	3. Triphala Ghrita	4. Pind tail
5. Jatyadi taila	6. Panchagun tail	7. Drakshasava	8. Kutajarishta
9. Bhringraj tail	10. Shadbindu tail	11. Vishgarbha tail	12. Shankha vati
13. Khadiradi vati	14. Lavangadi vati		

6. Knowledge of Drugs & Cosmetics Act. quality assurance & GMP. API. AFI
7. Appropriate knowledge of storage and preservation of all types of manufacture drugs.

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Stri Prasuti evam Bal Roga

1. General knowledge of shukra and shonit of Garbhadhan.
2. Rajo vigyana-ritu chakra. ritu kala- menstrual cycle.
3. Symptoms and basic management of diseases occurring during pregnancy.
4. Brief introductory Knowledge about the three stages of labour.
5. Post partum – general knowledge of placental retention (Makkashula Atirakatkshaya). nabhinal Chedana. aprapatana and sisu paricharya (natal care). stana granthi & stana vidradhi
6. Diagnosis of Stanshoth. Garbhashya shoth. Raktapradar and Garbashyabransh Stanvidradhi.
7. Tetanus. Mastiskavarana pradha (Meningitis). Atisura (Diarrhea). Kukur kas (Whooping cough). Kanthshalushoth (Tonsilitis). Rohini (Diphtheria). General knowledge. treatment. physiology & preventive measure of polio myelitis.
8. Navjat shishu paricharya. kamala (jaundice). mridbhaskshan janya pandu. Bone deformities. dantodbhav.
9. Atyayika balroga prabandhan.
10. Importance of breast feeding and vaccination.
11. Aushadh matra nirdharan (drug dose according to age. weight & drug preparation)
12. Kuposhan janya vyadhi- samanya parichaya. vitamins
13. Knowledge of National programmes related to RCH

PRACTICAL

Knowledge of various equipments & instruments used in labour room. photo therapy unit. warmer. panchkarma procedures used in prasuti & bal rog.

Useful points of granth Sushruth Sharir Sthana Stri roga vigyana.

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Shalya-Shalakya

1. Definition of Shalya, types and their niruhan-upaya. Yantras and Shastra introduction. Sanrakshana, Visankramana and Knowledge of their use. type of vranbandhan.
2. Sadyavrana & dushtavrana: Definition of wound, aam-pachyman-paripakva wound knowledge, signs of dustvarna, bed sores (Shayyavarna). Types of wound and Basic knowledge of wound management.
3. Practical knowledge of Jalokacharna and Rakta mokshana.
4. Practical knowledge of ashtavidha Shastra karma.
5. General Diagnostic knowledge of arsh, bhagandhar, Vidradhi, Shula, Gulma, Ashmari.
6. Symptoms & first aid of emergency haemorrhage (Rakatshrav), Fracture (Bhagan) and Shock (Stabdhata), electric burn (Vidyut Pravah).
7. Symptoms and primary treatment of poisonous gas released from factories: Carbondioxide, Carbonmonoxide and sulphurdioxide.
8. Symptoms and treatment line of consuming vishdravya keetnashak Aushada (Pesticide), Napthelene balls, and chemical fertilizers.
9. Etiology and treatment of Anadrta (dehydration).
10. Brief knowledge of Dantutpatana.
11. Basic knowledge of ear disease & method of examination- otitis
12. General anatomy of eye & Basic Knowledge of general eye disorders and basic treatment & first aid care-blepharitis, conjunctivitis, pterygium, keratitis, contagious diseases, refractive errors.
13. Mukh Roga: anatomy of tongue, examination of tongue and treatment knowledge of Jihva (Tongue), Kanth, Upjihivika.
14. Examination of Nasa (Nose): Nasal disease (their shalya and treatment knowledge) and shalya nirharana knowledge of Nasa & karna.

PRACTICAL

Instruments of shalya & shalakya used in opd & OT.
Administration of first aid, wound management
Methods, positions & techniques employed for patient examination.
Refraction methods utilized in shalakya.

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ORDER OF DEPUTY COMMISSIONER, SONIPAT

In pursuance of the instructions contained in the Punjab Govt. Letter No. 7004-F-41/60571 (Fin-Gen) dated 21st November, 1941 the following maximum rates of pay/wages are fixed for the contingent paid employees of the various departments in Sonipat District (Haryana) for the Year 2017-18 i.e. from 01-03-2017 to 28-02-2018.

Sr. No.	Name of Category	Wages per month for whole time with weekly rest once a week and all Gazetted Holidays (including DA) 2017-18	Daily wages Rate for 2017-2018
	CATEGORY NO. 1 : UNSKILLED WORK FORCE		
1.	Ayya/ Agri Mazdoor	11440	440
2.	Jamadar/ Job boy or Masalchi	11440	440
3.	Cleaner/ Helper/ Health Helper	11440	440
4.	Khalasi Fitcher/Key Men Mazdoor Skilled	11440	440
5.	Chowkidar/Chowkidar-cum-Sweeper/Chowkidar-cum-Water Carrier/ Chowkidar-cum-Cook/Langeri(Cook) Milk Collector	11440	440
6.	Peon/ Dak Runner/Cycle Dak Router/Attendant	11440	440
7.	Baildar/ Grass Cutter/ Mali/Gyan Master/ Ground man	11440	440
8.	Barber/Boatmen/Waiter/Bookbinder/Bicycle Mechanic/Barman/Gauge Reader	11440	440
9.	Blacksmith	11440	440
10.	Caretaker for air conditioners/ Cattle Catcher/ Tube well Operator	11440	440
11.	Cobbler/Mochi/Canvas/Mistri	11440	440
12.	Sewer Man	11970	460
13.	Sewer Helper	11440	440
14.	Dhobi/Washer Man/Dispenser DPA/Diesel Pump Attendant	11440	440
15.	Fisherman/Fisheries Catcher-Flagman	11440	440
16.	Generator Operator (Unskilled)	11440	440
17.	Natak Artist	11440	440
18.	Store Boy/Sweeper Supervisor(Instrumentation/Skilled worker(Trade Certificate/Server)	11440	440
19.	Turnor/Oil Holder/Bhisti Miskki	11440	440
20.	Light men/Welder/Washing Boy/Trade Maker/Work Munshi	11440	440
21.	Head Coolie/ Coolie/Dusting Coolie/Palledar/Pali/Molder-Milling Machines Man	12650	490
22.	Ticket Verifier/ Ticket Cleaner/ Ticket Conductor	12650	490
23.	Tailor Master	12650	490
24.	Daftri/ Health Assistant	12650	490
25.	Sanitary Supervisor/Counter Salesman/Store man	13780	530
26.	Staff Nurse	16560	640
27.	Camel Man with two camel & Camel Cart	15190	590
28.	Bullock Cart with two camel and one Driver	13160	510
29.	Bullock Cart with One Driver and bullock	13160	510
30.	One man with Jhota Buggi/Camel	12650	490
31.	One labour with two dongeys	12650	490
32.	Tanga with driver and horse	12650	490
33	Rickshaw puller with Rickshaw/ Cart man with one puller	11440	440
34.	Unskilled labour (Worker) in all trade	11440	440
	CATEGORY NO. 2 : SLMI UNSKILLED/SKILLED WORKFORCE		
35	Carpenter III Grade	12650	490
36.	Carpenter II Grade	12930	500
37.	Carpenter I Grade	13490	520
38.	Mason III Grade	12650	490
39.	Mason II Grade	12930	500
40.	Mason I Grade	13490	520
41.	Painter III Grade	12650	490

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42.	Painter II Grade	14930	580
43.	Painter III Grade	17910	690
44.	Mechanic III Grade	12650	490
45.	Mechanic II Grade	14930	580
46.	Mechanic I Grade	17910	690
47.	Motor Truck Driver Mechanic	14950	580
48.	Electrician- I Grade (with 6 year experience)	17910	690
49.	Electrician- II Grade (with 3 year experience)	14930	580
50.	Lineman (Elect.) Wireman with ITI Certificate	14930	580
51.	Shift Attendant (Metric with 2 Years ITI Course/Assistant Lineman with ITI Diploma (0 to 5 Years)	16360	630
52.	Assistant Lineman Metric with 2 yr. Diploma without any experience	12500	480
53.	ALM (Electricity Department)	12750	500
54.	Tracer	14930	580
55.	Plumber (Class-I) with ITI Certificate	14930	580
56.	Pump Operator-cum-Mech. & Pipe Fitter (ITI Certificate)	14930	580
57.	Plumber (Class-II)(with 5 year experience)	12650	490
58.	Key man (with 3 Year experience)	12650	490
59.	Security Inspector/ Officer/ Supervisor	13580	530
60.	Hawaldar / Instructor	13580	530
61.	Security Guard (with weapon)	12940	500
62.	Security Guard (without weapon)	11930	460
65.	Fireman(with Diploma)	14930	580
64.	Boiler Man	14930	580
65.	Diver Man	14930	580
66.	Lift Operator (Diploma Holder)	14790	570
67.	Lift Attendant (Non Diploma Holder)	11440	440
68.	Data Entry Operator (three year experience)	16560	650
69.	Data Entry Operator	13740	530
70.	Junior Programmer (three year experience)	16460	640
71.	Junior Programmer	17100	660
72.	Lab Attendant	12950	500
73.	Technical/ Lab Assistant/ECG Technician	14560	560
74.	Field Investigator/ surveyor/ work Inspector/Asstt. Accountant/Site Supervisor (5 year experience)	17910	690
75.	Shift Supervisor/Senior Sub Station Attendant/Senior Shift Attendant (ITI. Electrical Trade or any other equivalent with 5 Years Experience in Power Deptt.	19130	740
76.	Language Teacher/Lecturer (Hindi/ English)	23340	895
77.	Craft Teacher/ Craft Assistant	13770	530
78.	Warden	13770	530
79.	JE/INSTRUCTOR (ITI) Vocational Lecturer	23340	895
80.	Legal Manager	23340	895
	CATEGORY NO-3: OTHER CATEGORIES OF MANPOWER		
81.	Drafts Man	18720	720
82.	Junior Drafts Man/Assistant Drafts Man	14790	570
83.	Circle Head Drafts Man/Divisional Head Drafts Man	21830	840
84.	Printing Press Composer	11930	460
85.	Pharmacists	18390	710
86.	Zilledar	25790	990
87.	Naib Tehsildar	25780	990
88.	Kanungo Head Revenue Clerk	22360	860
89.	Election Kanungo	22360	860
90.	Patwari	20650	790
91.	Superintendent	22450	860
92.	Accountant	22350	860
93.	Assistant	16270	630
94.	Steno Tynist	15740	610
95.	Clerk/Library Attendant/Lab Technician	13770	530
96.	Senior Scale Stenographer	13960	540
97.	Junior Scale Stenographer	23340	895
98.	Deputy Superintendent	13770	530
99.	Telephone Attendant/ Dark Room Attendant	23340	895
100.	Senior Account Officer	13770	530

101.	Account Officer	22130	860
	CATEGORY NO. 4: MACHINERY/TRANSPORT		
102.	Driver for Heavy Earth Cleaning Duty Demonstration (Diploma Holder)	14930	580
103.	Driver Heavy Vehicle	14930	580
104.	Driver Light Vehicle	14930	580
105.	Driver Tractor/ JCB Crain/ Road Roller	14810	575
106.	Fire Brigade Heavy Driver	14930	580
107.	Tractor with Trolley with Diver and Diesel Gori/ Herow (Rs. Per Hour)	13-0	
108.	Crain/ JCB Machine Poclane (Rs. Per Hour	13-0	
	CATEGORY NO. 5: Part time Category staff Sweeper/Mali/Cook/Water Carrier/ Chowkidar		
	Sweeper/Mali/Cook/Water Carrier etc. (No.of Hours engaged day)		
109.	1-0 Hr.	2830	110
110.	2-0 Hr.	3920	150
111.	3-0 Hr.	5220	200
112.	4-0 Hr.	6710	260

Carriage of dead body for Railway Police.

1- Within the municipal Limit — 1570/-Per dead body.
2- Out of Municipal Limit — 1730/-per dead body.

Note:-

1- These rates will be valid during the FY 2017-2018.
2- Persons engaged on monthly basis will be entitled for one day rest a week.

Deputy Commissioner,
Sonipat

Endst. No. /D.N., Dated:

A copy is forwarded to the following for information and necessary action please:-

1. Commissioner, Rohtak Division, Rohtak/Hissar/Gurugram/Ambala.
2. Accountant General, Haryana, Chandigarh.
3. Inspector General of Police, Haryana, Chandigarh.
4. Inspector General of Prison, Haryana, Chandigarh.
5. Deputy Secretary to Govt., Haryana, Financial Department, Chandigarh.
6. All Deputy Commissioner in Haryana State.
7. Superintendent, P&T, RMS Ambala Cantt./ Sonipat.
8. Superintendent Railway, Ambala Cantt.
9. All the Sub Divisional Officers (Civil) in the Sonipat District.
10. All Head of Officers in the Sonipat District.
11. All Tehsildars/ BD&POs in Sonipat District.
12. DIO, NIC, Sonipat for upload DC Rate 2017-18 in website sonipat.nic.in.
13. Stenographer to L.D.D.C/A.D.C/Steno to CTM/DD& PO/DRO Sonipat.

Deputy Commissioner,
Sonipat.

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Proceedings of the 18th meeting of Executive Council held on 19.08.2009 at 11.30 a.m. in the Conference Hall of Engineering & Sciences of BPS Mahila Vishwavidyalaya, Khanpur Kalan

The following members were present:-

1.	Dr. (Mrs.) Pankaj Mittal, Vice-Chancellor	Chairperson
2.	Dr. Vibha Dhawan, Tata Energy Research Institute, (Deemed University), India Habibat Centre, Lodhi Estate, New Delhi	Chancellor s Nominee
3.	Dr. Sujata K. Dass, University of Delhi, Delhi	-do-
4.	Dr. Vijay Laxmi, Member, Appellate Tribunal for Foreign Exchange, Ministry of Law and Justice, Janpath Bhavan, New Delhi.	-do-
5.	Prof. (Mrs.) Atiya Habeeb Kidwai Centre for the Study of Regional Development, JNU, New Delhi.	-do-
6.	Sh. V.P. Asija, Chief Accounts Officer, Sugar Mills, Sonipat (Nominee of Finance Dept., Haryana)	Ex-officio-member
7.	Prof. Vimal Joshi, Dean, Faculty of Law	-do-
8.	Dr. Vijay Nehra, Dean, Faculty of Engineering and Technology	-do-
9.	Dr. Sanket Vij, Dean, Faculty of Management Studies	-do-
10.	Dr. Gulab Singh, Dean, Faculty of Arts and Languages	-do-
11.	Dr. K.V. Singh Dean, Faculty of Ayurvedic Medicine	-do-
12.	Dr. Sandeep Berwal, Dean, Faculty of Education	-do-
13.	Dr. Akash Gulalia Dean, Faculty of Social Sciences	-do-
14.	Dr. Omvati.	Member

2. Appointment of Sh. Manphul Singh Dhaka as Dy. Registrar.

Considered and approved the appointment of Sh. Manphul Singh Dhaka as Deputy Registrar against the vacant post of Controller of examinations with a consolidated salary on the basis of last pay minus pension for a period of one year w.e.f. the date of joining.

3. Fee for D.Ed. Course prescribed by the SCERT for the session 2009-10 to 2011-12.

Considered and approved the fee of Rs.18400/- for D.Ed Course prescribed by the SCERT for the session 2009-10 to 2011-12.

4. Directions of the Hon'ble Punjab & Haryana High Court in CWP No.10900 of 2009 for the post of Reader in Agvad Tantra (Ayurveda)

Considered and decided to wait for the final decision of the Hon ble High Court.

5. Directions of the Hon'ble Punjab & Haryana High Court in CWP No.11251 of 2009 for the post of Reader in Prasudi Tantra & Stree Rog (Ayurveda)

Considered and decided to wait for the final decision of the Hon ble High Court.

6. Payment to be made to Guest Faculty

It was decided that guest faculty in any subject/department/institution be paid at the rate of Rs.250/- per lecture subject to a maximum of Rs.10,000 per month.

7. Permission to the teaching faculty to take up additional teaching assignments in another department/institution in BPS Mahila Vishwavidyalaya, Khanpur Kalan

(a) In view of the shortage of teaching faculty, it was decided to allow a faculty member in any subject/department/institution to take up

additional teaching assignment in another department/institution in BPS Mahila Vishwavidyalaya, Khanpur Kalan on payment of an honorarium of Rs.250/- per lecture, subject to a maximum payment of Rs.5000/- per month. The additional payment shall be made only if the minimum workload as prescribed by the UGC is already being undertaken by the teacher in the parent department.

(c) It was further decided that prior permission in writing of both the Heads of the Departments/Heads of the Institutions i.e. the Parent Department/Institution as well as the borrowing Department/Institution is mandatory to take up such an additional assignment.

The meeting ended with a vote of thanks to the Chair.

Registrar

To,

The Principal,

MSM Institute of Ayurveda,

BPS Mahila Vishwavidyalaya,

Khanpur-Kalan, Sonepat.

Subject: Regarding proposal for one year Diploma in Panchkarma Therapy.

Sir,

In reference of your vide letter number BPSMV/Inst./Ayu/18/3494-3497 dated 01.05.2018 the proposal for one year **Diploma in Panchkarma Therapy** is to be presented according to given Proforma as follows:

1. Name of course : Diploma in Panchkarma Therapy.
   Duration : One year.
   Intake Capacity : 30 Students/year + Lateral entry 5 supernumerary seat.
2. Syllabus in detail along with examination scheme is attached.
3. Statutory requirement/permission: This one year diploma course is fully governed by BPS Mahila Vishwavidyalaya, Khanpur-Kalan, and Sonepat.
4. Budget details:

Income/Revenue generate per year	**Amount in Rs.**	**Expenditure per year**	**Amount in Rs.**
Fee: 30x25000 (12500/- per semester) for single batch Lateral entry 5X12500.00	7,50,000/- 62500/-	**Recurring** expenses	Contingency to purchase samples for demonstration and preparation of dravya etc. in practical classes = **20,000/-** Remuneration for faculty @rs. 250/-lecture for 180 hours in a year. 250x180=**45,000/-**
TOTAL	**8,12,500/-**		**65,000/**
		Non recurring/one time Expenditure at	Janu vasti yatra (10)@500/piece= **5000/-** Kati vasti Yantra (10x500/-)=**5000/-**

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		start of course	Sitting box swedan= **25000/-** Lying box swedan=**35000/-** Steam box (nadi swed yantra)=**20000/-** Nasya table (2x15000)=**30000/-** Vaman sink (2) (steel sink)=2x5000/-= **10000** Vaman chair = **10000**
			140000/-
Grand Total	**8,12,500/-**		**2,05,000/-**

5. Manpower- None
6. Any other: This course will **replace the CCPT** course already being run in department.

15/5/18

Dr. Anil Kumar
Asst. Professor
Dept. of Panchkarma

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BPS MAHILA VISHWAVIDYALAYA

KHANPUR KALAN, SONIPAT, HARYANA.

MSM INSTITUTE OF AYURVEDA

D.P.T.

Diploma in Panchakarma therapy

Course coordinator

DR. ANIL KUMAR
Asst. Professor
Dept. of Panchkarma

Head of Department of panchkarma

Dr. MADHAVI SEETHA

HOD / Associate Professor

Dept. of Panchkarma

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MSM INSTITUTE OF AYURVEDA

BPS MAHILA VISHWAVIDYALAYA, KHANPUR-KALAN

ORDINANCE FOR

ONE YEAR FULL TIME DIPLOMA IN PANCHKARMA THERAPIST

1. Definition:

1.1 Course stands for individual paper.
1.2 University stands for Bhagat Phool Singh Mahila Vishwavidyalaya, Khanpur Kalan.
1.3 Credit stands for weightage assigned to a course in terms of contact hours. One contact hour per week per course per semester is equivalent to one credit.
1.4 Programme stands for Diploma in Panchkarma Therapy.

2. Duration:

2.1 Duration of course is one year (2 Semesters) including examination and assessment.

2.2 Course will commence in month of July1st every year or as decided by University

3. Eligibility:

A candidate who attains the age of **17 years or more and not exceeding age of 30 years on 31st July** of the year of admission and has passed one of the following examination shall be eligible to join the first year course:-

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(a) Senior Secondary Certificate Examination (10+2) of the Board of School Education, Haryana with at least 40% marks in the aggregate Science/Arts/Commerce subjects; or

(b) Any other examination recognised by the University as equivalent thereto with prescribed percentage of marks/subjects, as the case may be

Note: Age will be determined on the basis of entries in the Matriculation Certificate/ Secondary School Certificate.

4. **Fee:**

As decided by University time to time. For lateral entry the candidate will have to deposit fee only for second semester at the time of admission in the course.

5. Teaching Methodology:

The methodology shall include class room teaching, OPD duty, IPD duty, viva-voice, project work etc. Regular theory & practical classes will be conducted in one year training programme.

6. Intake capacity:

Total of 30 students will be admitted every year.

Lateral Entry: Five supernumerary seats will be allocated to candidates possessing CCPT certificate from BPSMV. These candidates will be eligible for direct admission in second semester subject to their depositing the second semester fee at the time of commencement of the course. For selection, a separate merit list will be prepared as per aggregate marks obtained in CCPT from BPSMV

7. Scheme of Examination

Sr. No.	Course code	Subject	Teaching Hours per week Theory	practical	Marks	Total Marks
		Semester -I				
1.	DPT-101	PANCHKARMA-A	4		100	100
2.	DPT-102	PRACTICAL-1		24	100	100
		Semester -II				
3.	DPT-201	PANCHAKARMA-B	4		100	100
4.	DPT-202	PRACTICAL-2		24	100	100

8. Examination:

8.1 Examination of odd/even semester will be done as per scheme of examination mentioned in clause 7.

8.2 Theory paper will be set by the course coordinator and practical cum viva voice examination shall be conducted by coordinator in the presence of department's all teachers. The medium of instructions and examination shall be English/Hindi.

8.3 A candidate who fails in the exams has to reappear, in the next exam scheduled by BPSMV.

8.4 Candidate has to secure 50% marks in theory and practical examination separately.

8.5 Every successful candidate shall be granted a diploma cum detail mark sheet of the final exam.

9. Attendance:

The candidates having more than 75% attendance will eligible for appear in final exam.

10. Accommodation and Hospitality:

The accommodation will be arranged by University in the (B.A.M.S.) hostel if available after the BAMS student's accommodation.

11. Collected revenue will be spent for the development of the Panchkarma dept.

12. The University holds all the rights reserved to modify any part of the ordinance which may not be informed prior to the candidates.

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SYLLABUS FOR ONE YEAR COURSE OF
DIPLOMA IN PANCHAKARMA THERAPIST

SEMESTER-1
PANCHAKARMA- A

1. Basic Principles of Ayurveda:- Definition, unique features, Aim, Concept of Health, Theory of creation, Pancha Mahabhuta Concept, Tridosha, Concept of body mind soul, Concept of sapta dhatu (Body Elements), Concept of mala(waste products),Concept of prakruti (Body Constitution), Amavastha- Niramavastha, various types of Vat Vikaras.
2. SHARIR Vigyan –Anatomy, General knowledge about organs of body, Koshthang, Shadangasharir, Asthisharir -general idea about skeletal system of body, Marma, Study of anatomy relevant to Panchkarma. Anatomical position and physiological functions. General physiological process in body. Brief knowledge of Tridosha, Saptadhatus& mala. Concept of Agni. General idea of B.P., Body temperature, pulse and respiratory rate and temperature monitoring
3. Introduction to Panchkarma. Importance &application of all karmas. The stages of Panchakarma treatment a) Purva karma, b) Pradhana karma and c) Paschat karma.
4. Massage therapy - Qualities of Masseur, Massage techniques according of body parts. Different types of massages like Effleurage, Petrissage, kneading (Mardanam), friction wringing or Marshanam, Tapotement etc.
5. Different types of Panchkarma instruments & equipments- Tailadroni, Bashpa sweda yantra, Sirobasti yantra, Bastinetra, Matrabasti yantra, Dharapatra, Nasya peeth, Vaman peeth, Nadiswed yantra etc.
6. SNEHAN KARMA (Oleation treatment): Definition, Snehadravya parichay, Achhapeya, Vicharna, Snehmatra, various types of Sneha used for internal & external Snehapan, Practical applications & types of external & internal Snehan, Abhyanga, Padabhyanga (oleation of the feet), Shiro-abhyanga (oleation of head),
7. SWEDAN KARMA (Fomentation)- Definition, its types & their practical utility, Yogya, Ayogya
8. VAMANA (Induced vomiting)- Introduction, Vaman dravya parichay, Vaman dravya properties, indications, contra- indications of Vaman, procedure of Vamana, application of different types of Vaman dravyas, Pathya- Apathya, Samyak vamana, Asamyak Vamana, ativamana, Samsarjana karma.

PRACTICAL-

Abhyanga& Body Massage
Pizhicill (SarvangaDhara)
Nadi Sweda

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Bashpa sweda
Choornapinda Sweda(choornakkizhi)
Pathrapinda Sweda(Ilakkizhi)
Shashtiksalipinda Sweda (Navarakkizhi)
Shashtiksalee Alepa(Annelepa)
Valooka sweda
Upanaha sweda
Avagaha sweda
Pichu- local
Shirobasti
Shirodhara
Takradhara
Ksheeradhara
Thalam
Snehapana

SEMESTER-2

PANCHKARMA-B

1. VIRECHANA(Induced purgation)- Introduction, Virechana drugs, indications of virechan, contra- indications of virechan, procedure of virechana, general precautions, Samyak Virechana, Asamyak Virechana, Ati- Virechana, Virechana Vyapada.
2. BASTI (Medicated Enema) — Introduction, Classification, Indications for Asthapana, Contra-indications for Asthapana, drugs used for Basti karma, description of Bastinetra and Bastiputak, purva karma of Basti, Pachat karma of Basti, Indications for Anuvasana, Contra- Indications for Anuvasana, Procedure of Basti, Samyakyoga, Ayog, Atiyoaga of Basti, different combination of Basti, Basti Vyapada and its management.
3. NASYA (Nasal Medication)- Introduction, Classification, Navananasya, Avapidanasya, Pradhamananasya, Dhumanasya, Marsa- Pratimarsanasya, Nasya drugs. Indications, Contraindications, Procedure of nasya, Post nasya regimen, Samyaknasya, Asamyaknasya, Atinasya, Nasyavyapad.
4. RAKTMOKSHAN -Introduction, Classification, Features of normal rakta, Functions of rakta, Indications of Raktamokshana, Contra- indication of Raktamokshana, Jalaukaavacharana, Sira- Vyadha.Indications, contraindications, Samyak, Sira- Vyadha, Asamyaksira- Vyadha, Atisiravyadha, Raktastambhana, Post Raktamokshana regimen, Prachhana, Alabu, Ghati- Yantra.
5. KERALIYA PANCHA KARMA:- Keraliyapanchakarma- Its five components, Dhara, Kaya seka, Pinda- Sweda, Anna lepa, Siro lepa - Introduction, Comparison of classical Ayurveda panchakarma&KeraliyaPanchakarma. DHARA: Introduction Classifications, dhroni – Vidhanam, Sarwangdhara, Tailadhara, Kwatha (Ausadhidhara), Siro-Dhara procedure. KAYASEKA: Introduction, Procedure, Complications. PINDA SWEDA (OR) NAVARAKIZHI: Procedure, Preparation of pottali and payasam, Elakizhi, Podi-kizhi procedure. ANNALEPA: Introduction, Preparation of Anna lepa, Method of treatment. SIROLEPA: Introduction, Preparation, Method. SIRO VASTI: Introduction, Preparation, Method. UDVARTANA: Introduction, Preparation, Method
6. Identification & brief knowledge of herbs & other drugs used in Patrapinda sweda, Vamankalp, Virechankalp, kwathdravya, Nadisweda, Basti etc. Panchkarma procedures.
7. Practical knowledge of Samsarjana karma.
8. Ayurvedic Dietetic Concepts-PathyaKalpana
9. Commonly Used oils in Panchkarma& uses .
10. Description of Panchkarma unit as per Ayurvedic classics. Maintenance of store (Sambhaarsanghra related to Panchkarma procedures). Principles of good housekeeping. Maintenance of cleanliness like doctor chamber, Snehan room, Swedana room, Basti room, Uttar basti room, Vaman room, patient's room and toilets.
11. Day to day cleaning of Panchkarma Instruments and its maintenance. Sterilization of Uttarbasti instruments.

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12. Hospitality. Duties of Panchkarma Technician, Personal hygiene and Communication skills, general etiquettes, dress code, behavior towards elderly etc. Duties of Panchkarma technician in relation to various procedures.
13. Maintenance of records both in consumables and non- consumables. Knowledge regarding maintenance of consumables likes sheets, towels, napkins and others. Safety of crude medicine from moisture, water, fire, rodents, insects and mites etc.
14. Records keeping. Maintenance of records (Daily, Monthly and yearly) of Panchkarma procedures at OPD and IPD levels. Maintenance of computerized records. Computer literacy MS Word, Excel, Power Point Presentation. Use of audio- visual aids system in health education.
15. Bio medical waste related to Panchkarma and its disposal. Disposal of blood, gloves, bandages, oil and masha flour paste etc according to BMW guidelines.

PRACTICAL-

Akshitarpana
Pindi & vidalaka
Netraprakshalana
Eye exercise
Annalepana for eye
Dhoomapana
Karnadhoopana
Ksharasoothra
Matrabasti
Anuvasanbasti
Kashayabasti
Agnikarama
Aalepa
Netradhara
Netraparisheka
Nasya
Aschothana
Anjana

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To,

The Principal,
MSM Institute of Ayurveda,
BPS Mahila Vishwavidyalaya,
Khanpur Kalan, Sonepat-131305

Subject: Regarding proposal for one year **Diploma in Yoga Science (D.Y.Sc.).**

Sir,

In reference of your vide letter number BPSMV/Inst./Ayu/18/3494-3497 dated 01.05.2018 the proposal for one year **Diploma in Yoga Science(D.Y.Sc.)** is to be presented according to given Performa as follows:

1. Name of course : Diploma in YogaScience.
   Eligibility : Senior Secondary Examination (10+2)
   Duration : One year
   Intake Capacity : 30 (20 Students per year + 10 Lateral entry of CCYN students of BPSMV)
2. Syllabus in detail along with examination scheme is attached.
3. Statuary requirement/permission: This one year diploma course is totally governed by BPS Mahila Vishwavidyalaya, Khanpur Kalan, Sonepat. Central Council of Indian Medicine has no provision for such one year diploma. So this diploma course is not specified by CCIM.

4. Budget details: As following;-

Income/Revenue per year	**Amount in Rupees**	**Expenditure per year**	**Amount in Rupees**
Fee: 25,000 X 20 12500 X 10 (Lateral Entry admission fees)	5,00,000/- 125000/-	**Recurring** expenses on manpower	➢ **Yoga Teacher**/Instructer-18000/- *12=**216000/-** ➢ Faculty Remuneration- 250/-Lecture*180=**45000/-**
		Consumable: Neti Sutra, Rock Salt, Yoga Matt, Darri, Stationary items, Books and journals Any other: contingency	**24,000/-** **20,000/-**
Total	**6,25,000/-**	**Total**	**3,05,000/-**

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		Non recurring/One time Expenditureto start the course	1 Computer with printer– 40,000/- 1 Projector with screen – 40,000/- 1 Officer Chair – 10,000/- 1 Office table – 15,000/- 4 Side chair – 16,000/- 20 Yoga Matt – 10,000/- 20 Neti Pot - 2,000/- 20 Desk - 40,000/- White board - 2,000/-
			Total- 1,75,000/-
Grand Total	**6,25,000/-**		**Rs. 4,80,000/-**

***Yoga teacher** is also mandatory for BAMS course as per CCIM (Ministry of AYUSH).

5. The teaching load would be distributed among the existing faculty of MSM Institute of Ayurveda, a remuneration of 250/- per lecture is proposed as per university norms (resolution no. 15.7 of 18th EC held on 19.8.2009)(F/D).
6. This course shall replace/upgrade the current running CCYN course in MSM Institute of Ayurveda.
7. In view of Yoga, the classes timing shall be from 07:00AM to 09:00AM.

Submitted for kind approval & further necessary action please.

14/05/2018

Dr. Pawan Kumar
MD(Swasthavritta& Yoga)
Assistant Professor
Department of Swasthavritta& Yoga
Course Coordinator of D.Y.Sc.

Dr. VeenaAgrawal
MD(Kayachiktsa)
Head of Deapartment/Associate Professor
Department of Swasthavritta& Yoga

BPS MAHILA VISHWAVIDYALAYA

KHANPUR KALAN,

SONIPAT, HRY.

MSM INSTITUTE OF AYURVEDA

D.Y.Sc.

Diploma in Yoga Science

Course Coordinator of D.Y.Sc.

Dr. Pawan Kumar

MD(Swasthavritta& Yoga)

Assistant Professor

Department of Swasthavritta& Yoga

Head of Department

Dr. VeenaAgrawal

MD(Kayachiktsa)

Associate Professor

Department of Swasthavritta& Yoga

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MSM INSTITUTE OF AYURVEDA

BPS Mahila Vishwavidyalaya, Khanpur-Kalan

Academic ordinance for duration, admission, Fee,

TeachingMethodology, Examination, Evaluation, Attendance

And

Course curriculum.

One Year Diploma in Yoga Science.

(D.Y.Sc.)

Preamble

Yoga is an invaluable gift of ancient Indian tradition. Yoga is essentially a spiritual discipline based on an extremely subtle science, which focuses on bringing harmony between mind, body; thought and action; restraint and fulfilment; harmony between man and nature and a holistic approach to health and well-being. Yoga is not about exercise but to discover the sense of oneness with ourselves, the world and Nature. It is an art and science for healthy living.

The word "Yoga" is derived from the Sanskrit root meaning "to join", "to yoke" or "to unite". yuj. According to Yogic scriptures, the practice of Yoga leads to the union of individual consciousness with universal consciousness.

Yoga is becoming popular day by day. A wave of yoga is sweeping across the globe. In this programme we introduce yoga as a science of Holistic living and not merely as yoga postures. During the programme the student is taught the basic concepts of Yoga for wellness. **This programme looks to train enthusiasts to teach general public wellness through yoga.**

1. **Definition:**
   i. The programme shall be called **Diploma in Yoga Science** abbreviated as **D.Y.Sc.**
2. **Aim:**
   i. The aim of the programme is to spread **"Wellness through Yoga"**

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3. **Objective:**

i. Promoting positive health, prevention of stress-related health problems and rehabilitation through Yoga.

ii. Adoption of Integral Approach of Yoga Therapy to common ailments. Imparting skills in them to introduce Yoga for health to general public. To enable them to establish Yoga Therapy centers in the service of common man.

iii. This course shall upgrade the current running CCYN course in MSM Institute of Ayurveda.

4. **Syllabus:**

i. The syllabus is design to fulfil aforesaid objectives containing theory subjects in Yoga,practical and field training in Yoga.

5. **Duration:**

i. Duration of course is one year i.e. two semester of six month each, including examination and assessment. After the completion of the course the students can join the Hospitals, Spa, wellness centers and give yoga therapy for patients under the guidance of qualified doctor.

ii. Course will commence from July month of every year or as prescribed by the University from time to time.

6. **Admission/Eligibility:**

i. The admission to the course of D.Y.Sc. shall be made on the terms and conditions as prescribed by Government of Haryana/BhagatPhool Singh Mahila Vishwavidyalaya, Khanpur Kalan (henceforth termed as 'University') from time to time.

ii. Eligibility: Afemale candidatespossessing a Senior Secondary Certificate Examination or equivalent (qualifying examination) from a recognized Board in India or abroad with minimum of aggregate 40% of marks is eligible for admission to the Diploma in Yoga Science.

iii. Mode of selection: Merit list will be prepared as per aggregate marks obtained Secondary Certificate Examination or equivalent.

iv. Reservation: Reservation of seats is applicable as per Govt./BPSMV policy in respect of SC/ST/OBC issued time to time. In case, reserved candidates belonging to SC/ST/OBC and other categories are not available, the seats

will be filled up by candidates of general category on the basis of merit.

v. A candidate who attains the age of 17 years as on 1st July of the year of admission, age will be determined on the basis of entries in the Matriculation Certificate/ Secondary School Certificate.

vi. Lateral Entry: Ten super-numeric seats may be allocated to candidates possessing CCYN certificate from BPSMV. These candidates will be eligible for direct admission in second semester subject to their depositing the second semester fee at the time of commencement of the course. For selection, a separate merit list will be prepared as per aggregate marks obtained in CCYN from BPSMV.

vii. Female Staff/Students of the BPSMV shall be eligible to seek admission to the programme considering the minimum eligibility criteria as the timings of this diploma course are 07:00AM to 09:00AM regardless of their duty/classes.

viii. A candidate should be medically fit. A Medical Fitness Certificate in this regard shall be produced from the MSM Institute of Ayurveda, BPSMV, Khanpur Kalan. Candidate suffering from any chronic disease is advised not to seek admission to this course and such candidates will not be admitted to the course.

7. **Fee:**

i. **D.Y.Sc.** course fee will be decided by the BPSMV from time to time. Lateral entry candidates will have to deposit fees only for 2nd semester at the time of admission of course.

8. **Teaching Methodology:**

i. Practical/Theory classes timing shall be 07:00AM to 09:00AM in all working days as per calendar of BPSMV.

ii. Students have to attend Yoga practical classes in the morning daily; so they must come empty stomach andcarry their breakfast to be taken after practical class

iii. The teaching methodology shall include class room teaching, OPD duty, viva-voice, project work etc. Regular theory & practical classes will be conducted in one year training programme.

9. **Intake Capacity**

i. 30 (TwentyStudents + Ten super-numeric students possessing CCYN certificate from BPSMV) will be taken in

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each batch. Seats may increase if necessary in comings years by the permission of Hon'ble Vice Chancellor.

10.Examination:

i. Each semester examination will consists of one theory paper and one practical cum viva-voice examination of 100 marks each.

ii. The list of students eligible for the examinations shall be provided by the Department to the University examination branch on the basis of the following:

   a. Clearance of all dues
   b. 75% of attendance

iii. The examiners shall be course coordinator. It shall be the duty of the examiner(s), to set question papers for examination, to evaluate the scripts and to conduct the viva-voce examinations. The medium of instructions and examination shall be English/Hindi/Sanskrit.

iv. Candidate has to secure 50% marks in theory and practical examination separately to qualify the course.

v. Every successful candidate shall be granted a diploma cum detail mark sheet of the final exam.

vi. Examinations shall be conducted under the direction of the Controller of Examinations, and in accordance with the rules and guidelines prescribed by the University in this regard from time to time.

vii. A candidate who fails in the exams has to reappear, in the next exam scheduled by BPSMV. A maximum of two consecutive chances shall be given to the fail students.

viii. The candidate will have to reappear and pass either theory or practical examination of the subject(s) during supplementary as per the case may be.

ix. A student failing in any subject/s in the first semester will be allowed to take admission to the second semester. However, her final results will be declared only after passing both the semesters.

x. Re-evaluation in theory/practical examination will not allowed. The theory answer seats are recounted just to ensure that all the questions attempted by the candidate have been evaluated or not, that the marks awarded have been totaled up correctly or not, and that the total marks have been correctly carried over to statement of marks or not. Fee

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chargeable for recounting of the answer book is as per existing rule of BPSMV.

xi. Considering the fact that the students of Diploma in Yoga Science may also registered for other courses in BPS Mahila Vishwavidyalaya, Khanpur Kalan, date schedule of the semester examinations for the courses will be declared by the Controller of Examinations, without clashing with the time schedules of other exams in the BPS Mahila Vishwavidyalya, Khanpur Kalan, on the recommendations from the department.

xii. Any student found indulging in any unfair or unethical practice during examination; she shall be barred from the course.

11.Promotion:

i. A candidate will be required to maintain 50% marks in each examination either theory or practical at the end of the first semester of the course, to continue to the next semester, failing which the Head of the Department, on the recommendation of the department may decide that her name may or may not deleted from the register.

12. Scheme of Examination:

First Semester			Teaching Hours per week		Marks		
S.no.	Paper code	Subject	Theory	Practical	Theory	Practical	Total Marks
1.	DYS101	Principles of Yoga & Human Systems	6	6	100	100	200
Second Semester							
1.	DYS201	Yoga & Health	6	6	100	100	200

13.Award of Diploma:

i. On completion of the course, a Certificate of "Diploma in Yoga Science" will be awarded to those candidates who are successful in both theory and practical examinations of both the Semesters.

14.Attendance:

i. The candidates having more than 75% attendance will eligible for appear in final exam.

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15.Accommodation and Hospitality:

i. The accommodation may be arranged by University in the (B.A.M.S.) hostel if available after the BAMS student's accommodation.

16.Dress Code:

i. The dress shall be white T-Shirt and Black trousers of selected color (or as decided by the Institute) which shall be purchase by the students on their own. Each candidate shall attend the Institute's formal classes and other functions only in the prescribed dress for summer as well as in Winter Season with Institute's emblem thereon.

17.Conclusion: Adoption of way of life after the course

i. The Institute is founded for those, who want to selflessly serve humanity on the moral and spiritual grounds. Hence, persons having political or economic ambitions are advised to refrain from seeking admission here. However, those who feel that they have a call to strive for the spiritual upliftment of humanity are earnestly invited to join.

18. The university holds the rights reserved to modify any part ofthe ordinance which may not be informed prior to the candidates.

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Course Curriculum

Semester-I

Subject Title: **Principles of Yoga & Human Systems**
Subject Code: **DYS Theory 101**
Objectives: The above programme has been designed with the following objectives

i. To equip the learners with a brief understanding about yoga and its stream.

ii. To give a basic knowledge of Yoga as preventive health care and Yogic life style analysis.

	Topics
DYS-1.	Yoga shabdautpatti, Yoga prayojana Definitions according to Gita , Patanjali ; Yog sutra , Hathyogpradipika ,GherandSamhita
DYS-2.	Ayurveda moolshidhanta(Dosa, Dhatu, Mal, Panchmahabhoot)
DYS-3.	Ayurvedyogsambandh,
DYS-4.	Introduction to Anatomy and physiology of Human body with special reference to **Respiratory system**: Nose, nasal cavity, pharynx, Trachea, Larynx, bronchiole, lungs; Brief understanding about transport of respiratory gases; Composition and function of blood - Plasma, RBC, WBC and Platelet; **Muscular system**: Introduction to tissues and types; Anatomy of the Skeleton; Classification of bones; Types of joint and muscles in the body; **Nervous system**: Basic understanding about Sympathetic and Para sympathetic; **Endocrine System**: Basic understanding about the functions of various endocrine glands-pituitary, thyroid, parathyroid, adrenal, ovary and testes. **Digestive system**: Mouth, Oral cavity, Pharynx, Oesophagus, Stomach, Large & small intestine, anus; Associated glands - Liver, Pancreas, salivary glands., **Cardiovascular system**: Structure of heart, its chamber, valves, function of arteries, vein and capillaries, **Excretory system**: Basic understanding about different stages of digestion; absorption; Function of Kidney, Urinary Bladder and Urethra;
DYS-5.	Astanga Yoga (Yama, Niyama, Asana, Pranayama, Pratyahara, Dharana, Dhyana and Samadhi)
DYS-6.	**Asanas& its Importance and its types;** **Standing postures Preparatory Poses:**Padahastasana, Hastottanasana, Kati Chakrasana, Tadasna **Sitting postures:**Padmasana, Bhadrasana, Vajrasana, Sasankasana, UttanaMandukasana, Gomukhasaa, Ardhamatsyendrasana, Paschimottanasana, Vajrasana

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	Prone postures: Bhujangasana, Salabhasana, Dhanurasana, Makarasana **Supine postures:**Halasana, Sarvangasana, Halasana, Shavasana, Pawanmuktasna
DYS-7.	Surya namaskar and its Benefits
DYS-8.	Pranayam :- Benefits of Pranayam , Nadishudhi pranayamaAvara – Pravara – Madhyama, Kumbhakbheda
DYS-9.	Samadhi and its types
DYS-10.	Difference between Asana and Vyayama (Exercise)
DYS-11.	Diet during Yogabhyas- Mitahara, Pathya, Apathya during Yogabhyas, Types of diet Satwik, Rajsik, Tamsikahara,
DYS-12.	Importance of yoga in Modern times
DYS-13.	Principle and Practice of yoga in Ayurveda

Subject Title: **Yoga Practical**
Subject Code: **DYS Practical 101**
Objectives: The above mentioned programme has been designed with following objectives:**i. To introduce Yogic postures and Practices**
ii. To introduce the practices of Suryanamaskar, Asanas, and Pranayama.

	Topics
DYS-1.	**Suryanamaskar**
DYS-2.	**Asanas& its Importance and its types;** **Standing postures Preparatory Poses:**Padahastasana, Hastottanasana, Kati Chakrasana, Tadasna **Sitting postures:** Padmasana, Bhadrasana, Vajrasana, Sasankasana, UttanaMandukasana, Gomukhasaa, Ardhamatsyendrasana, Paschimottanasana, Vajrasana **Prone postures:** Bhujangasana, Salabhasana, Dhanurasana, Makarasana **Supine postures:** Halasana, Sarvangasana, Halasana, Shavasana, Pawanmuktasna
DYS-3.	**Pranayama practices ;** Pranayama Practices: i) Nadishuddhi, ii) Surya Bhedana, iii) Bhastrika,
DYS-4.	**Field work** Lecture cum demonstration; Organizing Yoga Workshops and Yoga Camps
DYS-5.	**Educational Visit** One educational visit to national/reputed yoga institute/center to observe yogic modalities.

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Semester-II

Subject Title: **Yoga & Health**
Subject Code: **DYS Theory 201**
Objectives: The above programme has been designed with the following objectives

i. To give a basic knowledge of Yoga as preventive health care and Yogic life style analysis.
ii.To give an understanding of wellness and illness with reference to the yogic texts

DYS-1.	Yoga and Mental Health
DYS-2.	Different schools of yoga - Raj yoga, Hathayoga, Mantra yoga Laya yoga, Jnanayoga, Karma yoga, Bhakti yoga
DYS-3.	Asana & its Importance and its types **Standing postures Preparatory Poses:** Ardhakatichakrasana, Ardhachakrasana, Vriksasana, Trikonasana, Parivrittatrikonasana **Sitting postures:**Yoga Mudrasana, Ushtrasana,UttanaMandukasana, Ardhamatsyendrasana, Paschimottanasana, SuptaVajrasana **Prone postures:**Dhanurasana, Makarasana **Supine postures:**Uttanapadasana, ArdhHalasana, Setubandhasana, Mayurasana, Chakrasana, Matsyasana, Setubandhasana, **Balancing postures:**Vrikshasana, Garudasana, Namaskarasana, Natarajasana
DYS-4.	Shatkarma – Dhauti, Basti, Nauli, Neti , Tratak, Kapalbhati
DYS-5.	Bandh – Jalandhar, Uddiyan, MuladharBandh,Tribandh
DYS-6.	Mudras
DYS-7.	Shadchakras
DYS-8.	Ida , Pingla , Sushumnanadi
DYS-9.	Moksha , MuktatmaLakshna and upaya
DYS-10.	Naisthkichikitsa , Satyabhudhi
DYS-11.	AsthaAishwarya , Ashta siddhi
DYS-12.	Yogabhyaspratibhandhakbhava&Siddhikarbhavas as per Hathyoga
DYS-13.	Concept of stress according to modern science and Yoga; Stress as the cause for illnesses; Role of Yoga in Stress management
DYS-14.	Role of yoga in transforming the life style
DYS-15.	Concept of Body (PanchaKosha according to Taittiriya Upanishad),
DYS-16.	Total Human Development through Yogic practices for

	PanchaKosha (AnnamayaKosha, PranamayaKosha, ManomayaKosha, VijnanamayaKosha and AnandamayaKosha) and its integration with Ashtanga Yoga of Patnajali.
DYS-17.	Concept of health (Modern and Ancient View); Concept of Wellness and Illness (Modern and Ancient View)
DYS-18.	Causes of illness according to Yoga Vasishta - Concept of Adhi and Vyadhi and their consequences on the body.
DYS-19.	Precautions to be taken Before and During yoga
DYS-20.	Yoga and Value Education– Spiritual value, Yogic value, Personal value, Social values
DYS-21.	Importance Of Yoga in Present era
DYS-22.	Prayer – its significance in Yogic practices.

Subject Title: **Yoga Practical**
Subject Code: **DYSPractical 201**
Objectives: The above mentioned programme has been designed with following objectives:

i. To introduce Yogic postures and Practices
ii.To introduce the practices of Shatkarmas, Suryanamaskar, Asanas, Breathing practices and Pranayama.

Theory	Topics
DYS-1.	**Shatkarmas ;** Dhauti (Kunjal), Neti (Sutra and Jala), Kapalbhati, Agnisara
DYS-2.	**Suryanamaskar**
DYS-3.	**Asanas (yogic postures) ;** **Standing postures Preparatory Poses:** i) Ardhakatichakrasana, ii) Ardhachakrasana, iii) Padahastasana, iv) Hastottanasana, v) Vriksasana, vi) Kati Chakrasana, vii) Trikonasana, viii) Parivrittatrikonasana **Sitting postures** i) Padmasana, ii) Bhadrasana, iii) Vajrasana, iv) Vajrasana, v) Yoga Mudrasana, vi) Ushtrasana, vii) Sasankasana, viii) UttanaMandukasana, ix) Gomukhasaa, x) Ardhamatsyendrasana, xi) Paschimottanasana, xiii) SuptaVajrasana **Prone postures** i) Bhujangasana, ii) Salabhasana, iii) **Dhanurasana**, iv) Makarasana **Supine postures** i) Uttanapadasana, ii) ArdhHalasana, iii) Setubandhasana, iv) Sarvangasana, v) Halasana,vi) Mayurasana, vii) Chakrasana, viii) Matsyasana, ix) Setubandhasana, x)

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	Shavasana **Balancing postures** i) Vrikshasana, ii) Garudasana, iii) Namaskarasana, iv) Natarajasana
DYS-4.	**Breathing practices** (for rectification of breathing pattern) ; Breathing Practices: i) Hands in and out, ii) Hands stretch, iii) Ankle stretch, iv) Legs rising, v) Rabbit breathing, vi) Tiger breathing, vii) Breath awareness, viii) Sectional breathing: Abdominal, Thoracic and Clavicular breathing;
DYS-5.	**Pranayama practices ;** Pranayama Practices: i) Nadishuddhi, ii) Surya Bhedana, iii) Bhastrika, iv) Ujjai, v) Cooling Pranayama (Sitali, Sitkari and Sadanta), vi) Bhramari
DYS-6.	**Field work** Lecture cum demonstration; Organizing Yoga Workshops and Yoga Camps
DYS-7.	**Educational Visit** One educational visit to national/reputed yoga institute/center to observe yogic modalities.

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To,

The Principal,

MSM Institute of Ayurveda,

BPS Mahila Vishwavidyalaya,

Khanpur Kalan, Sonepat.

Subject: Regarding proposal for one year **Diploma in Ksharsutra Therapy**.

Sir,

In reference of your vide letter number BPSMV/Inst./Ayu/18/3494-3497 dated 01.05.2018 the proposal for one year **Diploma in Ksharsutra Therapy**in place of six month certificate Course in Ksharsutra therapy (CCKT) is to be presented according to given Proforma as follows:

1. Name of course : Diploma in Ksharsutra Therapy.
   Duration : One year (Twosemesters of six months)
   Intake Capacity : Five Students/year &lateral entry for two students (supernumerary) of CCKT from BPSMV only(in 2nd semester only) per year.
2. Syllabus in detail along with examination scheme is attached.
3. Statutory requirement/permission: This one year diploma course is totally governed by BPS Mahila Vishwavidyalaya, Khanpur-Kalan,Sonepat. Central Council of Indian Medicine has no provision for such one year diploma. So this diploma course is not specified by CCIM.
4. Budget details:

Income/Revenue generate per year	**Amount in Rs.**	**Expanditure per year**	**Amount in Rs.**
Fee: 30,000 X 05 (for two semesters) 15,000/- X 02 (only for CCKT, holder from BPSMV for 2nd semester)	1,50,000/- 30,000/-	**Recurring** expenses on manpower	Nil

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		Consumable: Thread, turmeric powder, medicatedSpirit, Betadine, Bandages, Oil, Gloves, Gauze sheets.	60,000/-
		Any other: contingency	20,000/-
		Remuneration to faculty for additional teaching work as per BPSMV rule (F/D) for total teaching hours (72X250=18,000/-	18,000/-
Total	**Rs.1,80,000/-**	**Total**	**Rs. 98,000/-**
		Non recurring/one time Expanditure at start of course	
		Fiber optic Flexible Sigmiodoscope	3,50,000/-
		Ksharasutra Oven	20,000/-
		Sitz Bath Chair	25,000/-
		One AC Training Room	40,000/-
		Total	4,35,000/-
Grand Total	**1,80,000/-**		**Rs. 5,15,000/-**

5. One outsource employee already exists in Shalya Department, that employee will be accommodate in DKT course.
6. Any other: **Diploma in Ksharsutra Therapy**in place of six month certificate Course in Ksharsutra therapy (CCKT).Students who has done their six month certificate course (CCKT) from BPSMV, they are also eligible for this diploma course. They can take direct admission through lateral entry as supernumerary candidate in 2nd semester directly.

Date:15.05.18

Dr. B.C. Arya

HOD / Associate Professor

Dept. of Shalya-Tantra
Course co-ordinator of DKT

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BPS MAHILA VISHWAVIDYALAYA

KHANPUR KALAN, SONIPAT, HARYANA.

MSM INSTITUTE OF AYURVEDA

D.K.T

Diploma in Ksharsutra therapy

Associate co-ordinator

Dr Manoj Kumar Gupta

Assistant Professor

Course co-ordinator

Dr. B.C. Arya

HOD & Associate Professor

Department of Shalya-Tantra

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MSM INSTITUTE OF AYURVEDA

BPS MAHILA VISHWAVIDYALAYA, KHANPUR-KALAN

Academic ordinance for duration, admission, Fee, Teaching Methodology, Examination, Evaluation, Attendance and Course curriculum.

ONE YEAR FULL TIME DIPLOMA IN KSHARSUTRA THERAPY PROGRAMME.

(DKT)

1. Definition:

1.1 Programme stands for DKT (**DIPLOMA IN KSHARSUTRA THERAPY PROGRAMME)**

2. Duration:

2.1 Duration of course is one year (two semesters) including examination and assessment.

2.2 Course will be complete in two semesters, each semester will be of six months.

3. Admission:

3.1 Eligibility criteria: Female candidates who has completed BAMS with one year necessary rotatory internship training from any University/Institute/ college or recognized by CCIM/ Ministry of Ayush.

3.2 Students who has done their six month certificate course (CCKT) from BPSMV only, they are also eligible for this diploma course. They can take direct admission through lateral entryas supernumerary candidate in 2nd semester directly.

3.3 Mode of selection: Merit list will be prepared as per aggregate marks obtained in BAMS examination. In case of equal percentage, the person who obtain maximum marks in Shalya-Tantra subject will be eligible.

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4. Fee:

DKT fee will be as decided by university time to time

4.1 Lateral entry for two candidates (Supernumerary) will have to deposit fee only for 2nd semester at the time of admission as decided by university.

5. Teaching Methodology:

The methodology shall include class room teaching, OPD duty, IPD duty, OT work, viva-voice, project work etc. Regular theory & practical classes will be conducted in both semesters.

6. Scheme of Examination

DIPLOMA IN KSHARSUTRA THERAPY			Teaching Hours		Marks	
S.N.	Course code	Subject	Theory	Practical	Theory	
1	DKT-101	Principals & Management in Ksharsutra Therapy Paper I	92	276	100	100
2	DKT-102	Principals& Management inKsharsutra Therapy Paper II	100	300	100	100

7. Examination:

7.1 Examination will be held after completion of each semester as one theory paper and one practical cum viva-voice examination of 100 marks each.

7.2 Theory paper will be set by the course coordinator and practical cum viva voice examination shall be conducted by coordinator in the presence of department's all teachers. The medium of instructions and examination shall be English/Hindi.

7.3 A candidate who fails in the exams has to reappear, in the next exam scheduled by BPSMV. Maximum two supplementary chances will be given to candidate to pass the examination. The candidate shall appear either in theory or practical or both, in which she has failed, as per the case may be.

7.4 The exam fee to be paid by the candidates shall be paid as per the university norms.

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7.4 Candidate has to secure 50% marks in theory and practical examination separately.

7.5 Every successful candidate shall be granted a diploma cum detail mark sheet after completion of the final exam(2nd semester).

8. Attendance:

The candidates having minimum 75% attendance will eligible for appear in each semester.

9. Accommodation and Hospitality:

The accommodation will be arranged by University in the (B.A.M.S.) hostel if available after the BAMS student's accommodation.

10. Collected revenue will be spent for the development of the Shalya Tantra dept.

11. The university holds all the rights reserved to modify any part of the ordinance which may not be informed prior to the candidates.

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Course Curriculum 1st Semester

Theoretical Lectures for DKT

Theory	Topics
DKT-1	Basic concept of Ayurveda
DKT-2	Principle and practice of surgery in Ayurveda
DKT-3	Surgical anatomy of rectum, anal canal and perineum
DKT-4	Applied physiology of rectum and anal canal
DKT-5	Body response to injury(inflammation)
DKT-6	Role of fluid and electrolyte balance in anorectal surgery
DKT-7	Concept of kshara
DKT-8	Preparation of kshara
DKT-9	Drugs used in kshara sutra preparation
DKT-10	Preparation of Ksharasutra,kshara varti, pichu etc.
DKT-11	Description of different types of Ksharasootra
DKT-12	Research work done on kshara sutra
DKT-13	Mechanism of action of kshara sutra
DKT-14	Techniques of application of kshara and Ksharasutra
DKT-15	Instruments required for application of kshara and Ksharasutra
DKT-16	Problems and complications of Ksharasutra
DKT-17	Diagnostic procedures to assess the ano-rectal patients
DKT-18	Anaesthesia in Ano-rectal patients
DKT-19	Preparations of patients for Ano-rectal operations
DKT-20	Pre application measures of kshara sutra therapy
DKT-21	Adjuvant measures during kshara sutra therapy
DKT-22	Pain management of Ano-rectal patients
DKT-23	Assessment of anal sphincteric tone, digital per rectal examination & proctoscopy

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PRACTICAL CLINICAL / OPERATIVE 1st Semester

DKT-1	History taking and clinical examination
DKT-2	Assessment of fistula in ano by clinical examination
DKT-3	Examination of anal canal and rectum for diseases other than fistula in ano like fissure, haemorrhoids ,ulcerative colitis and malignancies
DKT-4	How to do per rectal digital examination
DKT-5	How to do Proctoscopy examination
DKT-6	Procedures of Fistulogram
DKT-7	Selection of cases for kshara sutra therapy
DKT-8	Sterilization of OT
DKT-9	Anal manometry
DKT-10	Preparation and packing of Ksharasutra.
DKT-11	Sterilization of Instruments & equipments
DKT-12	Preparation of kshara & Ksharsutra

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Course Curriculum 2nd Semester

Theoretical Lectures for DKT

DKT-1	Postoperative management
DKT-2	Arsh- Nidan, samprapti, bheda, lakshana.
DKT-3	Arsh- chikitsa
DKT-4	Discription of Haemorrhoids, its types, causes, pathophysiology &symptoms.
DKT-5	Management of Haemorrhoids.
DKT-6	Bhagandar- nidana, samprapti, bheda, lakshan.
DKT-7	Bhagander Pidika.
DKT-8	Bhagander- chikitsa.
DKT-9	Description of Fistula-in-ano, causes, types, pathogenesis & symptoms.
DKT-10	Discription of Extra anal Fistula causes, types.
DKT-11	Management of extra anal fistula
DKT-12	Management of Fistula-in-ano.
DKT-13	Complicated Fistula-in-ano & management
DKT-14	Modified techniques of Ksharasutra therapy
DKT-15	Wound management during kshara sutra therapy
DKT-16	Parikartika- nidana, samprapti, lakshan evam chikitsa
DKT-18	Description of fissure-in-ano, its causes, pathogenesis symptoms & management.
DKT-19	Lord's anal dilatation
DKT-20	Description of Pilonidal sinus, its causes, pathogenesis, symptoms & management.
DKT-21	Malignancy of anal canal and rectum
DKT-22	Management of rectal & anal carcinoma.
DKT-23	Use and abuse of laxatives, analgesics and antibiotics.
DKT-24	Lower Gastro-intestinal bleeding.
DKT-25	Problems and complications of surgical treatment.
DKT-26	Consumer protection act.
DKT-27	Evaluation and assessment of ano-rectal patients.
DKT-28	Dressing material for wounds in ano-rectal region.
DKT-29	Ano-rectal diseases in immuno-compromised patients.
DKT-30	Abuses of Laxative & purgatives

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PRACTICAL CLINICAL / OPERATIVE 2nd Semester

DKT-1	Application of different forms of kshara
DKT-2	Application of Ksharasutra
DKT-3	Modified technique of Ksharasutra application
DKT-4	Anesthesia- types and techniques
DKT-5	Pain management in Ksharasutra therapy
DKT-6	How to change the Ksharsutra
DKT-7	Adjuvant Ayurveda medicine in Ksharasutra therapy
DKT-8	Post-operative management of Ano-rectal patients
DKT-9	Post-operative pain management
DKT-10	Fistulectomy
DKT-11	Fistulotomy
DKT-12	Haemorrhoidectomy
DKT-13	Preparation of patients for OT

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Annexure - 41

Minutes of the meeting of Academic Committee to start new Diploma courses in Ayurveda

A meeting was called (by informing telephonically) among members of academic committee in the office of principal to discuss about the proposal of diploma courses in four departments of MSM Institute of Ayurveda . Following members of academic committee and coordinator of Diploma courses were also present in the meeting as a special invitee.

Members of academic committee

1. Dr A P NAYAK
2. DR VIVEK AGARWAL
3. DR NARESH KUMAR
4. DR VEENA H SHARMA
5. DR PIYUSH CHAUDHARY.

Coordinator of Diploma courses

1. DR B C ARYA---Diploma in Ksharasutra Therapy
2. DR PAWAN KUMAR- Diploma in Yoga Science
3. DR ANIL KUMAR--- Diploma in Panchakarma therapy
4. DR PIYUSH CHAUDHARY- Diploma in Ayurveda Pharmacy

After discussing about the proposal of diploma courses one by one following modification/correction suggested unanimously by the committee members.

1. Three certificate courses CCPT, CCKT and CCYN modified as diploma courses in respective departments (as DPT, DKT and DYS) and duration of the course must be for one year.
2. One diploma course in Ayurveda pharmacy of two years duration, proposed by Dr Piyush Chaudhary was accepted by the committee as a new course under department of Rasa Shastra and Bhaishajya Kalpana.
3. Remuneration @250 per theory lecture may be given to the faculty members who take theory classes of Diploma courses, as these courses bear extra burden on the teaching faculty of MSM Institute of Ayurveda in addition to allotted work load.
4. Yoga theory and practical classes will be performed from 7AM to 9AM in all working days of a week and clinical/practical classes may be extended if required.
5. Head of the department, coordinator and Co–coordinator of each diploma courses are as under-

Sr. No	Name of Diploma course	Head of the department	Coordinator	Co–coordinator
1	Diploma in Panchkarma	Dr. Madhvi Seetha	Dr. Anil Kumar	
2	Diploma in Yoga Science	Dr Veena Agarwal	Dr. Pawan kumar	
3	Diploma in Ksharasutra	Dr B C Arya	Dr B C Arya	Dr. Manoj Gupta
4	Diploma in Ayurveda Pharmacy	Dr. Vishnu Prasad Gautam	Dr. Piyush Chaudhary	Dr. Pankaj Rai

6. **Fee structure and intake capacity of the Diploma courses are as under**

Sr. No	Name of Diploma course	Intake capacity	Total fee of the Diploma in INR
1	Diploma in Panchkarma	30+5*	25000/-
2	Diploma in Yoga Scince	20+10*	25000/-
3	Diploma in Ksharasutra	5+2*	30000/-
4	Diploma in Ayurveda pharmacy	30	40000/-

*Supernumerary seats for lateral entry pass out concerned 06 month certificate course from BPSMV.

All the coordinators are suggested to submit their proposal to the Office of Principal on or before 15-5-18. So, it may be presented in the meeting of BOS & faculty meeting.

Signature of the committee members and course coordinator

Dr A P NAYAK

DR B C ARYA--Diploma in Ksharasutra Therapy

DR VIVEK AGARWAL

DR PAWAN KUMAR- Diploma in Yoga Science

DR NARESH KUMAR

DR ANIL KUMAR--- Diploma in Panchkarma Therapy

DR VEENA H SHARMA

DR PIYUSH CHAUDHARY- Diploma in Ayurveda Pharmacy

DR PIYUSH CHAUDHARY

MSM Institute of Ayurveda
BhagatPhool Singh MahilaVishwavidyalaya
A State University Established by an act of Haryana Legislature &recognised by UGC under section 2 (f) and 12 (b) of the UGC act, 1956.
KhanpurKalan (Sonepat), Haryana-131305, Phone No. – 01263-283629, Email – principalmsmbpsmv@gmail.com

Ref. No. BPSMV/Inst./Ayu /18/3.4.94 – 3497 Date: - 1-5-18

To,
HOD/Incharge,
Deptt of Shalya Tantra/Panchkarma/Swasthavritt/GurukulPharmacy,
MSM Institute of Ayurveda, BPSMV

Sub: **Regarding submitting the proposal for one or two year Diploma course in your respective Department/Pharmacy.**

Sir/Madam,

You are requested to submit the respective proposal for one year Diploma course in Kshar Sutra therapy/Panchkarma Technician/Yoga & naturopathy/ Two year Diploma in Ayurveda Pharmacy for your department in view of employability, practicability and skill development so that students are benefitted professionally. In this regard, kindly draft the course including the following details:-

1. Name of course & duration with intake capacity
2. Syllabus in detail along with examination scheme
3. Statutory requirement/permission
4. Budget details

Income/revenue generate per year	Amount in Rs.	Expenditure per year	Amount in Rs.
Fees Any others	....	Recurring expenses on Manpower Consumables Any others	 ....
Total		Total	
		Non Recurring/One time expenditure at start of course: Attach the list	
Grand Total			

5. Manpower, consumable, Non recurring articles and any others requirement, if any, mentioned with details i.e. designation, qualification, experience, annual expenditure as per Haryana Govt/BPSMV norms/outsource policy and details specification, use sperate sheet if required.
6. Any other details

The proposal may kindly be submitted fresh or redrafted for Diploma course (if existing certificate course is run) before 10th may 2018. If you are on vacation kindly depute any other teacher of your department or if both are on vacation, you may send the same through email.

Please consider it as urgent so that the proposal may be discussed in BOS, Faculty and put up in Academic Council of BPSMV scheduled to be held in 3rd week of May 2018.

Principal 3/5/18

A Copy of the above is forwarded by Email to the followings for information and necessary action:

1. P.A. to V.C. (For kind information of Hon'ble Vice - Chancellor)
2. P.A. to Registrar (For kind information of Worthy Registrar)
3. Dean Faculty of Ayurvedic Medicine.
4. Faculty of Department of Shalya Tantra, Panchkarma, Swathvritta, Ras Shastra.

Principal

Annexure - 42

Minutes of meeting of Faculty of Ayurvedic Medicine, MSM Institute of Ayurveda

A meeting of faculty of Ayurvedic Medicine, MSM Institute of Ayurveda, BPSMV, Khanpur Kalan held on 16.05.2018 at 10.00 a.m. in the office of Principal, MSM Institute of Ayurveda.

The following were present in the meeting:-

1.	Prof. Sarla Duhan	Dean, Faculty of Ayu. Medicine	Chairperson
2.	Prof. Mahesh Dadhich	Principal, MSM Institute of Ayurveda	Member
3.	Dr. Shobha Benjwal,	Asso. Prof. MSM Institute of Ayurveda	Member
4.	Dr. Mamta Rani	Asst. Prof. MSM Institute of Ayurveda	Member
5.	Mr. Kuldeep Singh	Nominee Registrar, BPSMV	Member Secretary

At beginning the chairperson, of the meeting welcomed all the worthy members and apprised regarding the agenda items of the meeting.

All the members of Faculty of Ayurvedic Medicine were actively involved in the deliberation and discussions.

After detailed deliberation & discussions the following business was transacted.

1. Four diploma Courses (i.e. Diploma in Ayurvedic Pharmacy **D.Pharma (Ayu.),** Diploma in Panchkarma Therapy **D.P.T.,** Diploma in YOGA Science **D.Y.Sc.** & Diploma in Ksharsutra Therapy **D.K.T.)** introduced in the meeting and all the members congratulated to BoS, Academic Committee, course Co-ordinator & HOD concerned to propose the course in view of employability, present demand in these fields.
2. Three currently running 06 months certificate courses (i.e.- C.C.P.T., C.C.Y.N. and C.C.K.T.) will be replaced by one year diploma courses i.e.- D.P.T., D.Y.Sc. & D.K.T. respectively.
3. Only one teaching assistant should be appointed in the Swasthavritta department to fulfill the MSR of C.C.I.M. and also conduct the Yoga classes in diploma course. One clerk would be required in Pharmacy for D.Pharma (Ayu.) course. The existing teaching faculty of Ayurveda would teach the above said diploma courses @250/- per hour remunerations instead of the appointment of new faculty to run these courses.
4. One time expenditure of Rs. 14,55,000/- also necessary for start the course.
5. The details of course are as under:-

Sr. No.	Name of Course	Seats	Duration in years	Eligibility	Age	Fee per Semester	Income per year	Expenditure per year	One time expenditure	Profit per year	Remarks
						Amount in Rs.					
1.	Diploma in Ayurvedic Pharmacy **D.Pharma (Ayu.)**	30	02	10+2 or Equivalent with PCB	17-30 years	10000/- +10000/- (2 batches)	12,00,000/-	4,50,000/-	3,20,000/-	7,50,000/-	New Course

16/5/18 16/5/18 16/5/18

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2.	Diploma in Panchkarma Therapy **D.P.T.**	30 + 5 Super numeric for CCPT	01	10+2 or Equivalent in any stream	17-30 years	12500/-	8,72,500/-	65,000/-	1,40,000/-	8,07,500/-	Replace the current C.C.P.T.
3.	Diploma in YOGA Science **D.Y.Sc.**	20 + 10 Super numeric for CCYN	01	10+2 or Equivalent in any stream	Minimum 17 years	12500/-	6,25,000/-	3,05,000/-	4,80,000/-	3,20,000/-	Replace the current CCYN and classes time 7.00 to 9.00 a.m.
4.	Diploma in Kshar-sutra Therapy **D.K.T.**	5+ 2 Super numeric for CCKT	01	BAMS	----	15000/-	1,80,000/-	98,000/-	5,15,000/-	82,000/-	Replace the current C.C.K.T.
Total						60000/-	28,77,500/-	9,18,000/-	14,55,000/-	19,59,500/-	

The meeting ended with the Vote of Thanks to Chair.

16.5.18
Prof. Sarla Duhan

16/5/18
Prof. Mahesh Dadhich

16/5/18
Dr. Shobha Benjwal,

16/5/18
Dr. Mamta Rani

16/5
Mr. Kuldeep Singh

Minutes of meeting of UG BoS, MSM Institute of Ayurveda

A meeting of U.G. Board of Study of MSM Institute of Ayurveda, BPMSV, Khanpur Kalan held on 16.05.2018 at 09.00 a.m. in the office of Principal, MSM Institute of Ayurveda.

The following were present in the meeting:-

1.	Prof. Mahesh Dadhich	Principal, MSM Inst. Of Ayurveda	Chairperson/Convener
2.	Prof. Sarla Duhan	Dean, MSM Inst. Of Ayurveda	Member
3.	Dr. S.P. Gautam	Associate Professor, MSMIOA	Member
4.	Dr. Govind Gupta	Assistant Professor, MSM IOA	Member
5.	Dr. Zile Singh Bhardwaj	Professor, G.B. Ayu. College, Rohtak	Outside Expert

At beginning the chairperson, of the meeting welcomed the members of U.G. BoS and apprised regarding the agenda items of the meeting.

All the members of U.G. BoS were actively involved in the deliberation and discussions.

After detailed deliberation & discussions the following business was transacted.

1. Four diploma Courses (i.e. Diploma in Ayurvedic Pharmacy D.Pharma (Ayu.), Diploma in Panchkarma Therapy **D.P.T.,** Diploma in YOGA Science D.Y.Sc. & Diploma in Ksharsutra Therapy **D.K.T.)** introduced in the meeting and all the members congratulated the Academic Committee, course Co-ordinator & HOD concerned to propose the course in view of employability, present demand in these fields.
2. Three currently running 06 months certificate courses (i.e.- C.C.P.T., C.C.Y.N. and C.C.K.T.) will be replaced by one year diploma courses i.e.- D.P.T., D.Y.Sc. & D.K.T. respectively.
3. Only one teaching assistant should be appointed in the Swasthavritta department to fulfill the MSR of C.C.I.M. and also conduct the Yoga classes in diploma course. One clerk would be required in Pharmacy for D.Pharma (Ayu.) course. The existing teaching faculty of Ayurveda would teach the above said diploma courses @250/- per hour remunerations instead of the appointment of new faculty to run these courses.
4. One time expenditure 14,55,000/- also necessary for start the course.
5. The details of course are as under:-

Sr. No.	Name of Course	Seats	Duration in years	Eligibility	Age	Fee per Semester	Income per year	Expenditure per year	One time expenditure	Profit per year	Remarks
1.	Diploma in Ayurvedic Pharmacy D.Pharma (Ayu.)	30	02	10+2 or Equivalent with PCB	17-30 years	10000/- +10000/- (2 batches)	12,00,000/-	4,50,000/-	3,20,000/-	7,50,000/-	New Course
2.	Diploma in Panchkarma Therapy	30 + 5 Super numeri	01	10+2 or Equivalent in any	17-30 years	12500/-	8,72,500/-	65,000/-		8,07,500/-	Replace the current

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	D.P.T.	c for CCPT		stream					1,40,000/-		C.C.P.T.
3.	Diploma in YOGA Science D.Y.Sc.	20 + 10 Super numeri c for CCYN	01	10+2 or Equivalen t in any stream	Minimu m 17 years	12500/-	6,25,000/-	3,05,000/-	4,80,000/-	3,20,000/-	Replace the current CCYN and classes time 7.00 to 9.00 a.m.
4.	Diploma in Kshar-sutra Therapy D.K.T.	5+ 2 Super numeri c for CCKT	01	BAMS	----	15000/-	1,80,000/-	98,000/-	5,15,000/-	82,000/-	Replace the current C.C.K.T.
Total						60000/-	28,77,500/-	9,13,000/-	11,35,000/-	19,59,500/-	

The meeting ended with the Vote of Thanks to Chair.

16/5/18

Dr. Mahesh Dadhich

16/5/18

Dr. Zile Singh

16.5.18

Dr. Sarla Duhan

16.5.18

Dr. S.P. Gautam

16/5/18

Dr. Govind Gupta

Annexure-42

Department of Fashion Technology,
Bhagat Phool Singh Mahila Vishwavidyalaya,
Khanpur Kalan, Sonipat- 131305 (Haryana) India
Tel. No. 01263-283126

BPSMV/FT/18/322 Dated 22.5.18

Proceeding of the UG Board of Studies of Fashion Technology meeting:-
A meeting of UG BOS Fashion Technology was held on 22/05/2018 at 11:00 a.m. in the office of Chairperson, Fashion Technology.

The following members of UG BOS (FT) were present:

1. Prof. (Dr.) Lalit Jajpura, Professor & Chairperson, Department of Fashion Technology — (Chairman, UG BOS)
2. Mr. Harinder Pal, Assistant Professor, Department of Fashion Technology — (Special invitee)
3. Mr. Ashish Hooda, Assistant Professor, Department of Fashion Technology — (Member)

Agenda No. (a):- Considered and approved

There is no AICTE Model Curriculum for B.Tech. Fashion Technology. Thus in line of structure of AICTE Model curriculum scheme and syllabus of First Year B.Tech. Fashion Technology has been prepared. Scheme and syllabus of First Year B.Tech. Fashion Technology as per guidelines of AICTE Model curriculum was considered and approved after detailed deliberation and discussion. It was decided that syllabus for 2nd year onwards of B.Tech. Fashion Technology in structure of AICTE Model Curriculum will be prepared and approved in next coming meeting of the UG BOS as early as possible.

Agenda No. (Any other item):-

A student has to attempt five questions in all. Each question paper consists of two parts, first question is compulsory and consists of eight parts, carrying a two marks each covering the entire syllabus and part B consists of seven questions of sixteen marks each covering the entire syllabus, out of which students has to attempt four questions only.

The UG BOS authorise Chairperson of the department for minor correction required if any such as for change of codes required for common subjects etc.

With this the meeting ended with a vote of thank to the chair.

Dr. Lalit Jajpura (Chairman, UG BOS)	Dr. K. N. Chatterjee (Outside Expert)	Mr. Ashish Hooda (Member)	Mr. Harinder Pal (Special invitee)
	*	22.5.18	22/5/18

*The member of UG BOS (FT) has given his consent via email (copy attached)

Copy of the above is forwarded to the following for information and further necessary action:

1. PS to Vice-Chancellor (for kind information of Hob'ble Vice-Chancellor), BPSMV, Khanpur Kalan.
2. PA to Registrar (for kind information of Worthy Registrar), BPSMV, Khanpur Kalan.
3. Assistant Registrar (Acad.) for information and necessary action.
4. Dean, faculty of Engineering & Sciences for information.
5. Concerned person, for information.

Chairperson, FT

Department of Fashion Technology,
Bhagat Phool Singh Mahila Vishwavidyalaya,
Khanpur Kalan, Sonipat- 131305 (Haryana) India
Tel. No. 01263-283126

BPSMV/FT/18/323 Dated 22.5.18

Proceeding of the PG Board of Studies of Fashion Technology meeting:-

A meeting of PG BOS Fashion Technology was held on 22/05/2018 at 10:00 a.m. in the office of Chairperson, Fashion Technology.

The following members of PG BOS (FT) were present:

1. Prof. (Dr.) Lalit Jajpura, (Chairman PG BOS)
   Professor & Chairperson, Department of Fashion Technology
2. Prof. (Dr.) S.K.Sinha, (Outside Expert)
   Department of Textile Technology, NIT, Jalandher, Punjab
3. Dr. Nandan Kumar (Special invitee from industry)
   High Performance Textile Pvt. Ltd., Sonepat
4. Mr. Harinder Pal, (Member)
   Assistant Professor, Department of Fashion Technology
5. Mr. Ashish Hooda, (Member)
   Assistant Professor, Department of Fashion Technology

At the outset, Chairperson welcome all the members of PGBOS and further the points were discussed at length and following decisions were taken:-

Agenda No. (a):- Considered and approved

There is no AICTE Model Curriculum for M.Tech. Fashion Technology (Functional Garments) started under the Innovative programme granted by UGC. Thus in line of structure of AICTE Model curriculum scheme and syllabus of M.Tech. Fashion Technology (Functional Garments) has been prepared. The scheme and syllabus of M.Tech. Fashion Technology (Functional Garments) as per guidelines of AICTE Model curriculum was considered and approved after detailed deliberation and discussion.

Agenda No. (b):- Considered and approved

Panel of examiner of M.Tech. Fashion Technology (Functional Garments) has been considered and approved

Agenda No. (C):- Considered and approved.

Panel of examiner of Ph.D. Entrance exam has been considered and approved. Since offered PhD programme is in Fashion Technology, thus it was resolved that entrance exam must comprise the questions focusing more on Fashion technology along with only basic conceptual knowledge from fibre to fabric referring GATE syllabus of textiles engineering and fibre science and this must be notified to the external examiner.

Agenda No. (Any other item):-

A student has to attempt five questions in all. Each question paper consists of two parts, first question is compulsory and consists of eight parts, carrying a two marks each covering the entire syllabus and part B consists of seven questions of sixteen marks each covering the entire syllabus, out of which students has to attempt four questions only.

The PG BOS authorise Chairperson of the department for minor correction required if any such as for change of codes required for common subjects ie Audit course and open elective of M.Tech offered in Faculty of Engineering and Technology for Uniformity.

With this the meeting ended with a vote of thank to the chair.

Dr. Lalit Jajpura 22.5.18 | Prof. S.K.Sinha 22/5/18 | Dr. Nandan Kumar | Mr. Harinder Pal 22/5/18 | Mr. Ashish Hooda 22/5/18

BPSMV/FT/18/..... Dated:.....

Copy of the above is forwarded to the following for information and further necessary action:

1. PS to Vice-Chancellor (for kind information of Hon'ble Vice-Chancellor), BPSMV, Khanpur Kalan.
2. PA to Registrar (for kind information of Worthy Registrar), BPSMV, Khanpur Kalan.
3. COE with approved paper setters as mentioned at item No. b and c.
4. Assistant Registrar (Acad.) for information and necessary action.
5. Dean, faculty of Engineering & Sciences, for information.
6. Concerned person, for information.

Lalu / Rajpura 22.5.18

Chairperson, FT

Dean/FET/18/87-94
23/05/18

Annexure-43

Bhagat Phool Singh Mahila Vishwavidyalaya,
Khanpur Kalan (Sonepat), Haryana-131305
Office No. 01263-283124, www.bpswomenuniversity.ac.in

Minutes of the meeting of Faculty of Engineering and Technology held on 23.05.2018 at 10 a.m. in the office of Dean, Faculty of Engineering and Technology, BPSMV, Khanpur Kalan.

The following were present:-

1.	Prof. Vijay Nehra, Dean, Faculty of Engineering &Technology	Chairperson
2.	Prof. Ajit Singh, Chairperson, Deptt of CSE/IT	Member
3.	Prof. Lalit Jajpura, Chairperson, Deptt of F.T.	Member
4.	Ms. Priyanka, Asstt. Prof., Deptt. of ECE	Member
5.	Ms. Manju Saroha, Asstt. Prof., Deptt. of CSE/IT	Member

After detailed discussion and deliberation, the following decisions were taken:-

Agenda No. 1: Considered and Approved.
The syllabi and scheme of B.Tech. (Fashion Technology) under guidelines of AICTE Model Curriculum as resolved by Under Graduate Board of Studies of Department of Fashion Technology held on 22/5/2018 was considered and approved.

Agenda No. 2: Considered and Approved.
The syllabi, scheme and panel of examiner of M.Tech (Fashion Technology) under guidelines of AICTE Model Curriculum as resolved by Post Graduate Board of Studies of Department of Fashion Technology held on 22/5/2018 was considered and approved. Further syllabus and panel of examiner of Ph.D. entrance exam as resolved by PG BOS of FT was also considered and approved.

(Vijay Nehra) (Ajit Singh) 23/5/18 (Lalit Jajpura) 23.5.18 (Priyanka) (Manju Saroha)

Endst. No. BPSMV/ECE/ 18/ Date:-

A copy of above is forwarded to following for information and necessary action.

1. PA to VC for kind information of Hon'ble VC
2. PA to Registrar for kind information of Worthy Registrar.
3. Chairperson, CSE&IT, BPSMV, Khanpur Kalan, Sonipat.
4. Chairperson, Fashion Technology, Khanpur Kalan, Sonipat.
5. Chairperson, ECE, BPSMV, Khanpur Kalan, Sonipat.
6. AR(Academic), BPSMV, Khanpur Kalan, Sonipat.
7. All Concerned, for necessary action.
8. All faculty members for information.

Dean FET
23/5/2018

Annexure 44

Subject: Re: Common Scheme and Syllabus of first year B.Tech. Fashion Technology as per guide lines of AICTE model curriculum

From: kn.chatterjee@gmail.com

To: lalitjajpura@yahoo.com

Cc: satishbhardwaj@hotmail.com; sanjayiitd@yahoo.com; guptasanjay@vardhman.com; ashishhooda2131@gmail.com

Date: Monday, 21 May, 2018, 11:37:02 PM IST

Dear Lalit Jajpura,

GREETINGS FROM TIT!!

Thanks for your mail.

I give my consent for this.

I will be available for designing syllabus from 2nd year onwards.

Thanks for considering me an External expert for the same.

With regards,

KN Chatterjee

Dr.K.N. Chatterjee
Prof.,& Head of FAE department
Head, Research and Consulting
TIT Bhiwani
Haryana, India.
PH: +91-9255176649

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Course Curriculum

and

Scheme of Examination

for

Bachelor of Technology

in

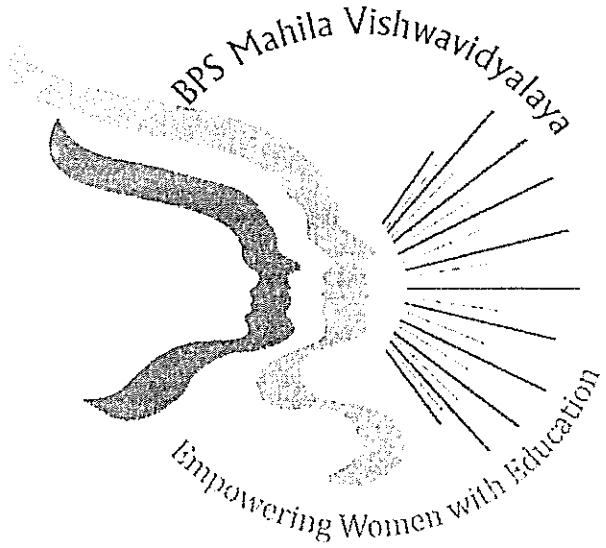
Electronics and Communication Engineering/Fashion Technology

(w.e.f. academic session 2018-19)

Offered by

Faculty of Engineering & Technology

1st Semester to 2nd Semester



Bhagat Phool Singh Mahila Vishwavidyalaya

Khanpur Kalan (Sonepat), Haryana-131305

www.bpswomenuniversity.ac.in

B.Tech. 1st year scheme w.e.f. 2018-19

Semester 1

S. No	Course Code	Course Title	Hrs/Week L	T	P	Total Credits	Internal Marks	External Marks	Total Marks
Theory Papers									
1.		Physics (Group A)	3	1	-	4	20	80	100
	BSC-101A	Chemistry-1(Group B)							
2.	BSC-102A	Mathematics –I (Group A & B)	3	1	-	4	20	80	100
3.	ESC-101A	Basic Electrical Engineering(Group A)	3	1	-	4	20	80	100
	ESC-103A	Programming for Problem Solving(Group B)	3	-	-	3	20	80	100
4.	HSMC101 A	English (Group A)	2	-	-	2	10	40	50
		Induction Program (mandatory) (Non Credit) 3weeks (Group A & B)	-	-	-	-	-	-	-
Lab									
5.	ESC-161A	Basic Electrical Engineering(Group A)	-	-	2	1	10	40	50
	ESC-163A	Programming for Problem Solving(GroupB)	-	-	4	2	10	40	50
6.	ESC-164A	Workshop/Manufacturing Practices(Group A)	1	-	4	3	20	80	100
	ESC-162A	Engineering Graphics & Design(Group B)							
7.	BSC - 170A	Physics Lab(Group A)	-	-	3	1.5	10	40	50
	BSC-161A	Chemistry-1(Group B)							
8.	HSMC161 A	English Language Lab(Group A)	-	-	2	1	10	40	50
Total Group A			12	3	11	20.5	120	480	600
Total Group B			10	2	11	17.5	100	400	500

Total Contact Hours = Group A= 26
Group B =23

Total Credits = 20.5 Gp A
17.5 Gp B

Options for Physics

BSC104A	Introduction to electromagnetic theory
BSC105A	Introduction to Mechanics
BSC106A	Quantum Mechanics for Engineers
BSC107A	Oscillations, waves and optics
BSC108A	Semiconductor Optoelectronics
BSC109A	Semiconductor physics
BSC110A	Optics, fibre optics, magnetism and quantum mechanics

Note :- Group B for B.Tech (ECE/FT)

Semester II

S. No	Course Code	Course Title	Hrs/Week L	T	P	Total Credits	Internal Marks	External Marks	Total Marks
Theory Papers									
1.		Physics (Group B)	3	1	-	4	20	80	100
	BSC-101A	Chemistry-1(Group A)							
2.	BSC-102A	Mathematics –II (Group A & B)	3	1	-	4	20	80	100
3.	ESC-101A	Basic Electrical Engineering(Group B)	3	1	-	4	20	80	100
	ESC-103A	Programming for Problem Solving(Group A)	3	-	-	3	20	80	100
4.	HSMC101 A	English (Group B)	2	-	-	2	10	40	50
		Induction Program (mandatory) (Non Credit) 3weeks (Group A & B)	-	-	-	-	-	-	-
Lab									
5.	ESC-161A	Basic Electrical Engineering(Group B)	-	-	2	1	10	40	50
	ESC-163A	Programming for Problem Solving(Group A)	-	-	4	2	10	40	50
6.	ESC-164A	Workshop/Manufacturing Practices(Group B)	1	-	4	3	20	80	100
	ESC-162A	Engineering Graphics & Design(Group A)							
7.	BSC - 170A	Physics Lab(Group B)	-	-	3	1.5	10	40	50
	BSC-161A	Chemistry-1(Group A)							
8.	HSMC161 A	English Language Lab (Group B)	-	-	2	1	10	40	50
Total Group B			12	3	11	20.5	120	480	600
Total Group A			10	2	11	17.5	100	400	500

Total Contact Hours = Group B= 26
Group A =23

Total Credits = 20.5 Gp B
17.5 Gp A

Options for Physics

BSC104A	Introduction to electromagnetic theory
BSC105A	Introduction to Mechanics
BSC106A	Quantum Mechanics for Engineers
BSC107A	Oscillations, waves and optics
BSC108A	Semiconductor Optoelectronics
BSC109A	Semiconductor physics
BSC110A	Optics, fibre optics, magnetism and quantum mechanics

Note :- Group B for B.Tech (ECE/FT)

BSC-101A

CHEMISTRY-1

L T P
3 1 -

Total Credits: 4

External Marks: 80
Internal Marks: 20

Total Marks: 100

Course Outcomes

- The concepts developed in this course will aid in quantification of several concepts in chemistry that have been introduced at the 10+2 levels in schools. Technology is being increasingly based on the electronic, atomic and molecular level modifications.
- Quantum theory is more than 100 years old and to understand phenomena at nanometer levels, one has to base the description of all chemical processes at molecular levels. The course will enable the student to:
- Analyse microscopic chemistry in terms of atomic and molecular orbitals and intermolecular forces.
- Rationalise bulk properties and processes using thermodynamic considerations.
- Distinguish the ranges of the electromagnetic spectrum used for exciting different molecular energy levels in various spectroscopic techniques
- Rationalise periodic properties such as ionization potential, electro negativity, oxidation states and electronegativity.

(i) Atomic and molecular structure (12 lectures)

Schrodinger equation. Particle in a box solutions and their applications for conjugated molecules and nanoparticles. Forms of the hydrogen atom wave functions and the plots of these functions to explore their spatial variations. Molecular orbitals of diatomic molecules and plots of the multicentre orbitals. Equations for atomic and molecular orbitals. Energy level diagrams of diatomics. Pi-molecular orbitals of butadiene and benzene and aromaticity. Crystal field theory and the energy level diagrams for transition metal ions and their magnetic properties. Band structure of solids and the role of doping on band structures.

(ii) Spectroscopic techniques and applications (8 lectures)

Principles of spectroscopy and selection rules. Electronic spectroscopy. Fluorescence and its applications in medicine. Vibrational and rotational spectroscopy of diatomic molecules. Applications. Nuclear magnetic resonance and magnetic resonance imaging, surface characterization techniques. Diffraction and scattering.

(iii) Intermolecular forces and potential energy surfaces (4 lectures)

Ionic, dipolar and van Der Waals interactions. Equations of state of real gases and critical phenomena. Potential energy surfaces of H_3, H_2F and HCN and trajectories on these surfaces.

(iv) Use of free energy in chemical equilibria (6 lectures)

Thermodynamic functions: energy, entropy and free energy. Estimations of entropy and free energies. Free energy and emf. Cell potentials, the Nernst equation and applications. Acid base, oxidation reduction and solubility equilibria. Waterchemistry. Corrosion. Use of free energy considerations in metallurgy through Ellingham diagrams.

(v) Periodic properties (4 Lectures)

Effective nuclear charge, penetration of orbitals, variations of s, p, d and f orbital energies of atoms in the periodic table, electronic configurations, atomic and ionic sizes, ionization energies, electron affinity and electronegativity, polarizability, oxidation states, coordination numbers and geometries, hard soft acids and bases, molecular geometries

(vi) Stereochemistry (4 lectures)

Representations of 3 dimensional structures, structural isomers and stereoisomers, configurations and symmetry and chirality, enantiomers, diastereomers, optical activity, absolute configurations and conformational analysis. Isomerism in transitional metal compounds

(vii) Organic reactions and synthesis of a drug molecule (4 lectures)

Introduction to reactions involving substitution, addition, elimination, oxidation, reduction, cyclization and ring openings. Synthesis of a commonly used drug molecule.

Books:

1. University chemistry, by B. H. Mahan
2. Chemistry: Principles and Applications, byM. J. Sienko andR. A. Plane
3. Fundamentals of Molecular Spectroscopy, by C. N. Banwell
4. Engineering Chemistry (NPTEL Web-book), by B. L. Tembe, Kamaluddin and M. S. Krishnan
5. Physical Chemistry, by P. W. Atkins
6. Organic Chemistry: Structure and Function by K. P. C. Volhardt and N. E. Schore, 5th Edition http://bcs.whfreeman.com/vollhardtschore5e/default.asp

BSC-161A

L T P

\- - 3

External Marks: 40

Internal Marks: 10

CHEMISTRY LAB-1

Total Credit: 1.5

Total Marks: 50

Chemistry Laboratory (1.5 credits)

Choice of 10-12 experiments from the following:

- Determination of surface tension and viscosity
- Thin layer chromatography.
- Ion exchange column for removal of hardness of water
- Determination of chloride content of water.
- Colligative properties using freezing point depression
- Determination of the rate constant of a reaction.
- Determination of cell constant and conductance of solutions
- Potentiometry - determination of redox potentials and emfs
- Synthesis of a polymer/drug.
- Saponification/acid value of an oil
- Chemical analysis of a salt.
- Lattice structures and packing of spheres.
- Models of potential energy surfaces.
- Chemical oscillations- Iodine clock reaction.
- Determination of the partition coefficient of a substance between two immiscible liquids
- Adsorption of acetic acid by charcoal.
- Use of the capillary viscosimeters to the demonstrate of the isoelectric point as the pH of minimum viscosity for gelatin sols and/or coagulation of the white part of egg.

Laboratory Outcomes

- The chemistry laboratory course will consist of experiments illustrating the principles of chemistry relevant to the study of science and engineering.
- Estimate rate constants of reactions from concentration of reactants/products as a function of time.
- Measure molecular/system properties such as surface tension, viscosity, conductance of solutions, redox potentials, chloride content of water, etc.
- Synthesize a small drug molecule and analyse a salt sample.

BSC-102A MATHEMATICS – I

L T P

3 1 -

Total Credits: 4

External Marks: 80

Total Marks: 100

Internal Marks: 20

OBJECTIVES:

The objective of this course is to familiarize the prospective engineers with techniques in calculus, multivariate analysis and linear algebra. It aims to equip the students with standard concepts and tools at an intermediate to advanced level that will serve them well towards tackling more advanced level of mathematics and applications that they would find useful in their disciplines. More precisely, the objectives are:

To introduce the idea of applying differential and integral calculus to notions of curvature and to improper integrals. Apart from some applications it gives a basic introduction on Beta and Gamma functions.

To introduce the fallouts of Rolle's Theoremthat is fundamental to application of analysis to Engineering problems.

To develop the tool of power series and Fourier series for learning advanced Engineering Mathematics.

To familiarize the student with functions of several variables that is essential in most branches of engineering. To develop the essential tool of matrices and linear algebra in a comprehensive manner.

Module 1: Calculus: (6 hours)

Evolutes and involutes; Evaluation of definite and improper integrals; Beta and Gamma functions and their properties; Applications of definite integrals to evaluate surface areas and volumes of revolutions.

Module 2: Calculus: (6 hours)

Rolle's Theorem, Mean value theorems, Taylor's and Maclaurin theorems with remainders; indeterminate forms and L'Hospital's rule; Maxima and minima.

Module 3: Sequences and series: (10 hours)

Convergence of sequence and series, tests for convergence; Power series, Taylor's series, series for exponential, trigonometric and logarithm functions; Fourier series: Half range sine and cosine series, Parseval's theorem.

Module 4: Multivariable Calculus (Differentiation): (8 hours)

Limit continuity and partial derivatives, directional derivatives, total derivative; Tangent plane and normal line; Maxima, minima and saddle points; Method of Lagrange multipliers; Gradient, curl and divergence.

Module 5: Matrices (10hours)

Inverse and rank of a matrix, rank-nullity theorem; System of linear equations; Symmetric, skew-symmetric and orthogonal matrices; Determinants; Eigen values and eigenvectors; Diagonalization of matrices; Cayley-Hamilton Theorem, and Orthogonal transformation.

Textbooks/References:

1. G.B. Thomas and R.L. Finney, Calculus and Analytic geometry, 9th Edition, Pearson, Reprint, 2002.
2. Erwin kreyszig, Advanced Engineering Mathematics, 9th Edition, John Wiley & Sons, 2006.
3. Veerarajan T., Engineering Mathematics for first year, Tata McGraw-Hill, New Delhi, 2008.
4. Ramana B.V., Higher Engineering Mathematics, Tata McGraw Hill New Delhi, 11thReprint, 2010.
5. D. Poole, Linear Algebra: A Modern Introduction, 2nd Edition, Brooks/Cole, 2005.
6. N.P. Bali and Manish Goyal, A text book of Engineering Mathematics, Laxmi Publications, Reprint, 2008.
7. B.S. Grewal, Higher Engineering Mathematics, Khanna Publishers, 36th Edition, 2010.

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BSC-103A
L T P
3 1 -
External Marks: 80
Internal Marks: 20

MATHEMATICS-2

Total Credits: 4

Total Marks: 100

OBJECTIVES:

The objective of this course is to familiarize the prospective engineers with techniques in multivariate integration, ordinary and partial differential equations and complex variables.It aims to equip the studentsto deal with advanced level of mathematics and applications that would be essential for their disciplines. More precisely, the objectives are:
To acquaint the student with mathematical tools needed in evaluating multiple integrals and their usage.

To introduce effective mathematical tools for the solutions of differential equations that model physical processes.

To introduce the tools of differentiation and integration of functions of complex variable that are used in various techniques dealing engineering problems.

Module 1:Multivariable Calculus (Integration): (10 hours)

Multiple Integration: Double integrals (Cartesian), change of order of integration in double integrals, Change of variables (Cartesian to polar), Applications: areas and volumes, Center of mass and Gravity (constant and variable densities);Triple integrals (Cartesian), orthogonal
curvilinear coordinates, Simple applications involving cubes, sphere and rectangular parallelepipeds; Scalar line integrals, vector line integrals, scalar surface integrals, vector surface integrals, Theorems of Green, Gauss and Stokes.

Module 2: First order ordinary differential equations:(6 hours)

Exact, linear and Bernoulli's equations, Euler's equations, Equations not of first degree:

equations solvable for p, equations solvable for y, equations solvable for x and Clairaut's type.

Module 3:Ordinary differential equations of higher orders:(8 hours)

Second order linear differential equations with variable coefficients, method of variation of parameters, Cauchy-Euler equation; Power series solutions; Legendre polynomials, Bessel functions of the first kind and their properties.

Module 4: Complex Variable – Differentiation :(8 hours):

Differentiation, Cauchy-Riemann equations, analytic functions, harmonic functions, finding harmonic conjugate; elementary analytic functions (exponential, trigonometric, logarithm) and their properties; Conformal mappings, Mobius transformations and their properties.

Module 5: Complex Variable – Integration :(8 hours):

Contour integrals, Cauchy-Goursat theorem (without proof), Cauchy Integral formula (without proof), Liouville's theorem and Maximum-Modulus theorem (without proof); Taylor's series, zeros of analytic functions, singularities, Laurent's series; Residues, Cauchy Residue theorem (without proof), Evaluation

of definite integral involving sine and cosine, Evaluation of certain improper integrals using the Bromwich contour.

Textbooks/References:

1. G.B. Thomas and R.L. Finney, Calculus and Analytic geometry, 9th Edition, Pearson, Reprint, 2002.
2. Erwin kreyszig, Advanced Engineering Mathematics, 9th Edition, John Wiley & Sons, 2006.
3. W. E. Boyce and R. C. DiPrima, Elementary Differential Equations and Boundary Value Problems, 9th Edn., Wiley India, 2009.
4. S. L. Ross, Differential Equations, 3rd Ed., Wiley India, 1984.
5. E. A. Coddington, An Introduction to Ordinary Differential Equations, Prentice Hall India, 1995.
6. E. L. Ince, Ordinary Differential Equations, Dover Publications, 1958.
7. J. W. Brown and R. V. Churchill, Complex Variables and Applications, 7th Ed., Mc-Graw Hill, 2004.
8. N.P. Bali and Manish Goyal, A text book of Engineering Mathematics, Laxmi Publications, Reprint, 2008.
9. B.S. Grewal, Higher Engineering Mathematics, Khanna Publishers, 36th Edition, 2010.

PHYSICS

BSC-104A **Introduction to Electromagnetic Theory**

L T P
3 1 -

Total Credits: 4

External Marks: 80
Internal Marks: 20

Total Marks: 100

Theory Prerequisite: Mathematics course with vector calculus

Module 1: Electrostatics in vacuum (8)
Calculation of electric field and electrostatic potential for a charge distribution; Divergence and curl of electrostatic field; Laplace's and Poisson's equations for electrostatic potential and uniqueness of their solution and connection with steady state diffusion and thermal conduction; Practical examples like Farady's cage and coffee-ring effect; Boundary conditions of electric field and electrostatic potential; method of images; energy of a charge distribution and its expression in terms of electric field.

Module 2: Electrostatics in a linear dielectric medium (4)
Electrostatic field and potential of a dipole. Bound charges due to electric polarization; Electric displacement; boundary conditions on displacement; Solving simple electrostatics problems in presence of dielectrics – Point charge at the centre of a dielectric sphere, charge in front of a dielectric slab, dielectric slab and dielectric sphere in uniform electric field.

Module 3: Magnetostatics (6)
Bio-Savart law, Divergence and curl of static magnetic field; vector potential and calculating it for a given magnetic field using Stokes' theorem; the equation for the vector potential and its solution for given current densities.

Module 4: Magnetostatics in a linear magnetic medium (3)
Magnetization and associated bound currents; auxiliary magnetic field $\vec{H}$; Boundary conditions on $\vec{B}$ and $\vec{H}$. Solving for magnetic field due to simple magnets like a bar magnet; magnetic susceptibility and ferromagnetic, paramagnetic and diamagnetic materials; Qualitative discussion of magnetic field in presence of magnetic materials.

Module 5: Faraday's law (4)
Faraday's law in terms of EMF produced by changing magnetic flux; equivalence of Faraday's law and motional EMF; Lenz's law; Electromagnetic breaking and its applications; Differential form of Faraday's law expressing curl of electric field in terms of time-derivative of magnetic field and calculating electric field due to changing magnetic fields in quasi-static approximation; energy stored in a magnetic field.

Module 6: Displacement current, Magnetic field due to time-dependent electric field and Maxwell's equations (5)
Continuity equation for current densities; Modifying equation for the curl of magnetic field to satisfy continuity equation; displace current and magnetic field arising from time-dependent electric field; calculating magnetic field due to changing electric fields in quasi-static approximation.
Maxwell's equation in vacuum and non-conducting medium; Energy in an electromagnetic field; Flow of energy and Poynting vector with examples. Qualitative discussion of momentum in electromagnetic fields.

Module 7: Electromagnetic waves (8)
The wave equation; Plane electromagnetic waves in vacuum, their transverse nature and polarization; relation between electric and magnetic fields of an electromagnetic wave; energy carried by electromagnetic waves and examples. Momentum carried by electromagnetic waves and resultant pressure. Reflection and transmission of electromagnetic waves from a non-conducting medium-vacuum interface for normal incidence.

Text Book:

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(i) David Griffiths, Introduction to Electrodynamics **Reference books:**

1. Halliday and Resnick, Physics
2. W. Saslow, Electricity, magnetism and light

BSC-105A Introduction to Mechanics

L T P

3 1 -

Total Credits: 4

External Marks: 80

Internal Marks: 20

Total Marks: 100

Prerequisites: (i) High-school education

Module 1: (8)

Transformation of scalars and vectors under Rotation transformation; Forces in Nature; Newton's laws and its completeness in describing particle motion; Form invariance of Newton's Second Law; Solving Newton's equations of motion in polar coordinates; Problems including constraints and friction; Extension to cylindrical and spherical coordinates

Module 2: (7)

Potential energy function; F = - Grad V, equipotential surfaces and meaning of gradient; Conservative and non-conservative forces, curl of a force field; Central forces; Conservation of Angular Momentum; Energy equation and energy diagrams; Elliptical, parabolic and hyperbolic orbits; Kepler problem; Application: Satellite manoeuvres;

Module 3: (5)

Non-inertial frames of reference; Rotating coordinate system: Five-term acceleration formula-Centripetal and Coriolis accelerations; Applications: Weather systems, Foucault pendulum;

Module 4: (6)

Harmonic oscillator; Damped harmonic motion – over-damped, critically damped and lightly-damped oscillators; Forced oscillations and resonance

Module 5: (5)

Definition and motion of a rigid body in the plane; Rotation in the plane; Kinematics in a coordinate system rotating and translating in the plane; Angular momentum about a point of a rigid body in planar motion; Euler's laws of motion, their independence from Newton's laws, and their necessity in describing rigid body motion; Examples

Module 6: (7)

Introduction to three-dimensional rigid body motion — only need to highlight the distinction from two-dimensional motion in terms of (a) Angular velocity vector, and its rate of change and (b)Moment of inertia tensor; Three-dimensional motion of a rigid body wherein all points move in a coplanar manner: e.g. Rod executing conical motion with center of mass fixed — only need to show that this motion looks two-dimensional but is three-dimensional, and two-dimensional formulation fails.

Reference books:

1. Engineering Mechanics, 2nd ed. — MK Harbola
2. Introduction to Mechanics — MK Verma
3. An Introduction to Mechanics — D Kleppner & R Kolenkow
4. Principles of Mechanics — JL Synge & BA Griffiths
5. Mechanics — JP Den Hartog
6. Engineering Mechanics - Dynamics, 7th ed. - JL Meriam
7. Mechanical Vibrations — JP Den Hartog
8. Theory of Vibrations with Applications — WT Thomson

BSC-106A **Quantum Mechanics for Engineers**

L T P

3 1 -

Total Credits: 4

External Marks: 80

Internal Marks: 20

Total Marks: 100

Prerequisite: Mathematics course on differential equations and linear algebra

Module 1: Wave nature of particles and the Schrodinger equation (8)

Introduction to Quantum mechanics, Wave nature of Particles, Time-dependent and time-independent Schrodinger equation for wavefunction, Born interpretation, probability current, Expectation values, Free-particle wavefunction and wave-packets, Uncertainty principle

Module 2: Mathematical Preliminaries for quantum mechanics (4)

Complex numbers, Linear vector spaces, inner product, operators, eigenvalue problems, Hermitian operators, Hermite polynomials, Legendre's equation, spherical harmonics.

Module 3: Applying the Schrodinger equation (15)

Solution of stationary-state Schrodinger equation for one dimensional problems– particle in a box, particle in attractive delta-function potential, square-well potential, linear harmonic oscillator.

Numerical solution of stationary-state Schrodinger equation for one dimensional problems for different potentials

Scattering from a potential barrier and tunneling; related examples like alpha-decay, field-ionization and scanning tunneling microscope

Three-dimensional problems: particle in three dimensional box and related examples, Angular momentum operator, Rigid Rotor, Hydrogen atom ground-state, orbitals, interaction with magnetic field, spin

Numerical solution stationary-state radial Schrodinger equation for spherically symmetric potentials

Module 4: Introduction to molecular bonding (4)

Particle in double delta-function potential, Molecules (hydrogen molecule, valence bond and molecular orbitals picture), singlet/triplet states, chemical bonding, hybridization

Module 5: Introduction to solids (7)

Free electron theory of metals, Fermi level, density of states, Application to white dwarfs and neutron stars, Bloch's theorem for particles in a periodic potential, Kronig-Penney model and origin of energy bands

Numerical solution for energy in one-dimensional periodic lattice by mixing plane waves.

Text book: Eisberg and Resnick, Introduction to Quantum Physics

Reference Books:

1. D. J. Griffiths, Quantum mechanics Richard Robinett, Quantum
2. Mechanics Daniel Mc Quarrie, Quantum Chemistry

BSC-107A **Oscillations, waves and optics**

L T P

3 1 -

Total Credits: 4

External Marks: 80

Internal Marks: 20

Total Marks: 100

Prerequisites:

i. Mathematics course on Differential equations

ii. Introduction to Electromagnetic theory

Module 1: Simple harmonic motion, damped and forced simple harmonic oscillator (7) Mechanical and electrical simple harmonic oscillators, complex number notation and phasor representation of simple harmonic motion, damped harmonic oscillator – heavy, critical and light damping, energy decay in a damped harmonic oscillator, quality factor, forced mechanical and electrical oscillators, electrical and mechanical impedance, steady state motion of forced damped harmonic oscillator, power absorbed by oscillator

Module 2: Non-dispersive transverse and longitudinal waves in one dimension and introduction to dispersion (7)

Transverse wave on a string, the wave equation on a string, Harmonic waves, reflection and transmission of waves at a boundary, impedance matching, standing waves and their eigenfrequencies, longitudinal waves and the wave equation for them, acoustics waves and speed of sound, standing sound waves.

Waves with dispersion, water waves, superposition of waves and Fourier method, wave groups and group velocity.

Module 3: The propagation of light and geometric optics (10)

Fermat's principle of stationary time and its applications e.g. in explaining mirage effect, laws of reflection and refraction, Light as an electromagnetic wave and Fresnel equations, reflectance and transmittance, Brewster's angle, total internal reflection, and evanescent wave.

Mirrors and lenses and optical instruments based on them, transfer formula and the matrix method

Module 4: Wave optics (6)

Huygens' principle, superposition of waves and interference of light by wavefront splitting and amplitude splitting; Young's double slit experiment, Newton's rings, Michelson interferometer, Mach-Zehnder interferometer.

Farunhofer diffraction from a single slit and a circular aperture, the Rayleigh criterion for limit of resolution and its application to vision; Diffraction gratings and their resolving power

Module 5: Lasers (8)

Einstein's theory of matter radiation interaction and A and B coefficients; amplification of light by population inversion, different types of lasers: gas lasers (He-Ne, CO_2), solid-state lasers(ruby, Neodymium), dye lasers; Properties of laser beams: mono-chromaticity, coherence, directionality and brightness, laser speckles, applications of lasers in science, engineering and medicine.

Reference books:

1. Ian G. Main, Oscillations and waves in physics
2. H.J. Pain, The physics of vibrations and waves
3. E. Hecht, Optics
4. Ghatak, Optics
5. O. Svelto, Principles of Lasers

BSC-108A **Semiconductor Optoelectronics**

L T P
3 1 -

Total Credits: 4

External Marks: 80
Internal Marks: 20

Total Marks: 100

Prerequisite: Semiconductor physics

Module 1: Review of semiconductor physics (10) E-k diagram, Density of states, Occupation probability, Fermi level and quasi-Fermi level (variation by carrier concentration and temperature); p-n junction, Metal-semiconductor junction (Ohmic and Schottky); Carrier transport, generation, and recombination; Semiconductor materials of interest for optoelectronic devices, bandgap modification, heterostructures; Light-semiconductor interaction: Rates of optical transitions, joint density of states, condition for optical amplification.

Module 2: Semiconductor light emitting diodes (LEDs) (6)

Rate equations for carrier density, Radiative and non-radiative recombination mechanisms in semiconductors, LED: device structure, materials, characteristics, and figures of merit.

Module 3: Semiconductor lasers (8)

Review of laser physics; Rate equations for carrier- and photon-density, and their steady state solutions, Laser dynamics, Relaxation oscillations, Input-output characteristics of lasers. Semiconductor laser: structure, materials, device characteristics, and figures of merit; DFB, DBR, and vertical-cavity surface-emitting lasers (VECSEL), Tunable semiconductor lasers.

Module 4: Photo detectors (6)

Types of semiconductor photo detectors -p-n junction, PIN, and Avalanche --- and their structure, materials, working principle, and characteristics, Noise limits on performance; Solar cells.

Module 5: Low-dimensional optoelectronic devices (6) Quantum-well, -wire, and -dot based LEDs, lasers, and photo detectors.

References:

1. J. Singh, Semiconductor Optoelectronics: Physics and Technology, McGraw-Hill Inc. (1995).

2. B. E. A. Saleh and M. C. Teich, Fundamentals of Photonics, John Wiley & Sons,

3. S. M. Sze, Semiconductor Devices: Physics and Technology, Wiley (2008).
4. A. Yariv and P. Yeh, Photonics: Optical Electronics in Modern Communications, Oxford University Press, New York (2007).
5. P. Bhattacharya, Semiconductor Optoelectronic Devices, Prentice Hall of India (1997).

6. Online course: "Semiconductor Optoelectronics" by M R Shenoy on NPTEL
7. Online course: "Optoelectronic Materials and Devices" by Monica Katiyar and Deepak Gupta on NPTEL

BSC-109A **Semiconductor Physics**

L T P
3 1 -

Total Credits: 4

External Marks: 80
Internal Marks: 20

Total Marks: 100

Prerequisite: " Introduction to Quantum Mechanics" Desirable

Module 1: Electronic materials (8)

Free electron theory, Density of states and energy band diagrams, Kronig-Penny model (to introduce origin of band gap), Energy bands in solids, E-k diagram, Direct and indirect bandgaps, Types of electronic materials: metals, semiconductors, and insulators, Density of states, Occupation probability, Fermi level, Effective mass, Phonons.

Module 2: Semiconductors (10)

Intrinsic and extrinsic semiconductors, Dependence of Fermi level on carrier-concentration and temperature (equilibrium carrier statistics), Carrier generation and recombination, Carrier transport: diffusion and drift, p-n junction, Metal-semiconductor junction (Ohmic and Schottky), Semiconductor materials of interest for optoelectronic devices.

Module 3: Light-semiconductor interaction (6)

Optical transitions in bulk semiconductors: absorption, spontaneous emission, and stimulated emission; Joint density of states, Density of states for photons, Transition rates (Fermi's golden rule), Optical loss and gain; Photovoltaic effect, Exciton, Drude model.

Module 4: Measurements (6)

Four-point probe and van der Pauw measurements for carrier density, resistivity, and hall mobility; Hot-point probe measurement, capacitance-voltage measurements, parameter extraction from diode I-V characteristics, DLTS, band gap by UV-Vis spectroscopy, absorption/transmission.

Module 5: Engineered semiconductor materials (6)

Density of states in 2D, 1d and 0D (qualitatively). Practical examples of low-dimensional systems such as quantum wells, wires, and dots: design, fabrication, and characterization techniques. Heterojunctions and associated band-diagrams

References:

1. J. Singh, Semiconductor Optoelectronics: Physics and Technology, McGraw-Hill Inc. (1995).
2. B. E. A. Saleh and M. C. Teich, Fundamentals of Photonics, John Wiley & Sons, Inc., (2007).
3. S. M. Sze, Semiconductor Devices: Physics and Technology, Wiley (2008).
4. A. Yariv and P. Yeh, Photonics: Optical Electronics in Modern Communications, Oxford University Press, New York (2007).
5. P. Bhattacharya, Semiconductor Optoelectronic Devices, Prentice Hall of India (1997).
6. Online course: "Semiconductor Optoelectronics" by M R Shenoy on NPTEL
7. Online course: "Optoelectronic Materials and Devices" by Monica Katiyar and Deepak Gupta on NPTEL

BSC-110A Optics, Optical Fibre, Magnetism and Quantum Mechanics

L T P

3 1 -

Total Credits: 4

External Marks: 80

Internal Marks: 20

Total Marks: 100

Objectives:

Basic conceptsof optics and its applications, electricity and magnetism, and quantum physics.

UNIT – I: Optics

Diffraction:Introductiontointerferenceandexample;conceptofdiffraction, Fraunhofer and Fresneldiffraction,Fraunhoferdiffractionatsingleslit,doubleslit,and multiple slits; diffraction grating, characteristics of diffraction grating and its applications.

Polarisation:Introduction,polarisationbyreflection,polarisationbydouble refraction, scattering of light, circular and elliptical polarisation, optical activity.

UNIT – II: Fibre Optics and Lasers

FibreOptics:Introduction,opticalfibreasadielectricwave guide: total internal reflection, numericalaperture and variousfibreparameters,lossesassociatedwithopticalfibres,step and graded index fibres, application of optical fibres.

Lasers:Introductiontointeractionof radiation with matter, principles and working of laser: populationinversion,pumping, various modes, threshold population inversion, types of laser: solid state, semiconductor, gas; application of lasers.

UNIT – III: Electromagnetism and Magnetic Properties of Materials

Lawsofelectrostatics, electric current and the continuity equation, laws of magnetism. Ampere's Faraday's laws. Maxwell's equations. Polarisation, permeability and dielectric constant, polar and non-polar dielectrics, applications of dielectric. Magnetisation, permeability and susceptibility, classification of magnetic materials, ferromagnetism, magnetic domains and hysteresis, applications.

UNIT – IV : Quantum Mechanics

Introductiontoquantumphysics, black body radiation, explanation using the photon concept, photoelectric effect, Compton effect, de Broglie hypothesis, wave-particle duality, Born's interpretationofthewavefunction,verificationofmatter waves, uncertainty principle, Schrodinger wave equation, particle in 1-D box.

Course outcomes

Students will be familiar with

·Bragg's Law and introduced to the principles of lasers, types of lasers and applications

·Various terms related to properties of materials such as, permeability, polarization, etc.

·Some of the basic laws related to quantum mechanics as well as magnetic and dielectric properties of materials

·Simple quantum mechanics calculations

References:

1.I. G. Main, "Vibrations and waves in physics", Cambridge University Press, 1993.

2.H. J. Pain, "The physics of vibrations and waves", Wiley, 2006.

3.E. Hecht, "Optics", Pearson Education, 2008.

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4.A. Ghatak, "Optics", McGraw Hill Education, 2012.

5.O. Svelto, "Principles of Lasers", Springer Science & Business Media, 2010.

6.D. J. Griffiths, "Quantum mechanics", Pearson Education, 2014.

7.R. Robinett, "Quantum Mechanics", OUP Oxford, 2006.

8.D. McQuarrie, "Quantum Chemistry", University Science Books, 2007.

9. D. A. Neamen, "Semiconductor Physics andDevices",TimesMirrorHighEducation Group, Chicago, 1997.

10.E.S. Yang, "Microelectronic Devices", McGraw Hill, Singapore, 1988.

11.B.G. Streetman, "Solid State Electronic Devices", Prentice Hall of India, 1995.

BSC-170A PHYSICS LAB

L T P

- - 3

Total Credit: 1.5

External Marks: 40

Internal Marks: 10

Total Marks: 50

COURSE OBJECTIVES:

The purpose of this laboratory is to develop scientific temper and analytical capability among the engineering students.

LIST OF EXPERIMENTS:

1. To determine the wavelength of sodium light by Newton's rings experiment.
2. To find the specific rotation of sugar solution by using Polarimeter.
3. To find the refractive of a material of a given prism using spectrometer.
4. To find the wavelength of sodium light using Fresnel Biprism
5. To find the capacity of an unknown capacitor by flashing and quenching potential of argon/neon.
6. To measure the band gap of a semiconductors.
7. To determine the Hall coefficient using Hall Effect.
8. To determine the resistivity of a semiconductor by four probe method.
9. To find the wavelength of various colours of white light with the help of a plane transmission diffracting grating
10. To convert given galvanometer into an ammeter of given range.
11. To find high resistance by leakage method.
12. To calibrate a voltmeter and an ammeter by using potentiometer.
13 Verification of laws of stretched string- Sonometer.
14. To find the Frequency of A.C. mains-Sonometer.
15. Study of characteristics of LED and LASER sources.
16. Study of characteristics of p-i-n and avalanche photo diode detectors.
17. To study the shunting effect of a voltmeter on voltage measurement.
18. Evaluation of numerical aperture of a given fiber.
19. Magnetic field along the axis of a current carrying coil-Stewart and Gee's method.
20. To study characteristic of a thermistor
21. To study I-V characteristic and rectification properties of a semiconductor.

NOTE:

At least 12 experiments are to be performed by students in the semester. Out of which at least ten experiments should be performed from the above list, remaining two experiments may either be performed from the above list or designed and set by the concerned faculty as per the scope of the syllabus .

ESC-101A BASIC ELECTRICAL ENGINEERING

L T P
3 1 -

Total Credits: 4

External Marks: 80
Internal Marks: 20

Total Marks: 100

Detailed contents :

Module 1 : DC Circuits (8 hours)

Electrical circuit elements (R, L and C), voltage and current sources, Kirchoff current and voltage laws, analysis of simple circuits with dc excitation. Superposition, Thevenin and Norton Theorems. Time-domain analysis of first-order RL and RC circuits.

Module 2: AC Circuits (8 hours)

Representation of sinusoidal waveforms, peak and rms values, phasor representation, real power, reactive power, apparent power, power factor. Analysis of single-phase ac circuits consisting of R, L, C, RL, RC, RLC combinations (series and parallel), resonance. Three-phase balanced circuits, voltage and current relations in star and delta connections.

Module 3: Transformers (6 hours)

Magnetic materials, BH characteristics, ideal and practical transformer, equivalent circuit, losses in transformers, regulation and efficiency. Auto-transformer and three-phase transformer connections.

Module 4: Electrical Machines (8 hours)

Generation of rotating magnetic fields, Construction and working of a three-phase induction motor, Significance of torque-slip characteristic. Loss components and efficiency, starting and speed control of induction motor. Single-phase induction motor. Construction, working, torque-speed characteristic and speed control of separately excited dc motor. Construction and working of synchronous generators.

Module 5: Power Converters (6 hours)

DC-DC buck and boost converters, duty ratio control. Single-phase and three-phase voltage source inverters; sinusoidal modulation.

Module 6: Electrical Installations (6 hours)

Components of LT Switchgear: Switch Fuse Unit (SFU), MCB, ELCB, MCCB, Types of Wires and Cables, Earthing. Types of Batteries, Important Characteristics for Batteries. Elementary calculations for energy consumption, power factor improvement and battery backup.

Suggested Text / Reference Books

1. D. P. Kothari and I. J. Nagrath, "Basic Electrical Engineering", Tata McGraw Hill, 2010.
2. D. C. Kulshreshtha, "Basic Electrical Engineering", McGraw Hill, 2009.
3. L. S. Bobrow, "Fundamentals of Electrical Engineering", Oxford University Press, 2011
4. E. Hughes, "Electrical and Electronics Technology", Pearson, 2010
5. V. D. Toro, "Electrical Engineering Fundamentals", Prentice Hall India, 1989.

ESC-161A BASIC ELECTRICAL ENGINEERING LAB

L T P
- - 2

Total Credits: 1

External Marks: 40
Internal Marks: 10

Total Marks: 50

LIST OF EXPERIMENTS:

1. Identification, Specifications, Testing of passive R, L, C Components (Colour Codes), Potentiometers, Switches (SPDT, DPDT, and DIP), Coils, Gang Condensers, Relays, Bread Boards.
2. Identification, Specifications and Testing of Active Devices, Diodes, BJTs.
3. Soldering practice–Simple Circuits using active and passive components.
4. Single layer and Multi layer PCBs (Identification and Utility).
5. Study and operation of:
   (a) Multimeters (Analog and Digital)
   (b) Function Generator
   (c) Regulated Power Supplies
6. C.R.O for Measurement of electrical quantities:
   (a) Voltage measurement.
   (b) Frequency measurement
   (c) Phase measurement
   (d) Component Testing
7. Familiarization of PC hardware: function of different part of PC.
8. Study of different type of storage media: CDROM, CDRW, floppy disk, Zip drive, Hard Disks etc,
9. To study V-I characteristic of diode.
10. To study half wave and full wave rectifier.
11. To verify truth table of different logic gates.
12. To study operation of PA systems.

NOTE: Ten experiments are to be performed, out of which at least seven experiments should be performed from above list. Remaining three experiments may either be performed from the above list or designed and set by the concerned faculty as per the scope of the syllabus .

ESC-103 A PROGRAMMING FOR PROBLEM SOLVING

L T P

3 - -

Total Credits: 3

External Marks: 80

Internal Marks: 20

Total Marks: 100

Course Outcomes

The student will learn

- To formulate simple algorithms for arithmetic and logical problems. To translate the algorithms to programs (in C language). To test and execute the programs and correct syntax and logical errors. To implement conditional branching, iteration and recursion.
- To decompose a problem into functions and synthesize a complete program using divide and conquer approach.
- To use arrays, pointers and structures to formulate algorithms and programs.
- To apply programming to solve matrix addition and multiplication problems and searching and sorting problems.
- To apply programming to solve simple numerical method problems, namely rot finding of function, differentiation of function and simple integration

Detailed contents

Unit 1:Introduction to Programming (4 lectures)

Introduction to components of a computer system (disks, memory, processor, where a program is stored and executed, operating system, compilers etc.) - (1 lecture).

Idea of Algorithm: steps to solve logical and numerical problems. Representation of Algorithm: Flowchart/Pseudocode with examples. (1 lecture)

From algorithms to programs; source code, variables (with data types) variables and memory locations, Syntax and Logical Errors in compilation, object and executable code- (2 lectures)

Unit 2: Arithmetic expressions and precedence (2 lectures)

Conditional Branching and Loops (6 lectures)

Writing and evaluation of conditionals and consequent branching (3 lectures)

Iteration and loops (3 lectures)

Unit 3: Arrays (6 lectures)

Arrays (1-D, 2-D), Character arrays and Strings

Unit 4: Basic Algorithms (6 lectures)

Searching, Basic Sorting Algorithms (Bubble, Insertion and Selection), Finding roots of equations, notion of order of complexity through example programs (no formal definition required)

Unit 5: Function (5 lectures)

Functions (including using built in libraries), Parameter passing in functions, call by value, Passing arrays to functions: idea of call by reference

Unit 6:Recursion (4 -5 lectures)

Recursion, as a different way of solving problems. Example programs, such as Finding Factorial, Fibonacci series, Ackerman function etc. Quick sort or Merge sort.

Unit 7:Structure (4 lectures)

Structures, Defining structures and Array of Structures

Unit 8:Pointers (2 lectures)

Idea of pointers, Defining pointers, Use of Pointers in self-referential structures, notion of linked list (no implementation)

Unit 9:File handling (only if time is available, otherwise should be done as part of the lab)

Suggested Text Books

1. Byron Gottfried, Schaum's Outline of Programming with C, McGraw-Hill
2. E. Balaguruswamy, Programming in ANSI C, Tata McGraw-Hill

Suggested Reference Books

1. Brian W. Kernighan and Dennis M. Ritchie, The C Programming Language, Prentice Hall of India

ESC-163A PROGRAMMING FOR PROBLEM SOLVING LAB

L T P
- - 4

Total Credits: 2

External Marks:40
Internal Marks:10

Total Marks: 50

Laboratory Outcomes

- To formulate the algorithms for simple problems
- To translate given algorithms to a working and correct program Tobe able to correct syntax errors as reported by the compilers
- To be able to identify and correct logical errors encountered at run time
- To be able to write iterative as well as recursive programs
- To be able to represent data in arrays, strings and structures and manipulate them through a program
- To be able to declare pointers of different types and use them in defining self-referential structures.
- To be able to create, read and write to and from simple text files.

The laboratory should be preceded or followed by a tutorial to explain the Approach or algorithm to be implemented for the problem given.]

Tutorial 1: Problem solving using computers:
Lab1: Familiarization with programming environment
Tutorial 2: Variable types and type conversions:
Lab 2: Simple computational problems using arithmetic expressions
Tutorial 3: Branching and logical expressions:
Lab 3: Problems involving if-then-else structures
Tutorial 4: Loops, while and for loops:
Lab 4: Iterative problems e.g., sum of series
Tutorial 5: 1D Arrays: searching, sorting:
Lab 5: 1D Array manipulation
Tutorial 6: 2D arrays and Strings
Lab 6: Matrix problems, String operations
Tutorial 7: Functions, call by value:
Lab 7: Simple functions
Tutorial 8 &9: Numerical methods (Root finding, numerical differentiation, numerical integration):
Lab 8 and 9: Programming for solving Numerical methods problems
Tutorial 10: Recursion, structure of recursive calls
Lab 10: Recursive functions
Tutorial 11: Pointers, structures and dynamic memory allocation
Lab 11: Pointers and structures
Tutorial 12: File handling:
Lab 12: File operations

ESC-164A WORKSHOP/MANUFACTURING PRACTICES

L T P
1 - 4

Total Credit: 3

External Marks: 80
Internal Marks: 20

Total Marks: 100

Laboratory Outcomes

- Upon completion of this laboratory course, students will be able to fabricate components with their own hands.
- They will also get practical knowledge of the dimensional accuracies and dimensional tolerances possible with different manufacturing processes.
- By assembling different components, they will be able to produce small devices of
- their interest.
- Manufacturing is fundamental to the development of any engineering product. This course is intended to expose engineering students to different types of manufacturing/ fabrication processes, dealing with different materials such as metals, ceramics, plastics, wood, glass etc. While the actual practice of fabrication techniques is given more weightage, some lectures and video clips available on different methods of manufacturing are also included. The course intends to prepare students for:
- Understanding different manufacturing techniques and their relative advantages/ disadvantages with respect to different applications
- The selection of a suitable technique for meeting a specific fabrication need
- Acquire a minimum practical skill with respect to the different manufacturing methods and develop the confidence to design & fabricate small components for their project work and also to participate in various national and international technical competitions.

The chief goals of the course are:

Introduction to different manufacturing methods in different fields of engineering Practical exposure to different fabrication techniques

Creation of simple components using different materials

Exposure to some of the advanced and latest manufacturing techniques being employed in the industry

Lectures & videos: **(10 hours)**

1. Manufacturing Methods- casting, forming, machining, joining, advanced manufacturing methods (3 lectures)
2. CNC machining, Additive manufacturing (1 lecture)
3. Fitting operations & power tools (1 lecture)
4. Electrical & Electronics (1 lecture)
5. Carpentry (1 lecture)
6. Plastic moulding, glass cutting (1 lecture)
7. Metal casting (1 lecture)
8. Welding (arc welding & gas welding), brazing (1 lecture)

More hours can be given to Welding for Civil Engineering students as they may have to deal with Steel structures fabrication and erection; 3D Printing is an evolving manufacturing technology and merits some lectures and hands-on training.]

Suggested Text/Reference Books:

1. Hajra Choudhury S.K., Hajra Choudhury A.K. and Nirjhar Roy S.K., "Elements of Workshop Technology", Vol. I 2008 and Vol. II 2010, Media promoters and publishers private limited, Mumbai.
2. Kalpakjian S. And Steven S. Schemed, "Manufacturing Engineering and Technology", 4th edition, Pearson Education India Edition, 2002.
3. Gowri P. Hariharan and A. Suresh Babu,"Manufacturing Technology – I" Pearson Education, 2008.
4. Roy A. Lindberg, "Processes and Materials of Manufacture", 4th edition, Prentice Hall India, 1998.

5. Rao P.N., "Manufacturing Technology", Vol. I and Vol. II, Tata McGrawHill House, 2017.

Workshop Practice: (60 hours)

1. Machine shop - 10 hours
2. Fitting shop - 8 hours
3. Carpentry - 6 hours
4. Electrical & Electronics - 8 hours
5. Welding shop - 8 hours (Arc welding 4 hrs + gas welding 4 hrs)
6. Casting - 8 hours
7. Smithy - 6 hours
8. Plastic moulding & Glass Cutting -6 hours

Examinations could involve the actual fabrication of simple components, utilizing one or more of the techniques covered above.

ESC162 A ENGINEERING GRAPHICS & DESIGN

L T P

1 - 4 Total Credit: 3

External Marks: 80

Internal Marks: 20 Total Marks: 100

Engineering Graphics & Design [A total of 10 lecture hours & 60 hours of lab.]

Detailed contents

Traditional Engineering Graphics:

Principles of Engineering Graphics; Orthographic Projection; Descriptive Geometry; Drawing Principles; Isometric Projection; Surface Development; Perspective; Reading a Drawing; Sectional Views; Dimensioning & Tolerances; True Length, Angle; intersection, Shortest Distance.

Computer Graphics:

Engineering Graphics Software; -Spatial Transformations; Orthographic Projections; Model Viewing; Co-ordinate Systems; Multi-view Projection; Exploded Assembly; Model Viewing; Animation; Spatial Manipulation; Surface Modelling; Solid Modelling; Introduction to Building Information Modelling (BIM)

(Except the basic essential concepts, most of the teaching part can happen concurrently in the laboratory)

Module 1: Introduction to Engineering Drawing covering,

Principles of Engineering Graphics and their significance, usage of Drawing instruments, lettering, Conic sections including the Rectangular Hyperbola (General method only); Cycloid, Epicycloid, Hypocycloid and Involute; Scales – Plain, Diagonal and Vernier Scales;

Module 2: Orthographic Projections covering,

Principles of Orthographic Projections-Conventions - Projections of Points and lines inclined to both planes; Projections of planes inclined Planes - Auxiliary Planes;

Module 3: Projections of Regular Solids covering,

those inclined to both the Planes- Auxiliary Views; Draw simple annotation, dimensioning and scale. Floor plans that include: windows, doors, and fixtures such as WC, bath, sink, shower, etc.

Module 4:Sections and Sectional Views of Right Angular Solids covering,

Prism, Cylinder, Pyramid, Cone – Auxiliary Views; Development of surfaces of Right Regular Solids - Prism, Pyramid, Cylinder and Cone; Draw the sectional orthographic views of geometrical solids, objects from industry and dwellings (foundation to slab only)

Module 5: Isometric Projections **covering,**

Principles of Isometric projection – Isometric Scale, Isometric Views, Conventions; Isometric Views of lines, Planes, Simple and compound Solids; Conversion of Isometric Views to Orthographic Views and Vice-versa, Conventions;

Module 6: Overview of Computer Graphics covering,

listing the computer technologies that impact on graphical communication, Demonstrating knowledge of the theory of CAD software [such as: The Menu System, Toolbars (Standard, Object Properties, Draw, Modify and Dimension), Drawing Area (Background, Crosshairs, Coordinate System), Dialog boxes and windows, Shortcut menus (Button Bars), The Command Line (where applicable), The Status Bar, Different methods of zoom as used in CAD, Select and erase objects.; Isometric Views of lines, Planes, Simple and compound Solids];

Module 7: Customisation& CAD Drawing

consisting of set up of the drawing page and the printer, including scale settings, Setting up of units and drawing limits; ISO and ANSI standards for coordinate dimensioning and tolerancing; Orthographic constraints, Snap to objects manually and automatically; Producing drawings by using various coordinate input entry methods to draw straight lines, Applying various ways of drawing circles;

Module 8: Annotations, layering & other functions covering

applying dimensions to objects, applying annotations to drawings; Setting up and use of Layers, layers to create drawings, Create, edit and use customized layers; Changing line lengths through modifying existing lines (extend/lengthen); Printing documents to paper using the print command; orthographic projection techniques; Drawing sectional views of composite right regular geometric solids and project the true shape of the sectioned surface; Drawing annotation, Computer-aided design (CAD) software modeling of parts and assemblies. Parametric and non-parametric solid, surface, and wireframe models.

Part editing and two-dimensional documentation of models. Planar projection theory, including sketching of perspective, isometric, multiview, auxiliary, and section views. Spatial visualization exercises. Dimensioning guidelines, tolerancing techniques; dimensioning and scale multi views of dwelling;

Module 9: Demonstration of a simple team design project that illustrates

Geometry and topology of engineered components: creation of engineering models and their presentation in standard 2D blueprint form and as 3D wire-frame and shaded solids; meshed topologies for engineering analysis and tool-path generation for component manufacture; geometric dimensioning and tolerancing; Use of solid-modeling software for creating associative models at the component and assembly levels; floor plans that include: windows, doors, and fixtures such as WC, bath, sink, shower, etc. Applying colour coding according to building drawing practice; Drawing sectional elevation showing foundation to ceiling; Introduction to Building Information Modelling (BIM).

Course Outcomes

All phases of manufacturing or construction require the conversion of new ideas and design concepts into the basic line language of graphics. Therefore, there are many areas (civil, mechanical, electrical, architectural and industrial) in which the skills of the CAD technicians play major roles in the design and development of new products or construction. Students prepare for actual work situations through practical training in a new state-of-the-art computer designed CAD laboratory using engineering software. This course is designed to address:

- to prepare you to design a system, component, or process to meet desired needs within
- realistic constraints such as economic, environmental, social, political, ethical, health and
- safety, manufacturability, and sustainability
- to prepare you to communicate effectively
- to prepare you to use the techniques, skills, and modern engineering tools necessary for
- engineering practice

The student will learn :

- Introduction to engineering design and its place in society
- Exposure to the visual aspects of engineering design
- Exposure to engineering graphics standards
- Exposure to solid modeling
- Exposure to computer-aided geometric design
- Exposure to creating working drawings
- Exposure to engineering communication
- **Suggested Text/Reference Books:**
- (i) Bhatt N.D., Panchal V.M. & Ingle P.R., (2014), Engineering Drawing, Charotar
- Publishing House
- (ii) Shah, M.B. & Rana B.C. (2008), Engineering Drawing and Computer Graphics, Pearson
- Education
- (iii)Agrawal B. & Agrawal C. M. (2012), Engineering Graphics, TMH Publication
- (iv) Narayana, K.L. & P Kannaiah (2008), Text book on Engineering Drawing, Scitech
- Publishers
- (v) (Corresponding set of) CAD Software Theory and User Manuals

HSMC-101A ENGLISH

L T P

2 - -

Total Credits: 2

External Marks: 40

Total Marks: 50

Internal Marks: 10

Course Outcomes

- The student will acquire basic proficiency in English including reading and listening comprehension, writing and speaking skills.

Detailed contents

1. Vocabulary Building
   - The concept of Word Formation
   - Root words from foreign languages and their use in English
   - Acquaintance with prefixes and suffixes from foreign languages in English to form derivatives.
   - Synonyms, antonyms, and standard abbreviations.
2. Basic Writing Skills
   - Sentence Structures
   - Use of phrases and clauses in sentences
   - Importance of proper punctuation
   - Creating coherence
   - Organizing principles of paragraphs in documents
   - Techniques for writing precisely
3. Identifying Common Errors in Writing
   - Subject-verb agreement
   - Noun-pronoun agreement
   - Misplaced modifiers
   - Articles
   - Prepositions
   - Redundancies
   - Clichés
4. Nature and Style of sensible Writing
   - Describing
   - Defining
   - Classifying
   - Providing examples or evidence
   - Writing introduction and conclusion
5. Writing Practices
   - Comprehension
   - Précis Writing
   - Essay Writing
6. Oral Communication

(This unit involves interactive practice sessions in Language Lab)

   - Listening Comprehension
   - Pronunciation, Intonation, Stress and Rhythm
   - Common Everyday Situations: Conversations and Dialogues Communication at Workplace
   - Interviews
   - Formal Presentations

Suggested Readings:

Practical English Usage. Michael Swan. OUP. 1995.
Remedial English Grammar. F.T. Wood. Macmillan.2007 (iii)On Writing
Well. William Zinsser. Harper Resource Book. 2001
Study Writing. Liz Hamp-Lyons and Ben Heasly. Cambridge University Press. 2006.

Communication Skills. Sanjay Kumar and Pushp Lata. Oxford University Press. 2011.
Exercises in Spoken English. Parts. I-III. CIEFL, Hyderabad. Oxford University Press

HSMC-161A English Language Lab

L T P

- - 2

Total Credits: 1

External Marks: 40

Internal Marks: 10

Total Marks: 50

Oral Communication

(This unit involves interactive practice sessions in Language Lab)

- Listening Comprehension
- Pronunciation, Intonation, Stress and Rhythm
- Common Everyday Situations: Conversations and Dialogues
  Communication at Workplace
- Interviews
- Formal Presentations

Suggested Readings:

Practical English Usage. Michael Swan. OUP. 1995.
Remedial English Grammar. F.T. Wood. Macmillan.2007 (iii)On Writing
Well. William Zinsser. Harper Resource Book. 2001
Study Writing. Liz Hamp-Lyons and Ben Heasly. Cambridge University Press. 2006.
Communication Skills. Sanjay Kumar and Pushp Lata. Oxford University Press. 2011.
Exercises in Spoken English. Parts. I-III. CIEFL, Hyderabad. Oxford University Press

Induction Program

(Please refer Appendix-A for guidelines. Details of Induction program also available in the curriculum of Mandatory courses.)

Induction program (mandatory)	3 weeks duration (Please refer Appendix-A for guidelines & also details available in the curriculum of Mandatory courses)
Induction program for students to be offered right at the start of the first year.	• Physical activity • Creative Arts • Universal Human Values • Literary • Proficiency Modules • Lectures by Eminent People • Visits to local Areas • Familiarization to Dept. Branch & Innovations

Department of Fashion Technology
Bhagat Phool Singh Mahila Vishwavidyalaya,
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Course Curriculum and Scheme of Examination of Master of Technology in Fashion Technology (Functional Garments) First Semester

(w.e.f academic session 2018-19)

M.Tech. Fashion Technology (Functional Garments): 1st Semester									
S. No.	Code	Course Title	Hrs/Week			Total Credits	Internal Marks	External Marks	Total Marks
			L	T	P				
Theory Papers									
1.	FTL-2601A	Fashion Concepts	3	-	-	3	20	80	100
2.	FTL-2603A	Garment Manufacturing Technology	3	-	-	3	20	80	100
3.		Elective-I	3	-	-	3	20	80	100
4.		Elective-II	3	-	-	3	20	80	100
5.	RMI-2601A	Research Methodology and IPR	2	-	0	2	10	40	50
6.		Audit Course 1	2	--	--	-	20*	80*	100*
Laboratory									
1.	FTP-2601A	Garment Development Lab-I	-	-	4	2	10	40	50
2.	FTP-2603A	Software Packages Lab	-	-	4	2	10	40	50
Total			16	-	8	18	110	440	550

Elective-1

1. FTL-2605A: Traditional Textiles and Embroideries of India
2. FTL-2607A: History of Costume

Elective-II

1. FTL-2609A: Public Relations and Sales Promotion in Fashion
2. FTL-2611A: Textile Dyeing and Printing

Audit course 1 & 2

1. AUE-2601A: English for Research Paper Writing
2. AUE-2602A: Disaster Management
3. AUE-2603A: Sanskrit for Technical Knowledge
4. AUE-2604A: Value Education
5. AUE-2605A: Constitution of India
6. AUE-2606A: Pedagogy Studies
7. AUE-2607A: Stress Management by Yoga
8. AUE-2608A: Personality Development through Life Enlightenment Skills.

Note: * The marks will not be counted in total being audit course

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Second Semester
(w.e.f academic session 2018-19)

M.Tech. Fashion Technology (Functional Garments): 2nd Semester									
S. No.	Code	Course Title	Hrs/Week			Total Credits	Internal Marks	External Marks	Total Marks
			L	T	P				
Theory Papers									
1.	FTL-2602A	Advances in Apparel Technology	3	-	-	3	20	80	100
2.	FTL-2604 A	Fibre to Fabrics	3	-	-	3	20	80	100
3.		Elective-III	3	-	-	3	20	80	100
4.		Elective-IV	3	-	-	3	20	80	100
5.		Audit Course 2	2		0	0	20*	80*	100*
Laboratory									
1.	FTP-2602A	Textile and Apparel Testing Lab	-	-	4	2	10	40	50
2.	FTP-2604A	Garment Development Lab-II	-	-	4	2	10	40	50
3.	FTP-2606A	Minor Project with seminar	-	-	4	2	10	40	50
Total			**14**	**-**	**12**	**18**	**110**	**440**	**550**

Elective-III

(1) FTL-2606A: Functional Finishes of Garments
(2) FTL-2608A: Functional Textiles and Garments

Elective –IV

(1) FTL-2610A:Apparel Testing and Quality Characterisation
(2) FTL-2612A:Fabrics Properties and Textile Designing

Audit course 1 & 2

1. AUE-2601A: English for Research Paper Writing
2. AUE-2602A: Disaster Management
3. AUE-2603A: Sanskrit for Technical Knowledge
4. AUE-2604A: Value Education
5. AUE-2605A: Constitution of India
6. AUE-2606A: Pedagogy Studies
7. AUE-2607A: Stress Management by Yoga
8. AUE-2608A: Personality Development through Life Enlightenment Skills.

Note:

*** The marks will not be counted in total being audit course**

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Third Semester
(w.e.f academic session 2018-19)

M.Tech. Fashion Technology (Functional Garments): 3rd Semester									
S. No.	Code	Course Title	Hrs/Week			Total Credits	Internal Marks	External Marks	Total Marks
			L	T	P				
Theory Papers									
1.		Elective-V	3	-	-	3	20	80	100
2.		Open Elective	3	-	-	3	20	80	100
3.	FTP-2631A	Dissertation phase-I	0	-	20	10	60	240	300
Total			06	-	20	16	100	400	500

Elective- V

1. FTL-2631A: Managing the Supply chain
2. FTL-2633A: Fashion Retail and Marketing

Open Elective

(1) OPE-2631A: Business Analytics
(2) OPE-2632A: Industrial Safety
(3) OPE-2633A: Operations Research
(4) OPE-2634A: Cost management of Engineering Projects
(5) OPE-2635A: Composite Materials
(6) OPE-2636A: Waste to Energy

Fourth Semester
(w.e.f academic session 2018-19)

M.Tech. Fashion Technology (Functional Garments): 4th Semester									
S.No	Paper Code	Course Title	Hrs /week			Credits	Internal Marks	External Marks	Total Marks
			L	T	P				
1.	FTP 2632A	Dissertation Phase -II	-	-	32	16	100	400	500
Total						16	100	400	500

Grand Total of Credits for the M.Tech. Fashion Technology (Functional Garments)			
S.No	Semester	Credits	Marks
1.	I	18	550
2.	II	18	550
3.	III	16	500
4.	IV	16	500
Total		68	2100
All end examinations (Theory & Practical) are of three hours duration			

Note 1:

1. The choice of students for any elective shall not be binding on the department to offer it. The department may also offer any other elective subject with the consent of Course coordinator/ Faculty.
2. Dissertation phase-I and Dissertation phase-II load will be counted as two hours per week for each concerned faculty.

Note 2:

1. The minimum passing marks for any subject (paper) shall be 40* % in the external examination and 40*% in the aggregate of internal and external examination of the subject. In case student (s) fails to acquire 40*% in the aggregate of internal and external of a subject (paper), she will be awarded re-appear in the external examination of that paper.
2. There will be no reappear in internal examination. Marks obtained in internal examination/ assessment shall be carried forwarded in case of re-appear (either less than 40% in external or less than 40% in aggregate of internal and external).
3. Weight age for internal assessment (examination):
   (a) Internal test — 10% of the total marks 100 ie 10 Marks
   (b) Assignment/Seminar/Quiz/Group Disc., etc — at 5% of the total marks 100 ie 05 Marks
   (c) Attendance — 5% of the total marks 100 ie 05 Marks

Less than 75%	00 Marks
75% and above and less than 80%	02 Marks
80% and above and less than 85%	03 Marks
85% and above	05 Marks

*Subjected to Univeristy rules and regulatioin

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FTL-2601A				FASHION CONCEPTS					
L	T	P	Credit	Duration of Exam:	Total Number of Lectures		Internal Marks	External Marks	Total Marks
3	0	0	3	3 hrs	48		20	80	100

COURSE OBJECTIVE
To familiarize students with different concepts of fashion and Design, trends, its scope and prospects.

Lecture with Breakup	No. of Lec.
Unit 1: Fashion terminology, cycle, influence, fashion: Introduction to fashion and apparel design. Origin of fashion, concept, analysis, trends and creations. Fashion Theories: Fashion of different eras. fashion promotion, style-fad-trends.	11
Unit 2: Fashion Design fundamentals: Basic concept of design, elements of art, of design: Definition of line shape, form size, space, texture and colour. Structural and decorative dress designing, creating varieties through designs. Principles of Design: Definition Harmony, Proportion, Balance, Rhythm, Emphasis, meaning types and application on apparel psychology of clothing.	14
Unit 3: Introduction to colours and their theories. Colour harmony and colour contrast, modification of colours. Principle of colour measurement. Effect of colours on garment construction. Arrangement of figures such as unit repeating design, the drop device, drop reverse design, etc.	14
Unit 4: Anatomy for designers: Effect of Human proportion and figure construction on garment construction. Methods of determining individual proportions. Aesthetic requirement of dress, sensory factors affecting aesthetics. Display of fashion materials: Definition and importance, source techniques and window display, classic fashion shows. Important fashion centers of the world and India.	9

COURSE OUTCOMES
On completion of the course the student should be able to
• To work and act on the different fashion elements and principles
• Understand the history of designers and their design contribution, biography etc.

References:

1. Erwin Model, "Clothing for Moderns", Mac Millan Publications, New York
2. Tate and Sharon Lee, "Inside fashion design", harper Publication Inc., U.Kng
3. Jacob solinger ,"Apparel manufacturing handbook" Wiley, John & Sons, 1980

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FTL-2603A				GARMENT MANUFACTURING TECHNOLOGY					
L	T	P	Credit	Duration of Exam:	Total Number of Lectures		Internal Marks	External Marks	Total Marks
3	0	0	3	3 hrs	48		20	80	100

COURSE OBJECTIVE
To impart knowledge regarding different cutting tools, their role in apparel manufacturing.
To introduce various terms and techniques related to sewing of garment. Such as various sewing machine parts, sewing thread, seam and stitch formation, seam finishes, pucker, etc

LECTURE WITH BREAKUP	No. of Lec
Unit 1: Operation of apparel manufacturing unit, its various departments and their functionality. The planning, drawing, reproduction of the marker, requirement of marker planning, marker plan efficiency, methods of marker planning and use. The spreading of fabric to form a lay, requirement of spreading and different spreading method. Tracing and marking Terminology, Types of pattern.	11
Unit 2: Cutting: Objectives and methods of cutting. Aids and Tool equipment for cutting. History of Sewing: stages and evolution of sewing and sewing machineries. Sewing machinery – types of sewing machines and different bed type of sewing machines. Introduction to various Sewing machine parts, their functions and applications.Type of Feed mechanism. Sewing problems- problems of stitch formation, problem of pucker, problems of damaged to the fabric along stitch line, needle cutting index.	14
Unit 3: Needles: types of needles and parts of needle. Needle sizing: needle numbers, singer and metric system. Needle size and its relation to fabric and sewing quality requirements. Sewing threads: fibre types, and thread composition, thread finishes, thread sizing, thread package, thread cost, thread properties & seam performance.	14
Unit 4: Introduction, Classification and applications of different types of seams and stitches. Different type of seam finishes.Machine stitches and their classification. Blind stitch, chain stitch, double needle machine stitch, hemstitch, lettuce edging, lock stitch zigzag machine stitch, over edge machine stitch, purl edging, picot edging, safety stitch, scallop over edge, shirring stitch, etc.	9

COURSE OUTCOMES
On completion of the course the student should be able to
• To understand the marker planning, cutting and sewing.
• Understand the history of sewing machines and functioning of different parts of sewing machine.

References:

1. Tyler, "Carr and Latham's Technology of Clothing Manufacturing" Blackwell, Scientific Publications, 1988.
2. Ann Gioello,"Fashion product terms", Fairchild, 2nd Edition.
3. Jacob solinger ,"Apparel manufacturing handbook" Wiley, John & Sons, 1980
4. Jones, Richard M., "Apparel Industry", Blackwell, 2nd Edition .

FTL-2605A	TRADITIONAL TEXTILES AND EMBROIDERIES OF INDIA

L	T	P	Credit	Duration of Exam:	Total Number of Lectures		Internal Marks	External Marks	Total Marks
3	0	0	3	3 hrs	48		20	80	100

COURSE OBJECTIVE
Study of the above mentioned regional embroideries with reference to origin, technique, raw material, colours, motifs and layout.

LECTURE WITH BREAKUP	NO. OF Lec.
Unit-I- Introduction to traditional embroidered textiles from different regions of India. Categorization of embroidery styles on the basis of region: (a) North India: Kashida from Kashmir, Phulkari from Punjab, Chamba Rumal from Himachal Pradesh. (b) Western India: Embroidery from Gujarat, Parsi embroidery (c) Central India: Chikankari from Uttar Pradesh, Patti ka Kaam from Uttar Pradesh, Zardozi from Uttar Pradesh.(d) Southern India: Kasuti from Karnataka, Lambadi embroidery from Andhra Pradesh (e) Eastern India: Kantha from West Bengal, Sujani from Bihar, Pipli appliqué from Orissa.	11
Unit–2: Introduction to traditional resist-dyed textiles from different regions of India. Categorisation of ikat styles on the basis of region: Patola from Gujarat, Bandhas from Odisha, Pochampalli & Telia Rumal from Andhra Pradesh. Categorization of tie-dyed textiles on the basis of region: Bandhani from Gujarat, Bandhej & Leheriya from Rajasthan.	13
Unit–3: Introduction to traditional block printed textiles from different regions of India. Categorization of block printing styles on the basis of region: Bagru prints from Rajasthan, Sanganer prints from Rajasthan, Kalamkari from Andhra Pradesh.	13
Unit–4: Introduction to traditional hand-woven textiles from different regions of India. Categorisation of weaving styles on the basis of end product: (a) Saris- Benaras Brocades, Bauchari, Jamdani, Paithani, Kanjeevaram, Chanderi, Maheshwari.(b) Shawls- Kashmir shawl, Kullu & Kinnaur, Wraps of North-east (c) Floor coverings- Carpets, Durries.	11

COURSE OUTCOMES
On completion of the course the student should be able to:-
• To understand the embroidery of India.
• Learn about the textile of India.

References:

1. Lynton Linda, " The Sari", Thames & Hadson.
2. Anand M.R., "Textiles & Embroideries of India " Marg Publication Bombay, 1965.
3. Naik Shailaja D, " Traditional Embroderies of India" APH Publisher Corporation, New Delhi, 1996.
4. Chattopadhyay K, " Indian Embroidery", Wiley Eastern Ltd., New Delhi, 1977.

FTL-2607A				HISTORY OF COSTUME					
L	T	P	Credit	Duration of Exam:	Total Number of Lectures		Internal Marks	External Marks	Total Marks
3	0	0	3	3 hrs	48		20	80	100

COURSE OBJECTIVE
To familiarise students with history of costumes in Indian and western civilizations.

LECTURE WITH BREAKUP	NO. OF Lec.
Unit 1: Indus Valley Civilization:- (a)Women's Costumes-dresses, jewellery, hairstyles, footwear (b)Men's costumes - dresses, jewellery, hairstyles, footwear Mauryan and Sunga Period:-(a) Women's Costumes-dresses, jewellery, hairstyles, footwear (b) Men's costumes - dresses, jewellery, hairstyles, footwear Kushan Period:-(a) Women's Costumes-dresses, jewellery, hairstyles, footwear (b) Men's costumes - dresses, jewellery, hairstyles, footwear	11
Unit 2: Gandhara Period:- (a)Women's Costumes-dresses, jewellery, hairstyles, footwear (b)Men's costumes - dresses, jewellery, hairstyles, footwear Gupta Period:-(a) Women's Costumes-dresses, jewellery, hairstyles, footwear (b)Men's costumes - dresses, jewellery, hairstyles, footwear Mughal Period(a)Women's Costumes-dresses, jewellery, hairstyles, footwear (b)Men's costumes - dresses, jewellery, hairstyles, footwear	13
Unit 3 Egyptian costumes:- (a) Women's costumes – Dresses, jewellery, hairstyles, footwear b) Men's costumes – Dresses, Jewellery, Greek Costumes:- (a) Women's costumes – Dresses, jewellery, hairstyles, footwear b) Men's costumes – Dresses, Jewellery Roman Period:- (a) Women's costumes – Dresses, jewellery, hairstyles, footwear b) Men's costumes– Dresses, Jewellery, hairstyles, footwear	13
Unit 4: Byzantine Period:-(a) Women's costumes – Dresses, Jewellery, hairstyles, footwear b)Men's costumes– Dresses, Jwellery, hairstyle, footwear Victorian period:- (a) Women's costumes – Dresses, jewellery, hairstyles, footwear b) Men's costumes– Dresses, Jewellery, hairstyle, footwear French Revolution:- (a) Women's costumes – Dresses, jewellery, hairstyles, footwear b) Men's costumes– Dresses, Jewellery, hairstyle, footwear	11

COURSE OUTCOMES
On completion of the course the student should be able to
• Learn about the history of costume of Indian and Western Civilizations and its prospective.

References:

1. Erwin Model, "Clothing for Moderns", Mac Millan Publications, New York
2. Tate and Sharon Lee, "Inside fashion design", harper Publication Inc., U.Kng

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FTL-2609A				PUBLIC RELATIONS AND SALES PROMOTION IN FASHION					
L	T	P	Credit	Duration of Exam:	Total Number of Lectures		Internal Marks	External Marks	Total Marks
3	0	0	3	3 hrs	48		20	80	100

COURSE OBJECTIVE
To familiarize the students with sales techniques and public relations issues in fashion industries.

LECTURE WITH BREAKUP	NO. OF Lec.
UNIT 1: Fashion categories; clothing categories: styling, price ranges and size ranges for men's, women's and kids wear; store management; fashion advertising and promotion; material management and presentation skills. Visual Merchandising operations in Store-contents and its significance.	10
UNIT 2: Introduction, Role and importance of sales promotion; Strengths and Limitations of Sales Promotion; Difference between Sales Promotion and Advertising; Tools and Techniques of Consumer Sales Promotion; Trade Promotions; Organising Sales Promotion Campaign	14
UNIT 3: Tools of sales promotion- samples point of purchase, displays & demonstrations, exhibitions & fashion shows, sales contests & games of chance and skill, lotteries gifts offers, premium and free goods, price packs, rebates patronage rewards.Factors affecting sales promotion.	14
UNIT 4: Public relations-Meaning, features, growing importance, role in marketing, similarities in publicity and public relations, Major tools of Public Relations- News, speeches, special events, handouts, and leaflets, audio-visual public service activities, miscellaneous tools, Ethical and legal aspects of sales promotion and public relations.	10

COURSE OUTCOMES
On completion of the course the student should be able to
• Understand and implement the techniques of sales promotion and Public relation activities.

References:

1. Vijay Barotia. Marketing Management, Mangal Deep Publication, 2001
2. J. Jarnow and K. G, Dickerson. Inside the Fashion Business, Prentice Hall, 1997
3. Laine Stone, Jean A Samples. Fashion Merchandising, Mcgraw Hill Books, 1985
4. S. H. H. Kazmi and Satish K Batra, Advertising & Sales Promotion, Excel Books, New Delhi, 20
5. George E Belch and Michel A Belch, Advertising & Promotion, McGraw Hill, Singapore, 1998.
6. Julian Cummings, Sales Promotion, Kogan Page, London 1998.
7. E.Betch and Michael, Advertising and Promotion, McGraw Hill, 2003

FTL-2611A				TEXTILE DYEING AND PRINTING					
L	T	P	Credit	Duration of Exam:	Total Number of Lectures		Internal Marks	External Marks	Total Marks
3	0	0	3	3 hrs	48		20	80	100

COURSE OBJECTIVE
Objectives: To introduce the students with preparatory wet processing and concept of dyeing with relevant machines and procedure.
To familiarise the students with printing, printing paste ingredients, printing methods and styles.

LECTURE WITH BREAKUP	NO. OF Lec.
Unit1: Elementary knowledge and Process line for pretreatment, Natural and added impurities in greige cotton fabrics. Overview of sinzing, desizing, scouring, bleaching, merserisation operations with their objective, principal, general recipe, drawbacks and advantages. Introduction to heat setting, Pretreatment processing of wool and silk textiles. Introductory idea of machines used in preparatory wet processing.	11
Unit 2: Classification of dyes and pigment, Concept of dyeing operatioin. Introductory idea of dyeing of cellulosics and protein fibres with suitable dyes. Dyeing concept of synthetic textile materials such as Polyester, Nylon. Dyeing of denim using Indigo dye. Overview of dyeing machinery.	13
Unit 3: Introduction of printing. Different methods of printing such as block, roller and screen printing. Construction and working mechanism, drawback and advantage of each method. Transfer Printing: Types, mechanism of transfer in each type and machineries. Printing Paste: Constituent and characteristics of print paste, classification and mechanism and working of thickeners.	11
Unit 4: Printing Styles: Direct, discharge and resist styles of printing on textiles. Brief concept of printing of cellulosics with direct, reactive and vat dyes; proteineous with acid dyes and synthetic textiles with disperse dye. Printing with Pigments. Printing after treatments. Special effects like – Batik, Tie and dye, crimp style, etc. Advancement in printing technology and applications.	13

COURSE OUTCOMES
On completion of the course the student should be able to
Understand about preparatory wet processing and its requirement.
Various types of dyes, their properties and applications
Understand various types of printing methods, style, Printing paste and procedure of printing.

References:

1. Gohl E P G and Vilensky LD, "Textile Science", CBS Publishers.
2. Chakarverty J N, "Fundamental and practices in colouration of textiles", Woodhead Publishing India Pvt Ltd, 2008
3. Trotman E R, "Textile Scouring and Bleaching", Griffin, 1968.
4. Shenai VA, "Technology of Bleaching & Mercerising", Sevak Pub., Mumbai.
5. Gulrajani M L, "Chemical Processing of Silk".
6. Shenai V A,"Technology of Dyeing", Sevak Pub., Mumbai.

7. Trotman E R, "Dyeing and Chemical Technology of Textile Fibres", B.I. Publications Pvt. Ltd.
8. Hall David M, Chemical testing of textiles: a laboratory manual, Dept of Textile Engineering, Auburn University, 1981
9. VA Shenai,"Technology of printing", Sevak Pub. Mumbai.
10. Clarke, "An introduction to textile printing", CBS Pub Delhi.
11. R B Chavan ,"Textile Printing", Second annual Symposium,
12. Leslie W C Mile, Textile Printing, 2 Revised edition, Amer Assn of Textile, 2003.

RMI-2601A				RESEARCH METHODOLOGY AND IPR					
L	T	P	Credit	Duration of Exam:	Total Number of Lectures		Internal Marks	External Marks	Total Marks
2	0	0	2	2hrs	32		10	40	50

Syllabus

Unit 1: Meaning of research problem, Sources of research problem, Criteria Characteristics of a good research problem, Errors in selecting a research problem, Scope and objectives of research problem. Approaches of investigation of solutions for research problem, data collection, analysis, interpretation, Necessary instrumentations

Unit 2: Effective literature studies approaches, analysis Plagiarism, Research ethics,

Unit 3: Effective technical writing, how to write report, Paper Developing a Research Proposal, Format of research proposal, a presentation and assessment by a review committee

Unit 4: Nature of Intellectual Property: Patents, Designs, Trade and Copyright. Process of Patenting and Development: technological research, innovation, patenting, development.

International Scenario: International cooperation on Intellectual Property. Procedure for grants of patents, Patenting under PCT.

Unit 5: Patent Rights: Scope of Patent Rights. Licensing and transfer of technology. Patent information and databases. Geographical Indications.

Unit 6: New Developments in IPR: Administration of Patent System. New developments in IPR; IPR of Biological Systems, Computer Software etc. Traditional knowledge Case Studies, IPR and IITs

COURSE OUTCOMES
On completion of the course the student should be able to
• Understand research problem formulation.
• Analyze research related information
• Follow research ethics
• Understand that today's world is controlled by Computer, Information Technology, but tomorrow world will be ruled by ideas, concept, and creativity.
• Understanding that when IPR would take such important place in growth of individuals & nation, it is needless to emphasis the need of information about Intellectual Property Right to be promoted among students in general & engineering in particular. Understand that IPR protection provides an incentive to inventors for further research work and investment in R & D, which leads to creation of new and better products, and in turn brings about, economic growth and social benefits

References:

1. Stuart Melville and Wayne Goddard, "Research methodology: an introduction for science & engineering students'"
2. Wayne Goddard and Stuart Melville, "Research Methodology: An Introduction"
3. Ranjit Kumar, 2 nd Edition , "Research Methodology: A Step by Step Guide for beginners"
4. Halbert, "Resisting Intellectual Property", Taylor & Francis Ltd ,2007.
5. Mayall , "Industrial Design", McGraw Hill, 1992.
6. Niebel , "Product Design", McGraw Hill, 1974.
7. Asimov, "Introduction to Design", Prentice Hall, 1962.
8. Robert P. Merges, Peter S. Menell, Mark A. Lemley, " Intellectual Property in New Technological Age", 2016.
9. T. Ramappa, "Intellectual Property Rights Under WTO", S. Chand, 2008

FTP-2601A				Garment Development Lab-I					
L	T	P	Credit	Duration of Exam:	Total Number of Lectures		Internal Marks	External Marks	Total Marks
0	0	4	2	2 hrs	32		10	40	50

Introduction and application of different aids, tools and equipment required in garment construction. Flat pattern technique: drafting, developing pattern. Drafting of child basic and adult bodic blocks. Drafting of collars and sleeves.

Preparation and construction of different types of seams, necklines, plackets, pockets, pleats and tucks. Dart manipulation and their applications.

FTP-2603A				Software Packages Lab					
L	T	P	Credit	Duration of Exam:	Total Number of Lectures		Internal Marks	External Marks	Total Marks
0	0	4	2	2 hrs	32		10	40	50

Study and application of tools and software packages related to the topic and discipline of the study and department. Pattern making, grading and marker making and designing software's in Fashion and Technology.

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FTL-2602A				ADVANCES IN APPAREL TECHNOLOGY					
L	T	P	Credit	Duration of Exam:	Total Number of Lectures		Internal Marks	External Marks	Total Marks
3	0	0	3	3 hrs	48		20	80	100

COURSE OBJECTIVE
To familiarise students with the various advancements in different processes of apparel manufacturing.

LECTURE WITH BREAKUP	NO. OF Lec.
Unit 1: Innovation in seams, stitches, sewing thread, needles, marker, planning and cutting technology	11
Unit 2: Understanding the need and use of various construction types for sewing machinery in regards to quality and performance improvement and ease to operate, Advancement in sewing Machinery: Directive for operating special purpose sewing machinery. Various bed types of machine and their applications in manufacturing processes: Flat Bed, large area Raised Bed, DNLS m/c, Over Lock m/c, Flat Lock m/c, Multi thread Chain Stitch m/c, Blind stitch machine and their developments.	13
Unit 3 Various types of feed mechanisms, their suitability for different fabrics and construction of components and their contribution towards quality and productivity. Application of programmable machines in garment industries. Developments and automation in garment manufacturing machines and industries. .	13
Unit 4: Scientific approach in sewing techniques. Ergonomic concepts and application in the sewing room, Introduction of time targets and quality aspects, Practical approach to achieve targets, Understanding of different shaped sewing lines in actual garments, Material Handling, Postural Techniques, Work Study, Working Time Arrangement, Shift Work, Motion Economy, anthropometric, Basic Sewing Patterns, Convex sewing pattern, Curved sewing pattern, Angular sewing pattern, etc	11

COURSE OUTCOMES
On completion of the course the student should be able to
• Understand the levels of advancements in different manufacturing processes of apparel production.

References:

1. Knitted Clothing Technology, Brackenburry

2. The Technology of Clothing Manufacture, Harold Carr,Barbara Latham

3. Introduction to Clothing Manufacture, Gerry Cooklin

FTL-2604A				FIBRE TO FABRICS					
L	T	P	Credit	Duration of Exam:	Total Number of Lectures		Internal Marks	External Marks	Total Marks
3	0	0	3	3 hrs	48		20	80	100

COURSE OBJECTIVE
To familiarise students with various fibres, chractersistics and their applications
To familiarise students with yarn and fabric manufacturing processes

LECTURE WITH BREAKUP	NO. OF Lec.
Unit 1: Introduction to fibres, their classification, important fibre properties. Natural fibres such as cotton, wool, silk, their physical & chemical properties and applications. General definition of man made or manufactured fibres, introduction to general principles of spinning. Regenerated fibres: ie Viscose, manufacturing concept, physical & chemical properties and applications.	12
Unit 2: Synthetic fibres: nylon 6 and 66, polyester, acrylic, Lycra, brief overview of manufacturing, properties and applications. High performance fibres: Introduction, their properties and applications.	12
Unit 3: Overview of Ring Spinning, Objectives of blow room, carding, combing, draw frame, speed frame and ring frame, Rotor yarn, textured yarns, types and uses, Overview of woolen and worsted yarn, Sewing Threads; basic requirements, fibres used, types and properties, thread finishes, thread selection.	11
Unit 4: Introduction to various fabric manufacturing methods like weaving, knitting, and nonwoven , product range and applications. Sequence of woven fabric manufacture, Primary, secondary and auxiliary motions for weaving, Warp, weft, crimp, cover etc. Warp and weft knitting, wales and courses, knitting cams and needles, loop formation during knitting, Web forming and bonding methods for nonwovens, dry laid, spun laid and spun laid nonwovens, needle punching, spun bonding, belt blowing and hydro-entangling processes.	13

COURSE OUTCOMES
On completion of the course the student should be able
• To learn about various fibres, their charactersistics
• To understand basic mechanisms of spinning and fabric manufacturing

References:

1. Vaidya A A, "Production of Synthetic Fibres", 1st Ed., Prentice Hall of India, New Delhi,1988.
2. Gupta V B and Kothari V K, "Manufactured Fibre Technology", 1st Ed., Chapman and Hall, London, 1997
3. Mark H F, Atlas S M and Cernia E, "Man Made Fibre Science and Technology", Vol. 1, 2, 3, 1st Ed., Willey Inter Science Publishers, New York, 1967.
4. Macintyre J E, "Synthetic Fibres", Woodhead Fibre Science Series, UK, 2003.

5. Fourne F, "Synthetic Fibres: Machines and Equipment, Manufacture, Properties", Hanser
Publisher, Munich, 1999.
6. Comdex Fashion Design; Fashion Concepts: Vol –I by Dr. Navneet Kaur, dreamtech press, 2010
7. Salhotra K R, "Spinning of Man Made Fibres and Blends on Cotton Spinning System",The Textile Association, Mumbai, 1989
8. Sara J. Kadolph, "Textiles", Prentice Hall, 10th edition 2007
9. Bernard P. Corbman, "Textile Fibres to Fabric" McGrawhill Publications, 6th Edition 1983
10. Penny Walsh, " The yarn book", A & C black publisher
11. Weaving mechanism by Marks and Robinson (Textile Institute).
12. Weaving: Conversion of Yarn to Fabric by Lord and Mohamed.
13. Woven cloth construction by Robinson.

FTL-2606A				FUNCTIONAL FINISHES OF GARMENTS					
L	T	P	Credit	Duration of Exam:	Total Number of Lectures		Internal Marks	External Marks	Total Marks
3	0	0	3	3 hrs	48		20	80	100

COURSE OBJECTIVE
To introduced various functional finishes, their application in textile and garment industries.
Emphasis is given on understanding of various finishes and applications along with sustainability issues instead of detail chemistry.

LECTURE WITH BREAKUP	NO. OF Lec.
Unit 1: Introduction to textile finishing. Aim and scope. Classification of finishes. Concept of permanent and temporary finishes. Various finishes in industrial practices such as raising and shearing, drying. Calendering - its types, construction and function of various calendering m/cs. Sanforizing – method and mechanism. Brief concept of finishing of wool: Crabbing, decatising, milling, shrink finishing, etc.	10
Unit 2: General chemical finishes like softening, organdy finish. Heat setting of synthetic fibres, concept and required machines. Introduction and preliminary concepts of specialty finishes such as durable press finish to textile and garments, anti-crease finish. Water repellent and water proof finish: concept, mechanism and their application.	13
Unit 3: Flame-proof and flame-retardant finish: concept, mechanism and their application. Introduction and preliminary concepts of specialty finishes such as Soil and oil repellent finish, anti-static finish, Antimicrobial finish.	12
Unit 4: Brief introduction and application of UV protective finishes, nanofinish, ultrasound, Laser, plasma Technology in textiles. Concept of Sustainability and its emphasis in textiles and apparel sector. Introduction to enzymes and their applications in finishing of textiles and garments. Finishing of denim: stone wash, enzyme wash, etc. enzyme wash and some other specialty finishes.	13

COURSE OUTCOMES
On completion of the course the student should be able to
Understand about various finishes for the textile and garments.
Understand about the basic value addition finishes, their mechanism and applications in textiles and garments.
Understand about specialty finishes and their application in value addition.

References:

1. Gohl E P G and Vilensky LD, "Textile Science", CBS Publishers
2. An Introduction to Textile Finishing, JT Marsh
3. Textile Finishing, VA Shenai
4. Fundamental and practices in colouration of textiles, J N Chakarverty

FTL-2608A				FUNCTIONAL TEXTILES & GARMENTS					
L	T	P	Credit	Duration of Exam:	Total Number of Lectures		Internal Marks	External Marks	Total Marks
3	0	0	3	3 hrs	48		20	80	100

COURSE OBJECTIVE
To familiarize the students with technical textiles and their applications.
To understand about functional aspects of textiles and their use in functional garments.

LECTURE WITH BREAKUP	NO. OF Lec.
Unit 1: Introduction of functional garment and their applications. Classification of technical textile. Medical Textiles: application of various polymers and textile materials in medical field such as surgical product, sterilization, wound care, etc. Sports Textile: Requirement, different fibres used, their application in sports.	11
Unit 2: Protective clothing - Brief idea about different type of protective clothing, General requirement of protective clothing. Over view and applications of Cut resistant fabric, Chemical protective clothing (CPC), Ballistic Protective clothing - different fibres and fabrics, Thermal Protective Clothing (TPC)	14
Unit 3: Smart and intelligent textiles- Passive and active functionality. Smart Electronic Clothing – Requirements, processing of conductive yarn, application in defence. Multifunctional textiles with incorporated electronics for integrated communication, music, health monitoring, defence support functions, Over view of phase change materials and their applications, waterproof breathable fabrics and their applications.	13
Unit 4: Environmentally sensitive textiles – over view of photochromic, thermochromic (Chameleonic), etc fabrics and their applications to textiles. Nanotechnology in apparels - Introduction and Definition of Nanotechnology. Applicatoins of nanotechnology in the field of textiles and apparels. Applications of High performance fibres in Functional textiles.	10

COURSE OUTCOMES
On completion of the course the student should be able to
Understand about various aspects of technical textiles ie medical textiles, protective textiles, sport textiles, etc and their applications in functional garments.

References:

1. Textiles in sport, Edited by R Shishoo, Woodhead Publisher.
2. Wearable electronics and photonics, Edited by X M Tao, Woodhead Publisher.
3. Wellington Sears handbook of Industrial Textiles, S Adanur, Woodhead Publisher
4. Handbook of technical textiles, Edited by A R Horrocks and S C Anand, UK.
5. Nanofibres and nanotechnology in textiles, Edited by P Brown and K Stevens, Woodhead Publisher.
6. Nanofunctional textiles and their application, Edited by Y Li, Woodhead Publisher.
7. Smart textile for medical and healthcare, Edited by L Van Langenhove, Woodhead Publisher.

FTL-2610A				APPAREL TESTING AND QUALITY CHARACTERISATION					
L	T	P	Credit	Duration of Exam:	Total Number of Lectures		Internal Marks	External Marks	Total Marks
3	0	0	3	3 hrs	48		20	80	100

COURSE OBJECTIVE
• To familiarise students with testing concepts, instruments and standards
• To familiarise students with quality evaluation approaches in garment industry

LECTURE WITH BREAKUP	NO. OF Lec.
Unit 1: Introduction: Aim and scope of testing, Sample and Population, Sampling techniques. Fibre, yarn and fabric testing concepts, instruments and applications. Fabric comfort properties: water-vapour transmission through fabrics, Wicking properties, Air permeability and wettability. Fabric composition testing, fabric chemical testing	11
Unit 2: Overview of low stress mechanical properties, FAST, Kawabatta Evaluation System. Analysis of KES, FAST data. Garment testing concepts, instruments and applications: dimensions, seam strength, seam slippage, adhesion between interlining and fabric, shrinkage, zippers, buttons, snap fasteners and other general garment properties. Needle cutting/yarn severance	14
Unit 3 Testing of specially designed fabrics and finishes: Flame resistance, Water repellency, etc. Computer colour matching: concept of colour measurement and applications. Different fastness (light, washing, perspiration, sublimation, chlorine, etc.) properties and their evaluation.	14
Unit 4: International quality parameters and various standards such as AATCC, SDC, ASTM, etc. Salient features of different testing protocols for apparels, various essential standards and regulations associated with quality evaluation of apparels, safety aspects of 15hildren's apparel, quality program of clothing sector, the role of retailer, agent, vendor and laboratory.	9

COURSE OUTCOMES
On completion of the course the student should be able to
• To learn about scope of testing and quality assessment of fibres, yarn, fabrics and apparels
• To learn about international standards, quality evaluation approaches in garment industry

References:

1. Physical Testing of Textiles, Woodhead Publishing Ltd, Cambridge, 2002. Saville B P
2. Testing and Quality Management, Ed. V. K. Kothari, IAFL Publications, New Delhi, 1999, V. K. Kothari.
3. Principles of Textile Testing", CBS Publishers and Distributors, New Delhi, 1999, Booth J E.
4. Textile Testing, SSM Institute of Textile Technology, Angappan P & Gopalakrishnan R,Komarapalayam, 2002.
5. Apparel quality Control, V.K. Mehta
6. Basu A, "Textile Testing", SITRA Coimbatore, 2002.

FTL-2612A				FABRICS PROPERTIES AND TEXTILE DESIGNING					
L	T	P	Credit	Duration of Exam:	Total Number of Lectures		Internal Marks	External Marks	Total Marks
3	0	0	3	3 hrs	48		20	80	100

COURSE OBJECTIVE
To familiarise students with fabric formation technologies, woven and knitted fabric properties.
To familiarise students with woven and knitted designing techniques.

LECTURE WITH BREAKUP	NO. OF Lec.
Unit 1: Fabric formation technologies, Fabric properties-dimensional & structural, Mechanical, Comfort related properties, Low stress mechanical properties, properties related to aesthetic significance, other physical properties relevant to end use, Influence of fibres, yarn charcterstics and fabric construction parameter on clothing comfort.	11
Unit 2: Concept of fabric designing through fabric structure, Importance of fabric structure, Basic Weaves: Plain, Twill, Sateen weaves, Theirs derivatives and ornamentation, Draft and Peg-plan for all simple weave. Other decorative weaves like Diamond, Mockleno, Corkscrew, Honey Comb, Huck-a-back, etc	14
Unit 3 knitting, comparison of knitting and weaving technology, Classification of knitting. Difference between woven and knitted fabric properties.,Characteristics of warp knit and weft knit structure.knitting elements: knitting needles, sinkers, cam systems, etc. Knitting cycles,Weft knitting: properties and uses of basic weft knitted structures- Plain, Rib, Interlock and Purl.	14
Unit 4: Fundamental Stitches: Knit, Tuck and float stitches and their uses. Ornamentation of knitted fabrics. Concept of loop length, production calculation, Calculations for Tightness factor, fabric cover, stitch density, areal density and knitting machine production.	9

COURSE OUTCOMES
On completion of the course the student should be able to
• To learn about fabric formation techniques
• To learn about woven and knitted fabric properties
• To design and ornamentation in woven and knitted structures

References:

1. Handbook of weaving; Sabit Adanur, Technomic Publishing Company, Inc, U.S.A
2. Fabric structure and design, Gokarneshan N, New Age International, N Delhi.
3. Knitting Technology, Azgaonkar, Universal Publishing Corp.

FTP-2602A				Textile and Apparel Testing Lab					
L	T	P	Credit	Duration of Exam:	Total Number of Lectures		Internal Marks	External Marks	Total Marks
0	0	4	2	2 hrs	32		10	40	50

Applications of chemicals, dyes and functional finishes to make speciality garments and their evaluation. Fabric composition testing. Fabric shrinkage, Air-permeability, Limited Oxygen Index (LOI), flammability test, Water absorbency, Water repellency, Hydrostatic water proof test, Abrasion Resistance: flat and flex, Pilling resistance.
Fabric composition testing, fabric chemical testing, testing for fabric comfort
Determination light, washing, perspiration, sublimation, chlorine, etc. fastness properties of dyed samples.
Seam strength, Seam Slippage, Adhesion between interlining and fabric, shrinkage, zippers, buttons, snap fasteners and other general garment properties.

FTP-2604A				Garment Development Lab-II					
L	T	P	Credit	Duration of Exam:	Total Number of Lectures		Internal Marks	External Marks	Total Marks
0	0	4	2	2 hrs	32		10	40	50

Construction of garment of children, men and women wear.
Techniques of draping and grading, their applications in dress construction. Line balancing system. Practice of pattern making and construction of selected kids, ladies and gents wear. Preparation functional/Speciality garment.

FTP-2606A				Mini Project With Seminar					
L	T	P	Credit	Duration of Exam:	Total Number of Lectures		Internal Marks	External Marks	Total Marks
0	0	4	2	2 hrs	32		10	40	50

Course Outcomes:
At the end of this course, students will be able to

- Understand of contemporary / emerging technology for various processes and systems.
- Share knowledge effectively in oral and written form and formulate documents.

Syllabus Contents:

The students are required to search / gather the material / information on a specific a topic
Comprehend it and present / discuss in the class.

FTL-2631A				MANAGING THE SUPPLY CHAIN				
L	T	P	Credit	Duration of Exam:	Total Number of Lectures		Internal Marks	External Marks	Total Marks
3	0	0	3	3 hrs	48		20	80	100

COURSE OBJECTIVE
To familiarise students with the various concepts of supply chain, latest techniques and processes leading to process improvement in manufacturing.

LECTURE WITH BREAKUP	NO. OF Lec.
Unit 1: Supply Chain, Supply Chain Concepts: flow of materials, Wastes in the pipeline, flow of Information, Supply Chain Drivers, Supply chain Management: Concept, frame work and need for study.	11
Unit 2: Planning & Managing Inventories in a Supply Chain: Safety Inventory , Benchmarking the supply chai Quick Response, Vendor Managed Inventory(VMI), Postponement, Just in Time & QR Logistics, Introduction to Apparel / Textile Supply Chain, Distribution & Procurement and various Procurement Channels in Supply Chain.	14
Unit 3 Reverse supply chain(RSC), difference with forward supply chain, cost considerations involved , industries participation, factors leading to application of concept of RSC in specific industries and its restricted application, benefits, cost effectiveness of RSC.	14
Unit 4: Supply chain in apparels, Introduction to sampling, Understanding quality procedures in sampling and sample development, different stages of samples and their requirements From Proto to Shipment sample Proto, fit, Size set, Pre production, TOP, Sealer, important Industry Inputs .	9

COURSE OUTCOMES
On completion of the course the student should be able to
• Learn and implemement different techniques of Supply Chain leading to overall process improvement in any organisation.

References:

1. Logistics & supply Chain Management: Strategies for Reducing Cost and Improving service – Martin Christopher
2. Supply Chain Management: Strategy, Planning and Operation - Sunil Chopra.
3. Partnership Sourcing: An Integrated Supply Chain Management Approach - Douglas Macbeth

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FTL-2633A				FASHION RETAIL AND MARKETING					
L	T	P	Credit	Duration of Exam:	Total Number of Lectures		Internal Marks	External Marks	Total Marks
3	0	0	3	3 hrs	48		20	80	100

COURSE OBJECTIVE
To familiarise students with various management principles and role of Retail in Modern Market.

LECTURE WITH BREAKUP	NO. OF Lec.
Unit 1: Marketing- Definition, core concepts of marketing, marketing management –process, marketing concepts- different approaches, marketing mix- P's of Marketing.	10
Unit 2: Retail marketing– nature, concept and importance, objectives of retail marketing, retail marketing mix, key elements of retail mix, various modes of fashion retail promotions. Influence of promotion on the business, limitations.	14
Unit 3 Fashion Marketing-fashion marketer, influencing factors. Sources of fashion marketing, promotion of fashion marketing and various techniques. Market Segmentation & Targeting. Differentiation & Positioning, Competitors Analysis. .	14
Unit 4: Product Development-Product, product line, product development, need for product development, types of product development, steps of product development, product life cycle, product development in apparel industry-need, organizations involved in PD-buyer, buying office, manufacturer.	10

COURSE OUTCOMES
On completion of the course the student should be able to
• Understand the management concepts and Retail fundamentals.

References:

1. John Graham, Mary C. Gilly, Philip R. Cateora, International Marketing, Mc Graw Hill, 2008.
2. Frings," Fashion from Concept to Consumer 7th Edition", Pearson.
3. Mike Easey,"Fashion marketing", Om Publication.

FTP-2631A				Dissertation Phase – I					
L	T	P	Credit	Duration of Exam:	Total Number of Lectures		Internal Marks	External Marks	Total Marks
0	0	20	10				60	240	300

Course Outcomes:

At the end of this course, students will be able to

- Ability to synthesize knowledge and skills previously gained and applied to an in-depth Study and execution of new technical problem.
- Capable to select from different methodologies, methods and forms of analysis to Produce a suitable research design, and justify their design.
- Ability to present the findings of their technical solution in a written report.
- Presenting the work in International/ National conference or reputed journals.

Syllabus Contents:

The dissertation / project topic should be selected / chosen to ensure the satisfaction of the urgent need to establish a direct link between education, national development and productivity and thus reduce the gap between the world of work and the world of study. The dissertation should have the following

- Relevance to social needs of society
- Relevance to value addition to existing facilities in the institute
- Relevance to industry need
- Problems of national importance
- Research and development in various domain

The student should complete the following:

- Literature survey Problem Definition
- Motivation for study and Objectives
- Preliminary design / feasibility / modular approaches
- Implementation and Verification
- Report and presentation

The dissertation stage II is based on a report prepared by the students on dissertation allotted to them. It may be based on:

- Experimental verification / Proof of concept.
- Current issues in Textile and Garment industry. Sustainability
- The viva-voce examination will be based on the above report and work.

Guidelines for Dissertation Phase – I

- As per the AICTE directives, the dissertation is a yearlong activity, to be carried out and evaluated in two phases i.e. Phase – I: July to December and Phase – II: January to June.
- The dissertation may be carried out preferably in-house i.e. department's laboratories and centers OR in industry allotted through department's T & P coordinator.
- After multiple interactions with guide and based on comprehensive literature survey, the student shall identify the domain and define dissertation objectives. The referred literature should preferably include IEEE/IET/IETE/Springer/Science Direct/ACM journals or in the areas of Textiles, garments, environment, polymers, etc. In case of

Industry sponsored projects, the relevant application notes, while papers, product catalogues should be referred and reported.

- Student is expected to detail out specifications, methodology, resources required, critical issues involved in design and implementation and phase wise work distribution, and submit the proposal within a month from the date of registration.
- Phase – I deliverables: A document report comprising of summary of literature survey, detailed objectives, project specifications, paper and/or computer aided design, proof of concept/functionality, part results, A record of continuous progress.
- Phase – I evaluation: A committee comprising of guides of respective specialization shall assess the progress/performance of the student based on report, presentation and Q & A. In case of unsatisfactory performance, committee may recommend repeating the Phase-I work.
- During phase – II, student is expected to exert on design, development and testing of the proposed work as per the schedule. Accomplished results/contributions/innovations should be published in terms of research papers in reputed journals and reviewed focused conferences OR IP/Patents.
- Phase – II deliverables: A dissertation report as per the specified format, developed system in the form of hardware and/or software, A record of continuous progress.
- Phase – II evaluation: Guide along with appointed external examiner shall assess the progress/performance of the student based on report, presentation and Q & A. In case of unsatisfactory performance, committee may recommend for extension or repeating the work.

Every student will carry out dissertation under the supervision of a faculty. The student will submit a synopsis of thesis topic at the beginning of the semester. The Departmental committee shall examine the request for dissertation from each student and fix in advance:

a. An internal guide (a faculty members of the university)
b. Area of dissertation
c. The name and dissertation of an external guide, if any.

Every student will be required to present two seminar talks, first at the beginning within one month of the Dissertation (Phase-I) to present the scope of the work and to finalize the topic, and second towards the end of the semester, presenting the work carried out by him/her in the semester. The committee constituted will screen both the presentations so as to award the sessional as prescribed in ordinance.

TP-2632A				Dissertation Phase – II					
L	T	P	Credit	Duration of Exam:	Total Number of Lectures		Internal Marks	External Marks	Total Marks
0	0	32	16				100	400	500

Course Outcomes:

At the end of this course, students will be able to

- Ability to synthesize knowledge and skills previously gained and applied to an in-depth study and execution of new technical problem.
- Capable to select from different methodologies, methods and forms of analysis to produce a suitable research design, and justify their design.
- Ability to present the findings of their technical solution in a written report.
- Presenting the work in International/ National conference or reputed journals.

Syllabus Contents:

The dissertation / project topic should be selected / chosen to ensure the satisfaction of the urgent need to establish a direct link between education, national development and productivity and thus reduce the gap between the world of work and the world of study. The dissertation should have the following

- Relevance to social needs of society
- Relevance to value addition to existing facilities in the institute
- Relevance to industry need
- Problems of national importance
- Research and development in various domain

The student should complete the following:

- Literature survey Problem Definition
- Motivation for study and Objectives
- Preliminary design / feasibility / modular approaches
- Implementation and Verification
- Report and presentation

The dissertation stage II is based on a report prepared by the students on dissertation allotted to them. It may be based on:

- Experimental verification / Proof of concept.
- Design, fabrication, testing of Communication System.
- The viva-voce examination will be based on the above report and work.

Guidelines for Dissertation Phase – II

- As per the AICTE directives, the dissertation is a yearlong activity, to be carried out and evaluated in two phases i.e. Phase – I: July to December and Phase – II: January to June.
- The dissertation may be carried out preferably in-house i.e. department's laboratories and centers OR in industry allotted through department's T & P coordinator.
- After multiple interactions with guide and based on comprehensive literature survey, the student shall identify the domain and define dissertation objectives. The referred literature should preferably include IEEE/IET/IETE/Springer/Science Direct/ACM journals in the areas of fibre, textile, garments, polymers, environment, sustainability, etc.

In case of Industry sponsored projects, the relevant application notes, while papers, product catalogues should be referred and reported.

- Student is expected to detail out specifications, methodology, resources required, critical issues involved in design and implementation and phase wise work distribution, and submit the proposal within a month from the date of registration.
- Phase – I deliverables: A document report comprising of summary of literature survey, detailed objectives, project specifications, paper and/or computer aided design, proof of concept/functionality, part results, A record of continuous progress.
- Phase – I evaluation: A committee comprising of guides of respective specialization shall assess the progress/performance of the student based on report, presentation and Q & A. In case of unsatisfactory performance, committee may recommend repeating the Phase-I work.
- During phase – II, student is expected to exert on design, development and testing of the proposed work as per the schedule. Accomplished results/contributions/innovations should be published in terms of research papers in reputed journals and reviewed focused conferences OR IP/Patents.
- Phase – II deliverables: A dissertation report as per the specified format, developed system in the form of hardware and/or software, A record of continuous progress.
- Phase – II evaluation: Guide along with appointed external examiner shall assess the progress/performance of the student based on report, presentation and Q & A. In case of unsatisfactory performance, committee may recommend for extension or repeating the work.
- The Dissertation Phase-1 will be continued as dissertation in 4th Semester.
- At the end of the semester, every student will be required to submit three hard bound copies and a soft copy of Master's dissertation to the office of the concerned Department. Out of these, one copy will be kept for department record & one copy shall be for the supervisor. A copy of the dissertation will be sent to the external examiner by the concerned department/exam branch, after his/her appointment and intimation from the university. Dissertation will be evaluated by a committee of examiners consisting of the Head of the Department, dissertation supervisor(s) and one external examiner.
- The external examiner shall be appointed by the University from a panel of examiners submitted by the respective Head of Deptt., to the Chairman, PG Board of Studies. The student will defend her dissertation through presentation before this committee and the committee will award one of the grades as prescribed in ordinance. A Student scoring 'Failing grade' in the exam shall have to resubmit her Dissertation after making all correction / improvements and this dissertation shall be evaluated as above.

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LIST OF AUDIT AND OPEN ELECTIVE

Open Elective

(1) OPE-2631A: Business Analytics
(2) OPE-2632A: Industrial Safety
(3) OPE-2633A: Operations Research
(4) OPE-2634A: Cost management of Engineering Projects
(5) OPE-2635A: Composite Materials
(6) OPE-2636A: Waste to Energy

Audit course 1 & 2

1. AUE-2601A: English for Research Paper Writing
2. AUE-2602A: Disaster Management
3. AUE-2603A: Sanskrit for Technical Knowledge
4. AUE-2604A: Value Education
5. AUE-2605A: Constitution of India
6. AUE-2606A: Pedagogy Studies
7. AUE-2607A: Stress Management by Yoga
8. AUE-2608A: Personality Development through Life Enlightenment Skills.

Note:

1. Any other subject offered in the department shall be taken as Elective with the consent of Course coordinator/Faculty.
2. The choice of students for any elective shall not be binding on the department to offer it. The department may also offer any other elective subject with the consent of Course coordinator/ Faculty.

OPEN ELECTIVES

OPE-2631A				Business Analytics					
L	T	P	Credit	Duration of Exam:	Total Number of Lectures		Internal Marks	External Marks	Total Marks
3	0	0	3	3 hrs	48		20	80	100

Course objective

- Understand the role of business analytics within an organization.
- Analyze data using statistical and data mining techniques and understand relationships between the underlying business processes of an organization.
- To gain an understanding of how managers use business analytics to formulate and solve business problems and to support managerial decision making.
- To become familiar with processes needed to develop, report, and analyze business data.
- Use decision-making tools/Operations research techniques.
- Mange business process using analytical and management tools.
- Analyze and solve problems from different industries such as manufacturing, service, retail, software, banking and finance, sports, pharmaceutical, aerospace etc.

LECTURE WITH BREAKUP NO. OF LECTURES

Unitl:

Business analytics: Overview of Business analytics, Scope of Business analytics, Business Analytics Process, Relationship of Business Analytics Process and organisation, competitive
advantages of Business Analytics.

Statistical Tools: Statistical Notation, Descriptive Statistical methods, Review of probability distribution and data modelling, sampling and estimation methods overview.

Unit 2:

Trendiness and Regression Analysis: Modelling Relationships and Trends in Data, simple Linear Regression. Important Resources, Business Analytics Personnel, Data and models for Business analytics, problem solving, Visualizing and Exploring Data, Business Analytics Technology.

Unit 3:

Organization Structures of Business analytics, Team management, Management Issues, Designing Information Policy, Outsourcing, Ensuring Data Quality, Measuring contribution of Business analytics, Managing Changes. Descriptive Analytics, predictive analytics, predicative Modelling, Predictive analytics analysis, Data Mining, Data Mining Methodologies, Prescriptive analytics and its step in the business analytics Process, Prescriptive Modelling, nonlinear Optimization.

Unit 4:

Forecasting Techniques: Qualitative and Judgmental Forecasting, Statistical Forecasting Models, Forecasting Models for Stationary Time Series, Forecasting Models for Time Series with a Linear Trend, Forecasting Time Series with Seasonality, Regression Forecasting with Casual Variables, Selecting Appropriate Forecasting Models. Monte Carlo Simulation and Risk Analysis: Monte Carle Simulation Using Analytic Solver

Platform, New-Product Development Model, Newsvendor Model, Overbooking Model, Cash Budget Model.

Unit 5:

Decision Analysis: Formulating Decision Problems, Decision Strategies with the without Outcome Probabilities, Decision Trees, The Value of Information, Utility and Decision Making.

Unit 6:

Recent Trends in : Embedded and collaborative business intelligence, Visual data recovery, Data Storytelling and Data Journilism.

COURSE OUTCOMES

1. Students will demonstrate knowledge of data analytics.
2. Students will demonstrate the ability of think critically in making decisions based on data and deep analytics.
3. Students will demonstrate the ability to use technical skills in predicative and Prescriptive modeling to support business decision-making.
4. Students will demonstrate the ability to translate data into clear, actionable insights.

Reference:

1. Business analytics Principles, Concepts, and Applications by Marc J. Schniederjans, Dara G. Schniederjans, Christopher M. Starkey, Pearson FT Press.
2. Business Analytics by James Evans, persons Education.

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OPE-2632A				Industrial Safety					
L	T	P	Credit	Duration of Exam:	Total Number of Lectures		Internal Marks	External Marks	Total Marks
3	0	0	3	3 hrs	48		20	80	100

Unit-I: Industrial safety: Accident, causes, types, results and control, mechanical and electrical hazards, types, causes and preventive steps/procedure, describe salient points of factories act 1948 for health and safety, wash rooms, drinking water layouts, light, cleanliness, fire, guarding, pressure vessels, etc, Safety color codes. Fire prevention and firefighting, equipment and methods.

Unit-II: Fundamentals of maintenance engineering: Definition and aim of maintenance engineering, Primary and secondary functions and responsibility of maintenance department, Types of maintenance, Types and applications of tools used for maintenance, Maintenance cost & its relation with replacement economy, Service life of equipment.

Unit-III: Wear and Corrosion and their prevention: Wear- types, causes, effects, wear reduction methods, lubricants-types and applications, Lubrication methods, general sketch, working and applications, i. Screw down grease cup, ii. Pressure grease gun, iii. Splash lubrication, iv. Gravity lubrication, v. Wick feed lubrication vi. Side feed lubrication, vii. Ring lubrication, Definition, principle and factors affecting the corrosion. Types of corrosion, corrosion prevention methods.

Unit-IV: Fault tracing: Fault tracing-concept and importance, decision treeconcept, need and applications, sequence of fault finding activities, show as decision tree, draw decision tree for problems in machine tools, hydraulic, pneumatic,automotive, thermal and electrical equipment's like, I. Any one machine tool, ii. Pump iii. Air compressor, iv. Internal combustion engine, v. Boiler, vi. Electrical motors, Types of faults in machine tools and their general causes.

Unit-V: Periodic and preventive maintenance: Periodic inspection-concept and need, degreasing,

cleaning and repairing schemes, overhauling of mechanical components, overhauling of electrical motor, common troubles and remedies of electric motor, repair complexities and its use, definition, need, steps and advantages of preventive maintenance. Steps/procedure for periodic and preventive maintenance of: I. Machine tools, ii. Pumps, iii. Air compressors, iv. Diesel generating (DG) sets, Program and schedule of preventive maintenance of mechanical and electrical equipment, advantages of preventive maintenance. Repair cycle concept and importance.

Reference:

1. Maintenance Engineering Handbook, Higgins & Morrow, Da Information Services.
2. Maintenance Engineering, H. P. Garg, S. Chand and Company.
3. Pump-hydraulic Compressors, Audels, Mcgrew Hill Publication.
4. Foundation Engineering Handbook, Winterkorn, Hans, Chapman & Hall London.

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OPE-2633A				Operations Research					
L	T	P	Credit	Duration of Exam:	Total Number of Lectures		Internal Marks	External Marks	Total Marks
3	0	0	3	3 hrs	48		20	80	100

Course Outcomes:

At the end of the course, the student should be able to

- Students should able to apply the dynamic programming to solve problems of discreet and continuous variables.
- Students should able to apply the concept of non-linear programming
- Students should able to carry out sensitivity analysis
- Student should able to model the real world problem and simulate it.

Syllabus Contents:

Unit 1:

Optimization Techniques, Model Formulation, models, General L.R Formulation, Simplex Techniques, Sensitivity Analysis, Inventory Control Models

Unit 2

Formulation of a LPP - Graphical solution revised simplex method - duality theory – dual simplex method - sensitivity analysis - parametric programming

Unit 3:

Nonlinear programming problem - Kuhn-Tucker conditions min cost flow problem – max flow problem - CPM/PERT

Unit 4

Scheduling and sequencing - single server and multiple server models – deterministic inventory models - Probabilistic inventory control models - Geometric Programming.

Unit 5

Competitive Models,Single and Multi-channel Problems, Sequencing Models, Dynamic Programming, Flow in Networks, Elementary Graph Theory, Game Theory Simulation

References:

(1) H.A. Taha, Operations Research, An Introduction, PHI, 2008
(2) H.M. Wagner, Principles of Operations Research, PHI, Delhi, 1982.
(3) J.C. Pant, Introduction to Optimisation: Operations Research, Jain Brothers, Delhi, 2008
(4) Hitler Libermann Operations Research: McGraw Hill Pub. 2009
(5) Pannerselvam, Operations Research: Prentice Hall of India 2010
(6) Harvey M Wagner, Principles of Operations Research: Prentice Hall of India 2010

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OPE-2634A				Cost Management of Engineering Projects					
L	T	P	Credit	Duration of Exam:	Total Number of Lectures		Internal Marks	External Marks	Total Marks
3	0	0	3	3 hrs	48		20	80	100

Introduction and Overview of the Strategic Cost Management Process

Cost concepts in decision-making; Relevant cost, Differential cost, Incremental cost and Opportunity cost. Objectives of a Costing System; Inventory valuation; Creation of a Database for operational control; Provision of data for Decision-Making. Project: meaning, Different types, why to manage, cost overruns centres, various stages of project execution: conception to commissioning. Project execution as conglomeration of technical and nontechnical activities. Detailed Engineering activities. Pre project execution main clearances and documents Project team: Role of each member. Importance Project site: Data required with significance. Project contracts. Types and contents. Project execution Project cost control. Bar charts and Network diagram. Project commissioning: mechanical and process

Cost Behavior and Profit Planning Marginal Costing; Distinction between Marginal Costing and Absorption Costing; Break-even Analysis, Cost-Volume-Profit Analysis. Various decision-making problems. Standard Costing and Variance Analysis. Pricing strategies: Pareto Analysis. Target costing, Life Cycle Costing. Costing of service sector. Just-in-time approach, Material Requirement Planning, Enterprise Resource Planning, Total Quality Management and Theory of constraints. Activity-Based Cost Management, Bench Marking; Balanced Score Card and Value-Chain Analysis. Budgetary Control; Flexible Budgets; Performance budgets; Zero-based budgets. Measurement of Divisional profitability pricing decisions including transfer pricing.

Quantitative techniques for cost management, Linear Programming, PERT/CPM, Transportation problems, Assignment problems, Simulation, Learning Curve Theory.

References:

1. Cost Accounting A Managerial Emphasis, Prentice Hall of India, New Delhi
2. Charles T. Horngren and George Foster, Advanced Management Accounting
3. Robert S Kaplan Anthony A. Alkinson, Management & Cost Accounting
4. Ashish K. Bhattacharya, Principles & Practices of Cost Accounting A. H. Wheeler publisher
5. N.D. Vohra, Quantitative Techniques in Management, Tata McGraw Hill Book Co. Ltd.

OPE-2635A				Composite Materials					
L	T	P	Credit	Duration of Exam:	Total Number of Lectures		Internal Marks	External Marks	Total Marks
3	0	0	3	3 hrs	48		20	80	100

UNIT–I: INTRODUCTION: Definition – Classification and characteristics of Composite materials. Advantages and application of composites. Functional requirements of reinforcement and matrix. Effect of reinforcement (size, shape, distribution, volume fraction) on overall composite performance.

UNIT – II: REINFORCEMENTS: Preparation-layup, curing, properties and applications of glass fibers, carbon fibers, Kevlar fibers and Boron fibers. Properties and applications of whiskers, particle reinforcements. Mechanical Behavior of composites: Rule of mixtures, Inverse rule of mixtures. Is strain and Isostress conditions.

UNIT – III: Manufacturing of Metal Matrix Composites: Casting – Solid State diffusion technique, Cladding – Hot isostatic pressing. Properties and applications. Manufacturing of Ceramic Matrix Composites: Liquid Metal Infiltration – Liquid phase sintering. Manufacturing of Carbon – Carbon composites: Knitting, Braiding, Weaving. Properties and applications.

UNIT–IV: Manufacturing of Polymer Matrix Composites: Preparation of Moulding compounds and prepregs – hand layup method – Autoclave method – Filament winding method – Compression moulding – Reaction injection moulding. Properties and applications.

UNIT – V: Strength: Laminar Failure Criteria-strength ratio, maximum stress criteria, maximum strain criteria, interacting failure criteria, hygrothermal failure. Laminate first play failure-insight strength; Laminate strength-ply discount truncated maximum strain criterion; strength design using caplet plots; stress concentrations.

TEXT BOOKS:

1. Material Science and Technology – Vol 13 – Composites by R.W.Cahn – VCH, West Germany.
2. Materials Science and Engineering, An introduction. WD Callister, Jr., Adapted by R. Balasubramaniam, John Wiley & Sons, NY, Indian edition, 2007.

References:

1. Hand Book of Composite Materials-ed-Lubin.
2. Composite Materials – K.K.Chawla.
3. Composite Materials Science and Applications – Deborah D.L. Chung.
4. Composite Materials Design and Applications – Danial Gay, Suong V. Hoa, and Stephen W. Tasi.

OPE-2636A				Waste to Energy					
L	T	P	Credit	Duration of Exam:	Total Number of Lectures		Internal Marks	External Marks	Total Marks
3	0	0	3	3 hrs	48		20	80	100

Unit-I: Introduction to Energy from Waste: Classification of waste as fuel – Agro based, Forest residue, Industrial waste - MSW – Conversion devices – Incinerators, gasifiers, digestors

Unit-II: Biomass Pyrolysis: Pyrolysis – Types, slow fast – Manufacture of charcoal – Methods -Yields and application – Manufacture of pyrolytic oils and gases, yields and applications.

Unit-III: Biomass Gasification: Gasifiers – Fixed bed system – Downdraft and updraft gasifiers – Fluidized bed gasifiers – Design, construction and operation – Gasifier burner arrangement for thermal heating – Gasifier engine arrangement and electrical power– Equilibrium and kinetic consideration in gasifier operation.

Unit-IV: Biomass Combustion: Biomass stoves – Improved chullahs, types, some exotic designs, Fixed bed combustors, Types, inclined grate combustors, Fluidized bed combustors, Design, construction and operation - Operation of all the above biomass combustors.

Unit-V: Biogas: Properties of biogas (Calorific value and composition) - Biogas plant technology and status - Bio energy system - Design and constructional features - Biomass resources and their classification - Biomass conversion processes - Thermo chemical conversion - Direct combustion - biomass gasification - pyrolysis and liquefaction - biochemical conversion - anaerobic digestion - Types of biogas Plants – Applications - Alcohol production from biomass - Bio diesel production - Urban waste to energy conversion - Biomass energy programme in India

References:

1. Non Conventional Energy, Desai, Ashok V., Wiley Eastern Ltd., 1990
2. Biogas Technology - A Practical Hand Book - Khandelwal, K. C. and Mahdi, S. S., Vol. I & II, Tata McGraw Hill Publishing Co. Ltd., 1983.
3. Food, Feed and Fuel from Biomass, Challal, D. S., IBH Publishing Co. Pvt. Ltd., 1991.
4. Biomass Conversion and Technology, C. Y. WereKo-Brobby and E. B. Hagan, John Wiley & Sons, 1996.

AUDIT COURSE 1 and 2

AUE-2601A				ENGLISH FOR RESEARCH PAPER WRITING				
L	T	P	Credit	Duration of Exam:	Total Number of Lectures		Internal Marks	External Marks	Total Marks
2	0	0	0	2 hrs	24-32		20*	80*	100*

Note: * The marks will not be counted in total being audit course

Course objectives:

Students will be able to:

- Understand that how to improve your writing skills and level of readability
- Learn about what to write in each section
- Understand the skills needed when writing a Title
  Ensure the good quality of paper at very first-time submission

	Syllabus	
Units	**CONTENTS**	**Hours**
1	Planning and Preparation, Word Order, Breaking up long sentences, Structuring Paragraphs and Sentences, Being Concise and Removing Redundancy, Avoiding Ambiguity and Vagueness	4
2	Clarifying Who Did What, Highlighting Your Findings, Hedging and Criticising, Paraphrasing and Plagiarism, Sections of a Paper, Abstracts. Introduction	4
3	Review of the Literature, Methods, Results, Discussion, Conclusions, The Final Check.	4
4	key skills are needed when writing a Title, key skills are needed when writing an Abstract, key skills are needed when writing an Introduction, skills needed when writing a Review of the Literature,	4
5	kills are needed when writing the Methods, skills needed when writing the Results, skills are needed when writing the Discussion, skills are needed when writing the Conclusions	4
6	useful phrases, how to ensure paper is as good as it could possibly be the first- time submission	4

Suggested Studies:

(1) Goldbort R (2006) Writing for Science, Yale University Press (available on Google Books)

(2) Day R (2006) How to Write and Publish a Scientific Paper, Cambridge University Press

(3) Highman N (1998), Handbook of Writing for the Mathematical Sciences, SIAM. Highman's book.

(4) Adrian Wall work , English for Writing Research Papers, Springer New York Dordrecht Heidelberg London, 2011

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AUE-2602A				DISASTER MANAGEMENT					
L	T	P	Credit	Duration of Exam:	Total Number of Lectures		Internal Marks	External Marks	Total Marks
2	0	0	0	2 hrs	24-32		20*	80*	100*

Note: * The marks will not be counted in total being audit course

Course Objectives:

Students will be able to:

- Learn to demonstrate a critical understanding of key concepts in disaster risk reduction and humanitarian response.
- Critically evaluate disaster risk reduction and humanitarian response policy and practice from multiple perspectives.
- Develop an understanding of standards of humanitarian response and practical relevance in specific types of disasters and conflict situations.
- Critically understand the strengths and weaknesses of disaster management approaches, planning and programming in different countries, particularly their home country or the countries they work in

	Syllabus	
Units	CONTENTS	Hours
1	**Introduction** Disaster: Definition, Factors And Significance; Difference Between Hazard And Disaster; Natural And Manmade Disasters: Difference, Nature, Types And Magnitude.	4
2	**Repercussions Of Disasters And Hazards:** Economic Damage, Loss Of Human And Animal Life, Destruction Of Ecosystem. Natural Disasters: Earthquakes, Volcanisms, Cyclones, Tsunamis, Floods, Droughts And Famines, Landslides And Avalanches, Man-made disaster: Nuclear Reactor Meltdown, Industrial Accidents, Oil Slicks And Spills, Outbreaks Of Disease And Epidemics, War And Conflicts.	4
3	**Disaster Prone Areas In India** Study Of Seismic Zones; Areas Prone To Floods And Droughts, Landslides And Avalanches; Areas Prone To Cyclonic And Coastal Hazards With Special Reference To Tsunami; Post-Disaster Diseases And Epidemics	4
4	**Disaster Preparedness And Management** Preparedness: Monitoring Of Phenomena Triggering A Disaster Or Hazard; Evaluation Of Risk: Application Of Remote Sensing, Data From Meteorological And Other Agencies, Media Reports: Governmental And Community Preparedness.	4
5	**Risk Assessment** Disaster Risk: Concept And Elements, Disaster Risk Reduction, Global And National Disaster Risk Situation. Techniques Of Risk Assessment, Global Co-Operation In Risk Assessment And Warning, People's Participation In Risk Assessment. Strategies for Survival.	4
6	**Disaster Mitigation** Meaning, Concept And Strategies Of Disaster Mitigation, Emerging Trends In Mitigation. Structural Mitigation And Non-Structural Mitigation, Programs Of Disaster Mitigation In India.	4

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SUGGESTED READINGS:

(1) R. Nishith, Singh AK, "Disaster Management in India: Perspectives, issues and strategies "New Royal book Company.
(2) Sahni, Pardeep Et.Al. (Eds.)," Disaster Mitigation Experiences And Reflections", Prentice Hall Of India, New Delhi.
(3) Goel S. L. , Disaster Administration And Management Text And Case Studies" ,Deep &Deep Publication Pvt. Ltd., New Delhi.

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AUE-2603A				SANSKRIT FOR TECHNICAL KNOWLEDGE					
L	T	P	Credit	Duration of Exam:	Total Number of Lectures		Internal Marks	External Marks	Total Marks
2	0	0	0	2 hrs	24-32		20*	80*	100*

Note: * The marks will not be counted in total being audit course

Course Objectives

- To get a working knowledge in illustrious Sanskrit, the scientific language in the world
- Learning of Sanskrit to improve brain functioning.
- Learning of Sanskrit to develop the logic in mathematics, science & other subjects Enhancing the memory power.
- The engineering scholars equipped with Sanskrit will be able to explore the huge knowledge from ancient literature.

	Syllabus	
Units	CONTENTS	Hours
1	• Alphabets in Sanskrit, • Past/Present/Future Tense, • Simple Sentences	8
2	• Order • Introduction of roots • Technical information about Sanskrit Literature	8
3	• Technical concepts of Engineering-Electrical, Mechanical, Architecture, Mathematics	8

Suggested reading

(1) "Abhyaspustakam" – Dr.Vishwas, Samskrita-Bharti Publication, New Delhi
(2) "Teach Yourself Sanskrit" Prathama Deeksha-Vempati Kutumbshastri, Rashtriya Sanskrit Sansthanam, New Delhi Publication
(3) "India's Glorious Scientific Tradition" Suresh Soni, Ocean books (P) Ltd., New Delhi.

Course Output

Students will be able to

1. Understanding basic Sanskrit language.
2. Ancient Sanskrit literature about science & technology can be understood.
3. Being a logical language will help to develop logic in students.

AUE-2604A				VALUE EDUCATION					
L	T	P	Credit	Duration of Exam:	Total Number of Lectures		Internal Marks	External Marks	Total Marks
2	0	0	0	2 hrs	24-32		20*	80*	100*

Note: * The marks will not be counted in total being audit course

Course Objectives

Students will be able to

1. Understand value of education and self- development.
2. Imbibe good values in students.
3. Let the should know about the importance of character.

	Syllabus	
Units	**CONTENTS**	**Hours**
1	• Values and self-development –Social values and individual attitudes. Work ethics, Indian vision of humanism. • Moral and non- moral valuation. Standards and principles. • Value judgments	4
2	• Importance of cultivation of values. • Sense of duty. Devotion, Self-reliance. Confidence, Concentration. Truthfulness, Cleanliness. • Honesty, Humanity. Power of faith, National Unity. • Patriotism. Love for nature ,Discipline	6
3	• Personality and Behavior Development - Soul and Scientific Attitude. Positive Thinking. Integrity and discipline. • Punctuality, Love and Kindness. • Avoid fault Thinking. • Free from anger, Dignity of labour. • Universal brotherhood and religious tolerance. • True friendship. • Happiness Vs suffering, love for truth. • Aware of self-destructive habits. • Association and Cooperation. • Doing best for saving nature	6
4	• Character and Competence –Holy books vs Blind faith. • Self-management and Good health. • Science of reincarnation. • Equality, Nonviolence, Humility, Role of Women. • All religions and same message. • Mind your Mind, Self-control. • Honesty, Studying effectively	6

Suggested reading

1 Chakroborty, S.K. "Values and Ethics for organizations Theory and practice", Oxford University Press, New Delhi.

Course outcomes

Students will be able to

1. Knowledge of self-development
2. Learn the importance of Human values

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3. Developing the overall personality

AUE-2605A				CONSTITUTION OF INDIA					
L	T	P	Credit	Duration of Exam:	Total Number of Lectures		Internal Marks	External Marks	Total Marks
2	0	0	0	2 hrs	24-32		20*	80*	100*

Course Objectives:

Students will be able to:

- Understand the premises informing the twin themes of liberty and freedom from a civil rights perspective.
- To address the growth of Indian opinion regarding modern Indian intellectuals' constitutional role and entitlement to civil and economic rights as well as the emergence of nationhood in the early years of Indian nationalism.
- To address the role of socialism in India after the commencement of the Bolshevik Revolution in 1917 and its impact on the initial drafting of the Indian Constitution.

	Syllabus	
Units	CONTENTS	Hours
1	• **History of Making of the Indian Constitution:** History Drafting Committee, (Composition & Working)	4
2	• **Philosophy of the Indian Constitution:** Preamble Salient Features.	4
3	• **Contours of Constitutional Rights & Duties:** • Fundamental Rights • Right to Equality • Right to Freedom • Right against Exploitation • Right to Freedom of Religion • Cultural and Educational Rights • Right to Constitutional Remedies • Directive Principles of State Policy • Fundamental Duties.	4
4	• Organs of Governance: • Parliament • Composition • Qualifications and Disqualifications • Powers and Functions • Executive • President • Governor • Council of Ministers • Judiciary, Appointment and Transfer of Judges, Qualifications • Powers and Functions	4
5	• Local Administration: • District's Administration head: Role and Importance,	4

	• Municipalities: Introduction, Mayor and role of Elected Representative, CEO of Municipal Corporation. • Pachayati raj: Introduction, PRI: Zila Pachayat. • Elected officials and their roles, CEO Zila Pachayat: Position and role. • Block level: Organizational Hierarchy (Different departments), • Village level: Role of Elected and Appointed officials, • Importance of grass root democracy	
6	• Election Commission: • Election Commission: Role and Functioning. • Chief Election Commissioner and Election Commissioners. • State Election Commission: Role and Functioning. • Institute and Bodies for the welfare of SC/ST/OBC and women.	4

Suggested reading

1. The Constitution of India, 1950 (Bare Act), Government Publication.
2. Dr. S. N. Busi, Dr. B. R. Ambedkar framing of Indian Constitution, 1st Edition, 2015.
3. M. P. Jain, Indian Constitution Law, 7th Edn., Lexis Nexis, 2014.
4. D.D. Basu, Introduction to the Constitution of India, Lexis Nexis, 2015.

Course Outcomes:

Students will be able to:

(1) Discuss the growth of the demand for civil rights in India for the bulk of Indians before the arrival of Gandhi in Indian politics.

(2) Discuss the intellectual origins of the framework of argument that informed the Conceptualization of social reforms leading to revolution in India.

(3) Discuss the circumstances surrounding the foundation of the Congress Socialist Party [CSP] under the leadership of Jawaharlal Nehru and the eventual failure of the proposal of direct elections through adult suffrage in the Indian Constitution.

(4) Discuss the passage of the Hindu Code Bill of 1956.

AUE-2606A				PEDAGOGY STUDIES					
L	T	P	Credit	Duration of Exam:	Total Number of Lectures		Internal Marks	External Marks	Total Marks
2	0	0	0	2 hrs	24-32		20*	80*	100*

Course Objectives:

Students will be able to:

- Review existing evidence on the review topic to inform programme design and policy making undertaken by the DfID, other agencies and researchers.
- Identify critical evidence gaps to guide the development.

Units	Syllabus CONTENTS	Hours
1	• Introduction and Methodology: • Aims and rationale, Policy background, Conceptual framework and terminology • Theories of learning, Curriculum, Teacher education. • Conceptual framework, Research questions. • Overview of methodology and Searching.	4
2	• Thematic overview: Pedagogical practices are being used by teachers in formal and informal classrooms in developing countries. • Curriculum, Teacher education.	2
3	• Evidence on the effectiveness of pedagogical practices • Methodology for the in depth stage: quality assessment of included studies. • How can teacher education (curriculum and practicum) and the school curriculum • and guidance materials best support effective pedagogy? • Theory of change. • Strength and nature of the body of evidence for effective pedagogical practices. • Pedagogic theory and pedagogical approaches. • Teachers' attitudes and beliefs and Pedagogic strategies	
4	• Professional development: alignment with classroom practices and follow-up support • Peer support • Support from the head teacher and the community. • Curriculum and assessment • Barriers to learning: limited resources and large class sizes	4
5	• Research gaps and future directions . • Research design • Contexts • Pedagogy • Teacher education • Curriculum and assessment • Dissemination and research impact.	2

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Suggested reading

- Ackers J, Hardman F (2001) Classroom interaction in Kenyan primary schools, Compare, 31 (2): 245-261.
- Agrawal M (2004) Curricular reform in schools: The importance of evaluation, Journal of Curriculum Studies, 36 (3): 361-379.
- Akyeampong K (2003) Teacher training in Ghana - does it count? Multi-site teacher education research project (MUSTER) country report 1. London: DFID.
- Akyeampong K, Lussier K, Pryor J, Westbrook J (2013) Improving teaching and learning of basic maths and reading in Africa: Does teacher preparation count? International Journal Educational Development, 33 (3): 272–282.
- Alexander RJ (2001) Culture and pedagogy: International comparisons in primary education. Oxford and Boston: Blackwell.
- Chavan M (2003) Read India: A mass scale, rapid, 'learning to read' campaign.
- www.pratham.org/images/resource%20working%20paper%202.pdf.

Course Outcomes:

Students will be able to understand:

(1) What pedagogical practices are being used by teachers in formal and informal classrooms in developing countries?

(2) What is the evidence on the effectiveness of these pedagogical practices, in what conditions, and with what population of learners?

(3) How can teacher education (curriculum and practicum) and the school curriculum and guidance materials best support effective pedagogy?

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AUE-2607A				STRESS MANAGEMENT BY YOGA					
L	T	P	Credit	Duration of Exam:	Total Number of Lectures		Internal Marks	External Marks	Total Marks
2	0	0	0	2 hrs	24-32		20*	80*	100*

Course Objectives

1. To achieve overall health of body and mind
2. To overcome stress

	Syllabus	
Units	CONTENTS	Hours
1	• Definitions of Eight parts of yog. (Ashtanga)	8
2	• Yam and Niyam. Do`s and Don't's in life. i) Ahinsa, satya, astheya, bramhacharya and aparigraha ii) Shaucha, santosh, tapa, swadhyay, ishwarpranidhan	8
3	• Asan and Pranayam (i) Various yog poses and their benefits for mind & body (ii)Regularization of breathing techniques and its effects-Types of pranayam	8

Suggested reading

(1) 'Yogic Asanas for Group Tarining-Part-I" : Janardan Swami Yogabhyasi Mandal, Nagpur

(2) "Rajayoga or conquering the Internal Nature" by Swami Vivekananda, Advaita Ashrama (Publication Department), Kolkata

Course Outcomes:

Students will be able to:

1. Develop healthy mind in a healthy body thus improving social health also
2. Improve efficiency

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AUE-2608A				PERSONALITY DEVELOPMENT THROUGH LIFE ENLIGHTENMENT SKILLS				
L	T	P	Credit	Duration of Exam:	Total Number of Lectures		Internal Marks	External Marks	Total Marks
2	0	0	0	2 hrs	24-32		20*	80*	100*

Course Objectives

1. To learn to achieve the highest goal happily
2. To become a person with stable mind, pleasing personality and determination
3. To awaken wisdom in students

	Syllabus	
Units	CONTENTS	Hours
1	Neetisatakam-Holistic development of personality • Verses- 19,20,21,22 (wisdom) • Verses- 29,31,32 (pride & heroism) • Verses- 26,28,63,65 (virtue) • Verses- 52,53,59 (dont's) • Verses- 71,73,75,78 (do's)	8
2	• Approach to day to day work and duties. • Shrimad Bhagwad Geeta : Chapter 2-Verses 41, 47,48, • Chapter 3-Verses 13, 21, 27, 35, Chapter 6-Verses 5,13,17, 23, 35, • Chapter 18-Verses 45, 46, 48.	8
3	• Statements of basic knowledge. • Shrimad Bhagwad Geeta: Chapter2-Verses 56, 62, 68 • Chapter 12 -Verses 13, 14, 15, 16,17, 18 • Personality of Role model. Shrimad Bhagwad Geeta: Chapter2-Verses 17, Chapter 3-Verses 36,37,42, • Chapter 4-Verses 18, 38,39 • Chapter18 – Verses 37,38,63	8

Suggested reading

(1) "Srimad Bhagavad Gita" by Swami Swarupananda Advaita Ashram (Publication Department), Kolkata

(2) Bhartrihari's Three Satakam (Niti-sringar-vairagya) by P.Gopinath, Rashtriya Sanskrit Sansthanam, New Delhi.

Course Outcomes

Students will be able to

1. Study of Shrimad-Bhagwad-Geeta will help the student in developing his personality and achieve the highest goal in life
2. The person who has studied Geeta will lead the nation and mankind to peace and prosperity
3. Study of Neetishatakam will help in developing versatile personality of students.

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