



**RASHTRASANT TUKADOJI MAHARAJ NAGPUR
UNIVERSITY, NAGPUR**

**HAND BOOK OF
ORDINANCES**

EDITION 2010

Price Rs. :



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NAGPUR UNIVERSITY, NAGPUR**

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F O R E W O R D

In due discharge of my bounden duty in accordance with the Section 17 (10) of the Maharashtra Universities Act, 1994, my joy knows no bounds in updating and compiling this Hand Book of Ordinances laid down by the University during the period 2010. This humble attempt is in continuation of the earlier ones resulting in carving out of the Hand Books of the Ordinances upto the period 2009 in different volumes. There has been a distinct development in terms of promulgation of the Maharashtra Universities Act, 1994, with effect from 22nd July, 1994, which necessitates fresh laying down of Ordinances in consonance with its governing provisions, including maintenance and retention of the previous Ordinances, laid in accordance with Rashtrasant Tukadoji Maharaj Nagpur University Act, 1994 to the extent they are not inconsistent with the provisions of the new Act.

The task by itself was tough and voluminous, however, it was made simple and free flowing by virtue of the active co-operation and learned counsel of the Draft Ordinance & Statute Committee of the Management Council comprising of Dr. Vedprakash Mishra, as its Chairman and Dr. Namdeo Saste, Dr. S.S. Bhasarkar, Dr. A.V. Gomase, Prof. Anil W. Dhage, Dr. D.K. Agarawal, Dr. N.S. Kokode, as members. The untiring efforts put in by this Committee and the facultywise Draft Ordinance Committees constituted by the Academic Council have got this Herculean task accomplished in the shortest possible span of time.

I would like to record my sincere sense of gratitude overwhelmingly for the timely advice and guidance rendered to me by Hon'ble Dr. S.N. Pathan, Vice-Chancellor, and Hon'ble Dr. G.S. Parashar, Pro-Vice-Chancellor, of the Rashtrasant Tukadoji Maharaj Nagpur University. The worthiness of the Hand Book shall be testimonised exclusively upon the satisfaction of its users in times to come.

NAGPUR

Dated: 14 June, 2010

(DR. ARVIND CHOUDHARY)
REGISTRAR
RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY

**RASHTRASANT TUKADOJI MAHARAJ
NAGPUR UNIVERSITY, NAGPUR**

I N D E X

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RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY

(Established by Government of Central Provinces Education Department by Notification No. 513 dated the 1st of August, 1923 & presently a State University governed by Maharashtra Universities Act, 1994)

***ORDINANCE NO. 1 OF 2010**

AN ORDINANCE TO AMEND ORDINANCE NO. 2 OF 1996

PROVIDING FOR MAXIMUM TEN CREDIT MARKS AS AN INCENTIVE TO THE STUDENTS PARTICIPATING IN THE NATIONAL SERVICE SCHEME (NSS), ADULT AND CONTINUING EDUCATION AND EXTENSION SERVICES (ACEES), NATIONAL CADET CORPS (NCC), GAMES AND SPORTS
AND CULTURAL ACTIVITIES

Whereas, it is expedient to amend Ordinance No.2 of 1996 i.e. ordinance to provide maximum Ten (10) Credit Marks as an incentive to the student's participating in the National Service Scheme (NSS), Adult and Continuing Education & Extension Services (ACEES), National Cadet Corps (NCC), Games & Sports and Cultural Activities, for the purposes hereinafter appearing the Management Council is hereby pleased to make the following Ordinance :-

1. This Ordinance may be called "Ordinance relating to addition of Credit/Incentive marks for National Service Scheme, Adult & Continuing Education & Extension Services, National Cadet Corps, Games & Sports & Cultural Activities" (Amendment) Ordinance, 2007.
2. This Ordinance shall come into force with effect from the date of its approval by the Management Council.
3. The Original Ordinance No. 2 of 1996 relating to "Providing Maximum Ten (10) Credit Marks as an incentive to the students, participating in the Games and Sports" shall be referred as the Main Ordinance.

* Accepted by the Management Council on dt.22nd March, 2010, vide item No. 9, under the draft Ordinance No. 27 of 2007

4. The para 9(D) of the Main Ordinance shall **be** substituted as follows :

- | | | |
|------|--|----------|
| i) | Participation of Students in Inter-Collegiate competition organized by Rashtrasant Tukadoji Maharaj Nagpur University. | 10 Marks |
| ii) | First, Second, & Third position obtained in Inter-Collegiate competitions organized by Rashtrasant Tukadoji Maharaj Nagpur University. | 15 Marks |
| iii) | Participation in Inter-University competition State Or National level organized by the Sports Association/ Organization/A.I.U. | 25 Marks |
| OR | | |
| iv) | Participation in Inter-National Competition organized by the Sports Association/ Organization/World University Body. | |

Students shall be eligible for maximum credit in any one of the level singularly.

5. Consequently clause No. 8 of the main Ordinance No. 2 of 1996 shall be modified as under:

“8. Student shall be eligible to get maximum 10 credit marks for participation in only one of the programmes listed under section (5), mentioned above, excepts Sports activities, as its has been covered by clause 7.”

STATEMENT OF OBJECT AND REASONS

In terms of the circular dated 6th June 2006 of Department of School Education & Sports, Government of Maharashtra the students of 10th & 12th standard who have participated in State or National Games & Sports competition(s) are entitled to get 25 marks as an incentive. In order to motivate the students for evoking greater and wider participation in Games & Sports and reward them suitably and in view of an participation at sports mandaters spending of much greater number of hours as compares to other areas at participation like N.S.S., A.C.E.E.S., N.C.C. Hence, there is a need to amend the ordinance. Hence this amendment to the ordinance

While implementing the provisions of this Ordinance, no financial implications are involved at the Government as well as university level as of now or in future and the same is in consonance with the orders of the State Government.

ORDINANCE NO. 2 OF 2010*ORDINANCE RELATING TO AWARD OF DEGREE OF BACHELOR OF ENGINEERING (SEMESTER PATTERN) FULL TIME IN THE FACULTY OF ENGINEERING & TECHNOLOGY.**

Whereas, it is expedient to provide for an Ordinance relating to the award of Degree of Bachelor of Engineering (Semester Pattern) Full time, in the Faculty of Engineering & Technology, the Management Council is hereby pleased to make the following Ordinance. :

1. This Ordinance may be called "Relating to the award of Degree of Bachelor of Engineering (Semester Pattern) Full time, in the Faculty of Engineering & Technology, Ordinance, 2010".
2. This Ordinance shall come in to force with effect from the date of its approval by the Management Council.
3. That subject to the compliance with the provisions of this Ordinance and any other Ordinance(s) in force, from time to time, an applicant for admission to the Course (i.e. Bachelor of Engineering) shall:
 - (a) have passed XII standard examination of the new (10+2) pattern examination of the Maharashtra State Board of Secondary & Higher Secondary Education/ Statutory Board/ Examination recognized by this University, as equivalent thereto, with following subjects:
 - (i) English (Higher or Lower)
 - (ii) Modern Indian Language (Higher or Lower)
 - (iii) Mathematics and Statistics
 - (iv) Physics
 - (v) Chemistry
 - (vi) Any other optional subject/ vocational subject from out of the list prescribed by the said Secondary & Higher Secondary Education Board of Maharashtra or its equivalent, recognized by this University.
 - OR
 - (b) have passed three years diploma in Engineering from the Technical Board of Maharashtra or its equivalent, recognized by this University;

AND

* Accepted by the Management Council on dt. 22nd March, 2010, vide item No. 8, under the draft Ordinance No. 1 of 2009.

- (c) Comply with the rules & condition(s) prescribed by the AICTE and adopted by the Govt. of Maharashtra & this University, from time to time in respect of the Common Entrance Test, minimum percentage of marks (composite or individual subjects at H.S.C. or its equivalent level), for different categories of applicants.
 - (d) As per the AICTE approved courses, there is a course with a nomenclature of Electronics and Communication Engineering therefore Electronics and Tele-communication be replaced by Electronics and Communication Engineering which is only the approved nomenclature by AICTE.
4. The degree of Bachelor of Engineering in respective branch shall be awarded to an examinee, who in accordance with the provisions of this Ordinance, qualifies himself/herself.
5. There shall be Four years semester pattern examinations, except First year B.E. which shall be of yearly pattern held by the University leading to the degree of Bachelor of Engineering in respective branch of Engineering, in the Faculty of Engineering & Technology. Also.
- (i) First Year B.E. examination shall be common for all the branches of Engineering.
 - (ii) Second year B.E. and onwards, the examinations shall be on the semester pattern basis. There shall be one examination at the end of each semester conducted by this University, whereby, in each academic year, there shall be two "Semester Examinations". Thus, from second year B.E. and onwards up to Fourth (Final) year B.E. there shall be six Semesters i.e. III, IV, V, VI, VII and VIII, each followed by a University examination.
6. The period of the academic session shall be such, as may be notified by the University.
7. That subject to examinee's compliance with the provisions of this Ordinance & the Ordinance pertaining to examinations in general in force from time to time, the applicant for admission to a higher examination, at the end of the course of study of a particular year/ semester shall be eligible, if:
- (i) he/she satisfies the conditions prescribed in the ATKT (Allowed to keep Term) rules, as enlisted in Annexure-II, revised & made applicable, from time to time.
 - (ii) he/she has complied with the provisions of paragraphs 5,7,8,10 and 31 of Ordinance No. 6, relating to the Examinations in general.

- (iii) he/she has prosecuted a regular & full time course of study in a College affiliated to this University,
 - (iv) he/she in the opinion of the concerned College Principal has shown satisfactory progress in his/her studies.
8. That an examinee shall be entitled for exemption in the subject(s) provided:
- (i) he/she who has passed in any subject (Theory or Practical) or subjects shall, at his/her opinion, be exemption from appearing in that subject(s), at the subsequent examination. The Theory and the Practical with their respective 'College Assessment' being separate heads of passing (though of the same subject), an examinee passing under any one of these but failing in another, shall at his option, be entitled to get "Exemption" in that part of the subject (either Theory or Practical), in which he/she has secured the pass marks, as mentioned in the respective scheme of examination, provided in the appendices.
 - (ii) he/she who holds three years first class diploma in the relevant branch of engineering from any of the recognized Polytechnic in the State of Maharashtra or its equivalent from outside the state, with its equivalence duly established by this University shall be eligible for admission, directly to the III semester of the respective B.E. degree course, subject to fulfillment of condition, if any, prescribed by the Govt. of Maharashtra.
9. The fee for the Theory & Practical examinations shall be as prescribed by the Management Council, from time to time. Whenever, any change is made in the fee prescribed for any particular examination, the same shall be notified through a Notification, for formation of the examinees concerned.
10. The scheme of examinations for different year/ semester shall be as prescribed by the University for various branches of Engineering, as provided in the respective branch appendix, changed & adopted from time to time.
- (i) The subjects, Theories & Practicals and the College Assessments in which an examinee is to be examined, the maximum marks for these heads and the minimum marks which an examinee must obtain in order to pass in the respective subject head and the examination are detailed in the appendix of the respective branch, as per Annexure – I.
 - (ii) The College Assessment marks for the practical shall be carried out in two stages (First) at the end of the First Term/ Mid semester, as the case may be, which shall be out of 40% of the total & shall be intimated to the student and the (Second) at the end of the semester/ academic term, as the case may be for remaining 60%.

(iii) The College Assessment marks for theory shall be based on examinee's performance in Sessional Exams. & Assignments, if any.

11. The Scope of the subject shall be as indicated in the Syllabus.
12. The medium of instruction & examination shall be English.
13. The provisions of Ordinance No. 3 of 2007 relating to "Award of Grace Marks for passing an examination, securing higher division/ class and for securing Distinction in Subject(s)" as amended up to date shall apply to the examinations under this Ordinance.
14. An examinee who does not pass or who fails to present himself/ herself for the examination shall be eligible for "Re-admission" to the same examination on payment of a fresh fee and such other fees, as may be prescribed from time to time.
15. An un-successful examinee, at any of the above examinations shall have an option to carry his/her "College Assessment Marks" for theory and / or practical examination to his / her successive attempt at the examination. The examinee, however, can forgo his/her College Assessment marks in Subject{s}, in which case he/she shall be examined for a total of marks comprising the Theory/ Practical examination and College Assessment together, at his/her successive attempts at the examination. Such an option may be availed by the examinee by indicating the same in his/her **'Application for the Examination'** and the option once exercised, shall be final & binding on the examinee concerned.
16. As soon as possible, after the examinations, the Board of Examinations shall publish a list of successful examinees. The result of all examinations shall be classified and the branch wise merit list shall be notified, as per Ordinance No.6.
17. Notwithstanding anything to the contrary in this Ordinance, no one shall be admitted to an examination under this Ordinance, if he/she has already passed the same examination or an equivalent examination thereto of any statutory University.
18.
 - (i) The examinees who have passed in all the subjects prescribed for all the examinations in the Course & particular branch of Engineering shall be eligible for award of Degree of Bachelor of Engineering, in the respective branch of Engineering, in the Faculty of Engineering & Tech.
 - (ii) The examinees who have passed in all the subjects prescribed for all the examinations in the Course & particular branch of Engineering shall be eligible for award of Degree of Bachelor of Engineering, in the respective branch of Engineering, in the Faculty of Engineering & Tech.
 - (iii) The degree in prescribed form shall be signed by the Vice-Chancellor.

19. Upon promulgation of this Ordinance, Direction Nos. 3,4,5,6,7,8,9,10, 11, 12,13,14,15,16,17,18, and 19 of 2001 and Direction Nos. 1 and 3 of 2002 shall stand repealed.

STATEMENT OF OBJECT & REASONS

The Academic Council in its meeting held on 10th Nov., 2001, vide item No. 3 & 187(1), 16th March, 2002, item No. 3,5 and Management Council in its meeting held on 29th Jan., 2002, vide item No. 158, had considered & approved the afore mentioned Directions and thereafter referred to the Draft Ordinance Committee, for the preparation of Ordinance. Accordingly, the Committee has prepared this Draft Ordinance for the consideration of the concerned authorities, hence this Ordinance.

While implementing the provisions of this Ordinance, no financial implications are involved at the Government as well as university level as of now or in future and the same is in consonance with the orders of the State Government and guidelines of the All India Council for Technical Education.

ANNEXURE-I

LIST OF BRANCHES IN WHICH B.E. (SEMESTER PATTERN) FULL TIME DEGREE IN THE FACULTY OF ENGINEERING & TECH. AWARDED & THEIR RESPECTIVE APPENDIX CODES FOR SCHEME.

| SR. NO. | ENGINEERING BRANCH TITLE | BRANCH CODE | APPENDIX CODE FOR EXAM. SCHEME |
|----------------|------------------------------------|--------------------|---------------------------------------|
| 01 | ELECTRONIC | ELX | ELX-I |
| 02 | ELECTRONICS & COMMUNICATION | EXC | EXC-I |
| 03 | INSTRUMENTATION | INST | INST-I |
| 04 | POWER ELECTRONIC | PE | PE-I |
| 05 | INDUSTRIAL ELECTRONIC | IELX | IELX-I |
| 06 | ELECTRONIC DESIGN & TECHNOLOGY | EDT | EDT-I |
| 07 | ELECTRICAL (ELECTRONIC & POWER) | EE | EE-I |
| 08 | MECHANICAL | MECH | MECH-I |
| 09 | METALLURGICAL | MTLG | MTLG-I |
| 10 | MINING | MIN | MIN-I |
| 11 | CIVIL | CIV | CIV-I |
| 12 | STRUCTURAL | STR | STR-I |
| 13 | PRODUCTION | PROD | PROD-I |
| 14 | INDUSTRIAL | INDS | INDS-I |
| 15 | COMPUTER TECHNOLOGY | CMPT | CMPT-I |
| 16 | COMPUTER SCIENCE & ENGINEERING | CSE | CSE-I |
| 17 | COMPUTER ENGINEERING | CE | CE-I |
| 18 | INFORMATION TECHNOLOGY | IT | IT-I |
| 19 | POWER ENGINEERING | POW | POW-I |

ANNEXURE-II

A.T.K.T. RULES FOR B.E. FULL TIME (SEMESTER PATTERN) COURSE IN THE FACULTY OF ENGINEERING & TECHNOLOGY

| Admission to Semester/Year | Candidate should have passed in all the subjects of following examination | Candidate should have appeared for the examination of year/ Semester | Candidate should have passed in all the subjects except in four or less number of passing heads of the following examinations taken together |
|-----------------------------------|--|---|---|
| I YEAR | As per paragraph'3' of the Ordinance | - | - |
| III SEM | - | I YEAR | I YEAR |
| IV SEM | - | III SEM | - |
| V SEM | I YEAR | IV SEM | III & IV SEMS |
| VI SEM | - | V SEM | - |
| VII SEM | III & IV SEM | VI SEM | V & VI SEM |
| VIII SEM | - | VII | - |

BACHELOR OF ENGINEERING
Scheme of Teaching and Examination
Branch: Electronics Engineering

Semester : Third

| Sr. No. | Subject Code | Subject Name | Board | L | T | P | Total Hr. per week | Maxi. Marks Paper / Practical | | | Mini. Marks for passing | Paper Dur. In Hrs. | Remarks |
|---------|--------------|---|-------------|----|---|---|--------------------|-------------------------------|------------|-----------|-------------------------|--------------------|---|
| | | | | | | | | Paper | Coll. Ass. | Practical | | | |
| 1. | 3U-1 | Mathematics – III | ASH | 3 | 1 | - | 4 | Paper | 80 | 100 | 40 | 3 | 1PTU-1 |
| 2. | 3U-2 | Electronic Devices and Circuits (Th. + P) | Electronics | 4 | 1 | 2 | 7 | Paper | 80 | 100 | 40 | 3 | Same as : 3ET-2, 3DT-2, 3PE-2, 3IE-2, 3IN-2, 33CT-4, 3IT-17, 3SE-5, 3CS-4, IPTU-2 |
| | | | | | | | | Coll. Ass. | 20 | 50 | 25 | 2 | |
| 3. | 3U-3 | Electronic Measurements (Th. + P) | Electronics | 4 | 1 | 2 | 7 | Paper | 80 | 100 | 40 | 3 | Same as : 3ET-3, 3DT-3, 3PE-3, 3IE-3, 3IN-3, IPTU-3 |
| | | | | | | | | Coll. Ass. | 20 | 50 | 25 | 2 | |
| 4. | 3U-4 | Network Theory | Electrical | 4 | 1 | - | 5 | Paper | 80 | 100 | 40 | 3 | Same as : 3ET-4, 3DT-4, 3PE-4, 3IE-4, 3IN-4, 33CT-2, IPTU-4 |
| | | | | | | | | Coll. Ass. | 20 | | | | |
| 5. | 3U-5 | C and Data Structure (Th. + P.) | Electronics | 4 | 1 | 2 | 7 | Paper | 80 | 100 | 40 | 3 | Same as : 3ET-5, 3DT-5, 3PE-5, 3IN-5, 3IE-5, 3PTU-1 |
| | | | | | | | | Coll. Ass. | 20 | 50 | 25 | 2 | |
| | | | Total Load | 19 | 5 | 6 | 30 | Total | | 650 | | | |

BACHELOR OF ENGINEERING
Scheme of Teaching and Examination
Branch: Electronics Engineering

Semester : Fourth

| Sr | Subject Code | Subject Name | Board | L | T | P | Total Hr. per week | Maxi. Marks Paper / Practical | | | Mini. Marks for passing | Paper Dur. In Hrs. | Remarks |
|----|--------------|--|-------------|----|---|---|--------------------|------------------------------------|----------------------|---------------|-------------------------|--------------------|---|
| | | | | | | | | Paper Coll. Ass. | 80 20 | 10 0 | | | |
| 1. | 4U-1 | Mathematics – IV | ASH | 3 | 1 | - | 4 | Paper Coll. Ass. | 80 20 | 10 0 | 40 | 3 | 2PTU-1 |
| 2. | 4U-2 | Digital Circuits (Th. + P.) | Electronics | 4 | 1 | 2 | 7 | Paper Coll. Ass. Pract. Coll. Ass. | 80 20 25 25 | 10 0 50 | 40 25 | 3 2 | Same as : 4ET-2, 4DT-2, 4PE-2, 4IE-2, 4IN-2, 2PTU-2 |
| 3. | 4U-3 | Electronics Engineering Materials and Components | Electronics | 4 | 1 | - | 5 | Paper Coll. Ass. | 80 20 | 10 0 | 40 | 3 | Same as : 4ET-3, 4DT-3, 4PE-3, 4IE-3, 4IN-3, 3PTU-2 |
| 4. | 4U-4 | Electromagnetic fields | Electronics | 4 | 1 | - | 5 | Paper Coll. Ass. | 80 20 | 10 0 | 40 | 3 | Same as : 4ET-4, 4DT-4, 4PE-4, 4IE-4, 4IN-4, 2PTU-3 |
| 5. | 4U-5 | Basic Electrical Machines (Th. + P.) | Electronics | 4 | 1 | 2 | 7 | Paper Coll. Ass. Pract. Coll. Ass. | 80 20 25 25 | 10 0 50 | 40 25 | 3 2 | Same as : 4ET-5, 4DT-5, 4PE-5, 4IE-5, 4IN-5, 2PTU-4 |
| | | | Total Load | 19 | 5 | 4 | 28 | Total | | 60 0 | | | |

BACHELOR OF ENGINEERING
Scheme of Teaching and Examination
Branch: Electronics Engineering

Semester : Fifth

| Sr. No. | Subject Code | Subject Name | Board | L | T | P | Total Hr. per week | Maxi. Marks Paper / Practical | | | Mini. Marks for passing | Paper Dur. In Hrs. | Remarks | |
|---------|--------------|---|-------------|----|---|---|--------------------|-------------------------------|------------|-----------|-------------------------|--------------------|---|--|
| | | | | | | | | Paper | Coll. Ass. | Practical | | | | |
| 1. | 5U-1 | Engineering Economics and Industrial Management | ASH | 3 | 1 | - | 4 | Paper | 80 | 100 | 40 | 3 | Same as : 5ET-1, 5DT-1, 5PE-1,5IE-1, 5IN-1, | |
| 2. | 5U-2 | Linear Electronic Circuits (Th. + P.) | Electronics | 4 | 1 | 2 | 7 | Paper | 80 | 100 | 40 | 3 | Same as : 5ET-2, 5DT-2, 5PE-2,5IE-2, 5IN-2, | |
| | | | | | | | | Coll. Ass. | 20 | | 25 | | | |
| | | | | | | | | Pract. | 25 | 50 | | | | |
| | | | | | | | | Coll. Ass. | 25 | | | | | |
| 3. | 5U-3 | Signals and Systems | Electronics | 4 | 1 | - | 5 | Paper | 80 | 100 | 40 | 3 | Same as : 5ET-3, | |
| | | | | | | | | Coll. Ass. | 20 | | | | | |
| 4. | 5U-4 | Power Electronics (Th. + P.) | Electrical | 4 | 1 | 2 | 7 | Paper | 80 | 100 | 40 | 3 | Same as : 5ET-4, 5TE-4, 5IN-4, | |
| | | | | | | | | Coll. Ass. | 20 | | 25 | - | | |
| | | | | | | | | Pract. | 25 | 50 | | | | |
| | | | | | | | | Coll. Ass. | 25 | | | | | |
| 5. | 5U-5 | Microprocessors Interfacing (Th. + P.) | Electronics | 4 | 1 | 2 | 7 | Paper | 80 | 100 | 40 | 3 | Same as : 5ET-5, 5DT-5, 5PE-5,5TE-5, | |
| | | | | | | | | Coll. Ass. | 20 | | 25 | - | | |
| | | | | | | | | Pract. | 25 | 50 | | | | |
| | | | | | | | | Coll. Ass. | 25 | | | | | |
| | | | Total Load | 19 | 5 | 6 | 30 | Total | | 650 | | | | |

BACHELOR OF ENGINEERING
Scheme of Teaching and Examination
Branch: Electronics Engineering

Semester : Sixth

| Sr. No. | Subject Code | Subject Name | Board | L | T | P | Total Hr. per week | Maxi. Marks Paper / Practical | | | Mini. Marks for passing | Paper Dur. In Hrs. | Remarks |
|---------|--------------|---------------------------------------|---------------------|----|---|---|--------------------|-------------------------------|------------|-----------|-------------------------|--------------------|--------------------------------|
| | | | | | | | | Paper | Coll. Ass. | Practical | | | |
| 1. | 6U-1 | Fields and Radiating systems | Electronics | 4 | 1 | - | 5 | Paper | 80 | 100 | 40 | 3 | Same as : 6ET-1, 6DT-1, |
| 2. | 6U-2 | Control System Engineering (Th. + P.) | Electrical | 4 | 1 | 2 | 7 | Paper | 80 | 100 | 40 | 3 | Same as : 6ET-2, 6DT-2, 6PE-2, |
| | | | | | | | | Pract. | 20 | 50 | 25 | 2 | |
| | | | | | | | | Coll. Ass. | 25 | | | | |
| 3. | 6U-3 | Electronics Instrumentation | Electronics | 4 | 1 | - | 5 | Paper | 80 | 100 | 40 | 3 | Same as : 6DT-3, 6PE-3 |
| | | | | | | | | Coll. Ass. | 20 | | | | |
| 4. | 6U-4 | Communication Electronics (Th. + P) | Electronics | 4 | 1 | 2 | 7 | Paper | 80 | 100 | 40 | 3 | Same as : 6ET-4, 6DT-4, |
| | | | | | | | | Coll. Ass. | 20 | 50 | 25 | 2 | |
| | | | | | | | | Pract. | 25 | | | | |
| | | | | | | | | Coll. Ass. | 25 | | | | |
| 5. | 6U-5 | Computer Organization | Computer Sci. Engg. | 4 | 1 | - | 5 | Paper | 80 | 100 | 40 | 3 | Same as : 6ET-5, 6DT-5, 6PE-5 |
| | | | | | | | | Coll. Ass. | 20 | | | | |
| 6. | 6U-6 | Electronic Workshop Practice (P) | Electronics | - | - | 2 | 2 | Pract. | 25 | 50 | 25 | 2 | Same as : 6ET-6 |
| | | | | | | | | Coll. Ass. | 25 | | | | |
| | | | Total Load | 20 | 5 | 6 | 31 | Total | | 650 | | | |

BACHELOR OF ENGINEERING
Scheme of Teaching and Examination
Branch: Electronics Engineering

Semester : Seventh

| Sr. No. | Subject Code | Subject Name | Board | L | T | P | Total Hr. per week | Maxi. Marks | | | Mini. Marks for passing | Paper Dur. In Hrs. | Remarks |
|---------|--------------|--------------------------------------|-------------|----|---|---|--------------------|-------------|------------------|------------|-------------------------|--------------------|---------|
| | | | | | | | | Paper | Coll. Ass-Pract. | Coll. Ass. | | | |
| 1. | 7U-1 | Electronic System Design (Th. + P.) | Electronics | 4 | 1 | 2 | 7 | 80 | 20 | 100 | 40 | 3 | |
| | | | | | | | | 25 | 25 | 50 | 25 | 2 | |
| 2. | 7U-2 | UHF and Microwave (Th. + P.) | Electronics | 4 | 1 | 2 | 7 | 80 | 20 | 100 | 40 | 3 | |
| | | | | | | | | 25 | 25 | 50 | 25 | 2 | |
| 3. | 7U-3 | Digital Signal Processing (Th. + P.) | Electronics | 4 | 1 | 2 | 7 | 80 | 20 | 100 | 40 | 3 | |
| | | | | | | | | 25 | 25 | 50 | 25 | 2 | |
| 4. | 7U-4 | Digital Communication | Electronics | 4 | 1 | - | 5 | 80 | 20 | 100 | 40 | 3 | |
| 5. | 7U-5 | Elective - I | Electronics | 3 | 1 | - | 4 | 80 | 20 | 100 | 40 | 3 | |
| 6. | 7U-6 | Seminar Project work | Electronics | - | - | 3 | 3 | 25 | 25 | 50 | | 2 | |
| | | | Total Load | 19 | 5 | 9 | 33 | Total | | 700 | | | |

LIST OF ELECTIVE: (Any One of the above)SUBJECTS
REMARKS

BOARD

Same as : 7DT-4

- i) Switching Theory
- ii) Fuzzy Logic & Neural Network
- iii) CMOS VLSI Design

Electronics
 Electronics
 Electronics

BACHELOR OF ENGINEERING
Scheme of Teaching and Examination
Branch: Electronics Engineering

Semester : Eighth

| Sr. No. | Subject Code | Subject Name | Board | L | T | P | Total Hr. per week | Maxi. Marks Paper / Practical | | | Mini. Marks for passing | Paper Dur. In Hrs. | Remarks |
|---------|--------------|--|-------------|----|---|----|--------------------|-------------------------------|------------------|------------|-------------------------|--------------------|---------|
| | | | | | | | | Paper | Coll. Ass-Pract. | Coll. Ass. | | | |
| 1. | 8U-1 | Digital System Design (Th. + P.) | Electronics | 4 | 1 | 2 | 7 | 80 | 20 | 100 | 40 | 3 | |
| | | | | | | | | 25 | 50 | | 25 | 2 | |
| 2. | 8U-2 | Advanced Microprocessors and Microcontrollers (Th. + P.) | Electronics | 4 | 1 | 2 | 7 | 80 | 20 | 100 | 40 | 3 | |
| | | | | | | | | 25 | 50 | | 25 | 2 | |
| 3. | 8U-3 | Computer Communication Network | Electronics | 4 | 1 | - | 5 | 80 | 20 | 100 | 40 | 3 | |
| 4. | 8U-4 | Optical Communication | Electronics | 3 | 1 | - | 4 | 80 | 20 | 100 | 40 | 3 | |
| 5. | 8U-5 | Elective - II | Electronics | 3 | 1 | - | 4 | 80 | 20 | 100 | 40 | 3 | |
| 6. | 8U-6 | Project | Electronics | - | - | 6 | 6 | 75 | 75 | 150 | 75 | 2 | |
| | | | Total Load | 18 | 5 | 10 | 33 | Total | | 750 | | | |

LIST OF ELECTIVE: (Any One of the above)

REMARKS

Same as : 8ET-3

Same as : 7DT-5 (iii)

SUBJECTS

i) Satellite Communication

ii) Mobile Communication

iii) Digital Image Processing

iv) Embedded Systems

BOARD

Electronics

Electronics

Electronics

Electronics

BACHELOR OF ENGINEERING
Scheme of Teaching and Examination
Branch: Electronics and Communication Engineering

Semester : Third

| Sr. No. | Subject Code | Subject Name | Board | L | T | P | Total Hr. per week | Maxi. Marks Paper / Practical | | | Mini. Marks for passing | Paper Dur. In Hrs. | Remarks |
|---------|--------------|---|-------------|----|---|---|--------------------|-------------------------------|------------|-----------|-------------------------|--------------------|--|
| | | | | | | | | Paper | Coll. Ass. | Practical | | | |
| 1. | 3EC-1 | Mathematics - III | ASH | 3 | 1 | - | 4 | Paper | 80 | 100 | 40 | 3 | 1PTU-1 |
| 2. | 3EC-2 | Electronic Devices and Circuits (Th. + P) | Electronics | 4 | 1 | 2 | 7 | Paper | 80 | 100 | 40 | 3 | Same as : 3U-2, 3DT-2, 3PE-2, 3IE-2, 3IN-2, 33CT-4, 3IT-17, 3SE-5, 3CS-4, IPTU-2 |
| | | | | | | | | Coll. Ass. | 20 | 50 | 25 | 2 | |
| 3. | 3EC-3 | Electronic Measurements (Th. + P) | Electronics | 4 | 1 | 2 | 7 | Paper | 80 | 100 | 40 | 3 | Same as : 3U-3, 3DT-3, 3PE-3, 3IE-3, 3IN-3, IPTU-3 |
| | | | | | | | | Coll. Ass. | 20 | 50 | 25 | 2 | |
| 4. | 3EC-4 | Network Theory | Electrical | 4 | 1 | - | 5 | Paper | 80 | 100 | 40 | 3 | Same as : 3U-4, 3DT-4, 3PE-4, 3IE-4, 3IN-4, 33CT-2, IPTU-4 |
| | | | | | | | | Coll. Ass. | 20 | | | | |
| 5. | 3EC-5 | C and Data Structure (Th. + P.) | Electronics | 4 | 1 | 2 | 7 | Paper | 80 | 100 | 40 | 3 | Same as : 3U-5, 3DT-5, 3PE-5, 3IN-5, 3IE-5, 3PTU-1 |
| | | | | | | | | Coll. Ass. | 20 | 50 | 25 | 2 | |
| | | | Total Load | 19 | 5 | 6 | 30 | Total | | 650 | | | |

BACHELOR OF ENGINEERING
Scheme of Teaching and Examination
Branch: Electronics and Communication Engineering

Semester : Fourth

| Sr. No. | Subject Code | Subject Name | Board | L | T | P | Total Hr. per week | Maxi. Marks Paper / Practical | | | Mini. Marks for passing | Paper Dur. In Hrs. | Remarks |
|---------|--------------|--|-------------|----|---|---|--------------------|-------------------------------|------------|-----------|-------------------------|--------------------|---|
| | | | | | | | | Paper | Coll. Ass. | Practical | | | |
| 1. | 4EC-1 | Mathematics – IV | ASH | 3 | 1 | - | 4 | Paper | 80 | 100 | 40 | 3 | 2PTU-1 |
| 2. | 4EC-2 | Digital Circuits (Th. + P.) | Electronics | 4 | 1 | 2 | 7 | Paper | 80 | 100 | 40 | 3 | Same as : 4UT-2, 4DT-2, 4PE-2, 4IE-2, 4IN-2, 2PTU-2 |
| | | | | | | | Pract. | 25 | 50 | 25 | 2 | | |
| | | | | | | | Coll. Ass. | 25 | | | | | |
| 3. | 4EC-3 | Electronics Engineering Materials and Components | Electronics | 4 | 1 | - | 5 | Paper | 80 | 100 | 40 | 3 | Same as : 4ET-3, 4DT-3, 4PE-3, 4IE-3, 4IN-3, 3PTU-2 |
| | | | | | | | Coll. Ass. | 20 | | | | | |
| | | | | | | | | | | | | | |
| 4. | 4EC-4 | Electromagnetic fields | Electronics | 4 | 1 | - | 5 | Paper | 80 | 100 | 40 | 3 | Same as : 4UT-4, 4DT-4, 4PE-4, 4IE-4, 4IN-4, 2PTU-3 |
| | | | | | | | Coll. Ass. | 20 | | | | | |
| | | | | | | | | | | | | | |
| 5. | 4EC-5 | Basic Electrical Machines (Th. + P.) | Electronics | 4 | 1 | 2 | 7 | Paper | 80 | 100 | 40 | 3 | Same as : 4UT-5, 4DT-5, 4PE-5, IE-5, 4IN-5, 2PTU-4 |
| | | | | | | | Coll. Ass. | 20 | 50 | 25 | 2 | | |
| | | | | | | | Coll. Ass. | 25 | | | | | |
| | | | Total Load | 19 | 5 | 4 | 28 | Total | | 600 | | | |

BACHELOR OF ENGINEERING
Scheme of Teaching and Examination
Branch: Electronics Communication Engineering

Semester : Fifth

| Sr. No. | Subject Code | Subject Name | Board | L | T | P | Total Hr. per week | Maxi. Marks Paper / Practical | | | Mini. Marks for passing | Paper Dur. In Hrs. | Remarks | |
|---------|--------------|---|-------------|----|---|---|--------------------|-------------------------------|------------|-----------|-------------------------|--------------------|--|--|
| | | | | | | | | Paper | Coll. Ass. | Practical | | | | |
| 1. | 5EC-1 | Engineering Economics and Industrial Management | ASH | 3 | 1 | - | 4 | Paper | 80 | 100 | 40 | 3 | Same as : 5U-1, 5DT-1, 5PE-1,5TE-1, 5IN-1, | |
| 2. | 5EC-2 | Linear Electronic Circuits (Th. + P.) | Electronics | 4 | 1 | 2 | 7 | Paper | 80 | 100 | 40 | 3 | Same as : 5U-2, 5DT-2, 5PE-2,5IE-2, 5IN-2, | |
| | | | | | | | | Coll. Ass. | 20 | | 25 | | | |
| | | | | | | | | Pract. Coll. Ass. | 25 | 50 | 25 | | | |
| 3. | 5EC-3 | Signals and Systems | Electronics | 4 | 1 | - | 5 | Paper | 80 | 100 | 40 | 3 | Same as : 5U-3, | |
| | | | | | | | | Coll. Ass. | 20 | | | | | |
| 4. | 5EC-4 | Power Electronics (Th. + P.) | Electrical | 4 | 1 | 2 | 7 | Paper | 80 | 100 | 40 | 3 | Same as : 5U-4, 5TE-4, 5IN-4, | |
| | | | | | | | | Coll. Ass. | 20 | | 25 | - | | |
| | | | | | | | | Pract. Coll. Ass. | 25 | 50 | 25 | | | |
| 5. | 5EC-5 | Microprocessors Interfacing (Th. + P.) | Electronics | 4 | 1 | 2 | 7 | Paper | 80 | 100 | 40 | 3 | Same as : 5U-5, 5DT-5, 5PE-5,5TE-5, | |
| | | | | | | | | Coll. Ass. | 20 | | 25 | - | | |
| | | | | | | | | Pract. Coll. Ass. | 25 | 50 | 25 | | | |
| | | | Total Load | 19 | 5 | 6 | 30 | Total | | 650 | | | | |

BACHELOR OF ENGINEERING
Scheme of Teaching and Examination
Branch: Electronics & Communication Engineering

Semester : Sixth

| Sr. No. | Subject Code | Subject Name | Board | L | T | P | Total Hr. per week | Maxi. Marks Paper / Practical | | | Mini. Marks for passing | Paper Dur. In Hrs. | Remarks |
|---------|--------------|--|---------------------|----|---|---|--------------------|-------------------------------|------------|-----------|-------------------------|--------------------|-------------------------------|
| | | | | | | | | Paper | Coll. Ass. | Practical | | | |
| 1. | 6EC-1 | Fields and Radiating systems | Electronics | 4 | 1 | - | 5 | Paper | 80 | 100 | 40 | 3 | Same as : 6U-1, 6DT-1, |
| 2. | 6EC-2 | Control System Engineering (Th. + P.) | Electrical | 4 | 1 | 2 | 7 | Paper | 80 | 100 | 40 | 3 | Same as : 6U-2, 6DT-2, 6PE-2, |
| | | | | | | | | Pract. Coll. Ass. | 25 | 50 | 25 | 2 | |
| 3. | 6EC-3 | Line Communication & Switching Systems | Electronics | 4 | 1 | - | 5 | Paper | 80 | 100 | 40 | 3 | Same as : 6DT-3, 6PE-3 |
| | | | | | | | | Coll. Ass. | 20 | | | | |
| 4. | 6EC-4 | Communication Electronics (Th. + P) | Electronics | 4 | 1 | 2 | 7 | Paper | 80 | 100 | 40 | 3 | Same as : 6U-4, 6DT-4, |
| | | | | | | | | Pract. Coll. Ass. | 25 | 50 | 25 | 2 | |
| 5. | 6EC-5 | Computer Organization | Computer Sci. Engg. | 4 | 1 | - | 5 | Paper | 80 | 100 | 40 | 3 | Same as : 6U-5, 6DT-5, 6PE-5 |
| | | | | | | | | Coll. Ass. | 20 | | | | |
| 6. | 6EC-6 | Electronic Workshop Practice (P) | Electronics | - | - | 2 | 2 | Pract. Coll. Ass. | 25 | 50 | 25 | 2 | Same as : 6U-6 |
| | | | | | | | | | 25 | | | | |
| | | | Total Load | 20 | 5 | 6 | 31 | Total | | 650 | | | |

BACHELOR OF ENGINEERING
Scheme of Teaching and Examination
Branch: Electronics & Communication Engineering

Semester : Seventh

| Sr. No. | Subject Code | Subject Name | Board | L | T | P | Total Hr. per week | Maxi. Marks Paper / Practical | | | Mini. Marks for passing | Paper Dur. In Hrs. | Remarks |
|---------|--------------|--|-------------|----|---|---|--------------------|-------------------------------|------------------|------------|-------------------------|--------------------|---------|
| | | | | | | | | Paper | Coll. Ass-Pract. | Coll. Ass. | | | |
| 1. | 7EC-1 | Television Engineering (Th. + P.) | Electronics | 4 | 1 | 2 | 7 | 80 | 20 | 100 | 40 | 3 | |
| | | | | | | | | 25 | 25 | 50 | 25 | 2 | |
| 2. | 7EC-2 | Advanced Microprocessor & Microcontroller (Th. + P.) | Electronics | 4 | 1 | 2 | 7 | 80 | 20 | 100 | 40 | 3 | |
| | | | | | | | | 25 | 25 | 50 | 25 | 2 | |
| 3. | 7EC-3 | Digital Signal Processing (Th. + P.) | Electronics | 4 | 1 | 2 | 7 | 80 | 20 | 100 | 40 | 3 | |
| | | | | | | | | 25 | 25 | 50 | 25 | 2 | |
| 4. | 7EC-4 | Digital Communication | Electronics | 4 | 1 | - | 5 | 80 | 20 | 100 | 40 | 3 | |
| 5. | 7EC-5 | Elective - I | Electronics | 3 | 1 | - | 4 | 80 | 20 | 100 | 40 | 3 | |
| 6. | 7EC-6 | Project Seminar | Electronics | - | - | 3 | 3 | 25 | 25 | 50 | 25 | 1 | |
| | | | Total Load | 19 | 5 | 9 | 33 | Total | | 700 | | | |

LIST OF ELECTIVE: (Any One of the above)
REMARKS

Same as 8U1

Same as : 8U-5(i)

SUBJECTS

i) Digital System Design

ii) RADAR Engineering

iii) Satellite Communication

BOARD

Electronics

Electronics

Electronics

BACHELOR OF ENGINEERING
Scheme of Teaching and Examination
Branch: Electronics & Communication Engineering

Semester : Eighth

| Sr. No. | Subject Code | Subject Name | Board | L | T | P | Total Hr. per week | Maxi. Marks Paper / Practical | | | Mini. Marks for passing | Paper Dur. In Hrs. | Remarks |
|---------|--------------|-------------------------------------|-------------|----|---|----|--------------------|-------------------------------|------------------|------------|-------------------------|--------------------|---------|
| | | | | | | | | Paper | Coll. Ass-Pract. | Coll. Ass. | | | |
| 1. | 8EC-1 | Electronic System Design (Th. + P.) | Electronics | 4 | 1 | 2 | 7 | 80 | 20 | 100 | 40 | 3 | |
| | | | | | | | | 25 | 50 | | 25 | 2 | |
| | | | | | | | | 25 | | | | | |
| 2. | 8EC-2 | UHF & Microwave (Th. + P.) | Electronics | 4 | 1 | 2 | 7 | 80 | 20 | 100 | 40 | 3 | |
| | | | | | | | | 25 | 50 | | 25 | 2 | |
| | | | | | | | | 25 | | | | | |
| 3. | 8EC-3 | Mobile Communication | Electronics | 4 | 1 | - | 5 | 80 | 20 | 100 | 40 | 3 | |
| 4. | 8EC-4 | Optical Communication | Electronics | 4 | 1 | - | 5 | 80 | 20 | 100 | 40 | 3 | |
| 5. | 8EC-5 | Elective - II | Electronics | 3 | 1 | - | 4 | 80 | 20 | 100 | 40 | 3 | |
| 6. | 8EC-6 | Project | Electronics | - | - | 6 | 6 | 25 | 25 | 50 | 25 | 1 | |
| | | | Total Load | 19 | 5 | 10 | 33 | Total | | 650 | | | |

LIST OF ELECTIVE: (Any One of the above)
REMARKS

Same as 8U5(iii)

Same as : 8U3

Same as : 7U5(ii)

SUBJECTS

i) Digital Image Processing

ii) Computer Communication & Network

iii) Fuzzy Logic & Neural Network

BOARD

Electronics

Electronics

Electronics

BACHELOR OF ENGINEERING
Scheme of Teaching and Examination
Branch: Instrumentation Engineering

Semester : Third

| Sr. No. | Subject Code | Subject Name | Board | L | T | P | Total Hr. per week | Maxi. Marks Paper / Practical | | | Mini. Marks for passing | Paper Dur. In Hrs. | Remarks |
|---------|--------------|---|-------------|----|---|---|--------------------|-------------------------------|------------|-----------|-------------------------|--------------------|--|
| | | | | | | | | Paper | Coll. Ass. | Practical | | | |
| 1. | 3IN-1 | Mathematics - III | ASH | 3 | 1 | - | 4 | Paper | 80 | 100 | 40 | 3 | |
| | | | | | | | | Coll. Ass. | 20 | | | | |
| 2. | 3IN-2 | Electronic Devices and Circuits (Th. + P) | Electronics | 4 | 1 | 2 | 7 | Paper | 80 | 100 | 40 | 3 | Same as : 3ET-2, 3DT-2, 3PE-2, 3IE-2, 3U-2, 33CT-4, 3IT-17, 3SE-5, 3CS-4, IPTU-2 |
| | | | | | | | | Coll. Ass. | 20 | 50 | 25 | 2 | |
| | | | | | | | | Pract. Coll. Ass. | 25 | | | | |
| 3. | 3IN-3 | Electronic Measurements (Th. + P) | Electronics | 4 | 1 | 2 | 7 | Paper | 80 | 100 | 40 | 3 | Same as : 3ET-3, 3DT-3, 3PE-3, 3IE-3, 3U-3, IPTU-3 |
| | | | | | | | | Coll. Ass. | 20 | 50 | 25 | 2 | |
| | | | | | | | | Pract. Coll. Ass. | 25 | | | | |
| 4. | 3IN-4 | Network Theory | Electrical | 4 | 1 | - | 5 | Paper | 80 | 100 | 40 | 3 | Same as : 3ET-4, 3DT-4, 3PE-4, 3IE-4, 3U-4, 33CT-2, IPTU-4 |
| | | | | | | | | Coll. Ass. | 20 | | | | |
| 5. | 3IN-5 | C and Data Structure (Th. + P.) | Electronics | 4 | 1 | 2 | 7 | Paper | 80 | 100 | 40 | 3 | Same as : 3ET-5, 3DT-5, 3PE-5, 3U-5, 3IE-5, 3PTU-1 |
| | | | | | | | | Coll. Ass. | 20 | 50 | 25 | 2 | |
| | | | | | | | | Pract. Coll. Ass. | 25 | | | | |
| | | | Total Load | 19 | 5 | 6 | 30 | Total | | 650 | | | |

BACHELOR OF ENGINEERING
Scheme of Teaching and Examination
Branch: Instrumentation Engineering

Semester : Fourth

| Sr. No. | Subject Code | Subject Name | Board | L | T | P | Total Hr. per week | Maxi. Marks Paper / Practical | | | Mini. Marks for passing | Paper Dur. In Hrs. | Remarks |
|---------|--------------|--|-------------|----|---|---|--------------------|-------------------------------|------------|-----------|-------------------------|--------------------|--|
| | | | | | | | | Paper | Coll. Ass- | Practical | | | |
| 1. | 4IN-1 | Mathematics – IV | ASH | 3 | 1 | - | 4 | Paper | 80 | 100 | 40 | 3 | |
| | | | | | | | | Coll. Ass- | 20 | | | | |
| 2. | 4IN-2 | Digital Circuits (Th. + P.) | Electronics | 4 | 1 | 2 | 7 | Paper | 80 | 100 | 40 | 3 | Same as : 4ET-2, 4DT-2, 4PE-2, 4IE-2, 4U-2, 2PTU-2 |
| | | | | | | | | Coll. Ass. | 20 | 50 | 25 | 2 | |
| | | | | | | | | Pract. | 25 | | | | |
| | | | | | | | | Coll. Ass. | 25 | | | | |
| 3. | 4IN-3 | Electronics Engineering Materials and Components | Electronics | 4 | 1 | - | 5 | Paper | 80 | 100 | 40 | 3 | Same as : 4ET-3, 4DT-3, 4PE-3, 4IE-3, 4U-3, 3PTU-2 |
| | | | | | | | | Coll. Ass. | 20 | | | | |
| 4. | 4IN-4 | Electro-magnetic fields | Electronics | 4 | 1 | - | 5 | Paper | 80 | 100 | 40 | 3 | Same as : 4ET-4, 4DT-4, 4PE-4, 4IE-4, 4U-4, 2PTU-3 |
| | | | | | | | | Coll. Ass. | 20 | | | | |
| 5. | 4IN-5 | Basic Electrical Machines (Th. + P.) | Electronics | 4 | 1 | 2 | 7 | Paper | 80 | 100 | 40 | 3 | Same as : 4ET-5, 4DT-5, 4PE-5, IE-5, 4U-5, 2PTU-4 |
| | | | | | | | | Coll. Ass. | 20 | 50 | 25 | 2 | |
| | | | | | | | | Pract. | 25 | | | | |
| | | | | | | | | Coll. Ass. | 25 | | | | |
| | | | Total Load | 19 | 5 | 4 | 28 | Total | | 600 | | | |

BACHELOR OF ENGINEERING
Scheme of Teaching and Examination
Branch: Instrumentation Engineering

Semester : Fifth

| Sr. No. | Subject Code | Subject Name | Board | L | T | P | Total Hr. per week | Maxi. Marks Paper / Practical | | | Mini. Marks for passing | Paper Dur. In Hrs. | Remarks |
|---------|--------------|---|-------------|----|---|---|--------------------|-------------------------------|------------|-----------|-------------------------|--------------------|--|
| | | | | | | | | Paper | Coll. Ass. | Practical | | | |
| 1. | 5ET-1 | Engineering Economics and Industrial Management | ASH | 3 | 1 | - | 4 | Paper | 80 | 100 | 40 | 3 | Same as : 5ET-1, 5DT-1, 5PE-1,5TE-1, 5U-1, |
| 2. | 5ET-2 | Linear Electronic Circuits (Th. + P.) | Electronics | 4 | 1 | 2 | 7 | Paper | 80 | 100 | 40 | 3 | Same as : 5ET-2, 5DT-2, 5PE-2,5IE-2, 5U-2, |
| 3. | 5ET-3 | Signals and Systems | Electronics | 4 | 1 | - | 5 | Paper | 80 | 100 | 40 | 3 | Same as : 5ET-3, |
| 4. | 5ET-4 | Power Electronics (Th. + P.) | Electrical | 4 | 1 | 2 | 7 | Paper | 80 | 100 | 40 | 3 | Same as : 5ET-4, 5TE-4, 5U-4, |
| 5. | 5U-5 | Micro-processors Interfacing (Th. + P.) | Electronics | 4 | 1 | 2 | 7 | Paper | 80 | 100 | 40 | 3 | Same as : 5ET-5, 5DT-5,5PE-5,5TE-5 |
| | | | Total Load | 19 | 5 | 6 | 30 | Total | | 650 | | | |

BACHELOR OF ENGINEERING
Scheme of Teaching and Examination
Branch: Instrumentation Engineering

Semester : Sixth

| Sr. No. | Subject Code | Subject Name | Board | L | T | P | Total Hr. per week | Maxi. Marks Paper / Practical | | | Mini. Marks for passing | Paper Dur. In Hrs. | Remarks |
|---------|--------------|-------------------------------------|-------------|----|---|---|--------------------|-------------------------------|------------|-----------|-------------------------|--------------------|-------------------------------------|
| | | | | | | | | Paper | Coll. Ass. | Practical | | | |
| 1. | 6IN-1 | Advanced Instrumentation | Electronics | 4 | 1 | - | 5 | 80 | 20 | 100 | 40 | 3 | |
| 2. | 6IN-2 | Pollution Control Instrumentation | Electrical | 4 | 1 | 2 | 7 | 80 | 25 | 100 | 40 | 3 | Same as : 6ET-2, 6U-2, 6DT-2, 6PE-2 |
| | | | | | | | | 25 | 25 | 50 | 25 | 2 | 6IE-2 |
| 3. | 6IN-3 | Sensors Transducers (Th. + P) | Electronics | 4 | 1 | - | 5 | 80 | 20 | 100 | 40 | 3 | Same as : 6DT-3, 6PE-3 |
| 4. | 6IN-4 | Communication Electronics (Th. + P) | Electronics | 4 | 1 | 2 | 7 | 80 | 25 | 100 | 40 | 3 | Same as : 6ET-4, 6DT-4, |
| | | | | | | | | 25 | 25 | 50 | 25 | 2 | |
| 5. | 6IN-5 | Metrology and Precision Engineering | Electronics | 4 | 1 | - | 5 | 80 | 20 | 100 | 40 | 3 | Same as : 6ET-5, 6DT-5, 6PE-5 |
| 6. | 6IN-6 | Project Planning and Management | Electronics | - | - | 2 | 2 | 25 | 25 | 50 | 25 | 2 | Same as : 6ET-6 |
| | | | Total Load | 20 | 5 | 6 | 31 | Total | | 650 | | | |

BACHELOR OF ENGINEERING
Scheme of Teaching and Examination
Branch: Instrumentation Engineering

Semester : Seventh

| Sr. No. | Subject Code | Subject Name | Board | L | T | P | Total Hr. per week | Maxi. Marks Paper / Practical | | | Mini. Marks for passing | Paper Dur. In Hrs. | Remarks |
|---------|--------------|--|-------------|----|---|---|--------------------|-------------------------------|------------------|-----------|-------------------------|--------------------|---------|
| | | | | | | | | Paper | Coll. Ass-Pract. | Practical | | | |
| 1. | 7IN-1 | Microprocessors & Micro-controller Based Design (Th. + P.) | Electronics | 4 | 1 | 2 | 7 | 80 | 20 | 100 | 40 | 3 | |
| | | | | | | | | 25 | 25 | 50 | 25 | 2 | |
| 2. | 7IN-2 | Control System Design | Electrical | 4 | 1 | - | 5 | 80 | 20 | 100 | 40 | *4 | |
| 3. | 7IN-3 | Chemical & Analytical Instrumentation (Th. + P.) | Electronics | 4 | 1 | 2 | 7 | 80 | 20 | 100 | 40 | 3 | |
| | | | | | | | | 25 | 25 | 50 | 25 | 2 | |
| 4. | 7IN-4 | Process Control | Electrical | 4 | 1 | 2 | 7 | 80 | 20 | 100 | 40 | 3 | |
| | | | | | | | | 25 | 25 | 50 | 25 | 2 | |
| 5. | 7IN-5 | Elective - I | Electronics | 3 | 1 | - | 4 | 80 | 20 | 100 | 40 | 3 | |
| 6. | 7IN-6 | Project Seminar | Electronics | - | - | 3 | 3 | 25 | 25 | 50 | 25 | - | |
| | | | Total Load | 19 | 5 | 9 | 33 | Total | | 700 | | | |

LIST OF ELECTIVE: (Any One of the above)
REMARKS

Same as 7U3

SUBJECTS

- i) Bio-Medical Instrumentation
- ii) Digital Signal Processing
- iii) Environmental Instrumentation

BOARD

Electronics
 Electronics
 Electronics

BACHELOR OF ENGINEERING
Scheme of Teaching and Examination
Branch: Instrumentation Engineering

| Sr. No. | Subject Code | Subject Name | Board | L | T | P | Total Hr. per week | Maxi. Marks Paper / Practical | | | Mini. Marks for passing | Paper Dur. In Hrs. | Remarks |
|---------|--------------|--|-------------|----|---|----|--------------------|-------------------------------|------------------|-----------|-------------------------|--------------------|---------|
| | | | | | | | | Paper | Coll. Ass-Pract. | Practical | | | |
| 1. | 8IN-1 | Instrumentation System Design (Th. + P.) | Electronics | 4 | 1 | 2 | 7 | 80 | 20 | 100 | 40 | 3 | |
| | | | | | | | | 25 | 25 | 50 | 25 | | |
| 2. | 8IN-2 | Analog and Digital Design | Electronics | 4 | 1 | - | 5 | 80 | 20 | 100 | 40 | *4 | |
| 3. | 8IN-3 | PC Based Instrumentation (Th. + P) | Electronics | 4 | 1 | 2 | 7 | 80 | 20 | 100 | 40 | 3 | |
| | | | | | | | | 25 | 25 | 50 | 25 | 2 | |
| 4. | 8IN-4 | Power Plant and Process instrumentation | Electrical | 4 | 1 | - | 5 | 80 | 20 | 100 | 40 | 3 | |
| 5. | 8IN-5 | Elective - II | Electronics | 3 | 1 | - | 4 | 80 | 20 | 100 | 40 | 3 | |
| 6. | 8IN-6 | Project | Electronics | - | - | 6 | 6 | 75 | 75 | 150 | 75 | - | |
| | | | Total Load | 19 | 5 | 10 | 34 | Total | | 750 | | | |

Semester : Eighth

LIST OF ELECTIVE: (Any One of the above)

Electronics
Robotics

SUBJECTS

i) Modeling and Simulation
Electronics

BOARD

Electronics
ii) Opto Electronic Instrumentation
iii)

BACHELOR OF ENGINEERING
Scheme of Teaching and Examination
Branch: Power Electronics Engineering

Semester : Third

| Sr. No. | Subject Code | Subject Name | Board | L | T | P | Total Hr. per week | Maxi. Marks Paper / Practical | | | Mini. Marks for passing | Paper Dur. In Hrs. | Remarks |
|---------|--------------|---|-------------|----|---|---|--------------------|-------------------------------|------------|-----------|-------------------------|--------------------|--|
| | | | | | | | | Paper | Coll. Ass. | Practical | | | |
| 1. | 3PE-1 | Mathematics - III | ASH | 3 | 1 | - | 4 | Paper | 80 | 100 | 40 | 3 | 1PTU-1 |
| 2. | 3PE-2 | Electronic Devices and Circuits (Th. + P) | Electronics | 4 | 1 | 2 | 7 | Paper | 80 | 100 | 40 | 3 | Same as : 3U-2, 3DT-2, 3ET-2, 3IE-2, 3IN-2, 33CT-4, 3IT-17, 3SE-5, 3CS-4, IPTU-2 |
| | | | | | | | | Coll. Ass. | 20 | 50 | 25 | 2 | |
| 3. | 3PE-3 | Electronic Measurements (Th. + P) | Electronics | 4 | 1 | 2 | 7 | Paper | 80 | 100 | 40 | 3 | Same as : 3U-3, 3DT-3, 3ET-3, 3IE-3, 3IN-3, IPTU-3 |
| | | | | | | | | Coll. Ass. | 20 | 50 | 25 | 2 | |
| 4. | 3PE-4 | Network Theory | Electrical | 4 | 1 | - | 5 | Paper | 80 | 100 | 40 | 3 | Same as : 3U-4, 3DT-4, 3ET-4, 3IE-4, 3IN-4, 33CT-2, IPTU-4 |
| | | | | | | | | Coll. Ass. | 20 | | | | |
| 5. | 3PE-5 | C and Data Structure (Th. + P.) | Electronics | 4 | 1 | 2 | 7 | Paper | 80 | 100 | 40 | 3 | Same as : 3U-5, 3DT-5, 3ET-5, 3IN-5, 3IE-5, 3PTU-1 |
| | | | | | | | | Coll. Ass. | 20 | 50 | 25 | 2 | |
| | | | Total Load | 19 | 5 | 6 | 30 | Total | | 650 | | | |

BACHELOR OF ENGINEERING
Scheme of Teaching and Examination
Branch: Power Electronics Engineering

Semester : Fourth

| Sr. No. | Subject Code | Subject Name | Board | L | T | P | Total Hr. per week | Maxi. Marks Paper / Practical | | | Mini. Marks for passing | Paper Dur. In Hrs. | Remarks |
|---------|--------------|--|-------------|----|---|---|--------------------|-------------------------------|------------|-----------|-------------------------|--------------------|--|
| | | | | | | | | Paper | Coll. Ass. | Practical | | | |
| 1. | 4PE-1 | Mathematics – IV | ASH | 3 | 1 | - | 4 | Paper | 80 | 100 | 40 | 3 | 2PTU-1 |
| 2. | 4PE-2 | Digital Circuits (Th. + P.) | Electronics | 4 | 1 | 2 | 7 | Paper | 80 | 100 | 40 | 3 | Same as : 4U-2, 4DT-2, 4ET-2, 4IE-2, 4IN-2, 2PTU-2 |
| | | | | | | | | Coll. Ass. | 20 | 50 | 25 | 2 | |
| 3. | 4PE-3 | Electronics Engineering Materials and Components | Electronics | 4 | 1 | - | 5 | Paper | 80 | 100 | 40 | 3 | Same as : 4U-3, 4DT-3, 4ET-3, 4IE-3, 4IN-3, 3PTU-2 |
| | | | | | | | | Coll. Ass. | 20 | | | | |
| 4. | 4PE-4 | Electro-magnetic fields | Electronics | 4 | 1 | - | 5 | Paper | 80 | 100 | 40 | 3 | Same as : 4U-4, 4DT-4, 4ET-4, 4IE-4, 4IN-4, 2PTU-3 |
| | | | | | | | | Coll. Ass. | 20 | | | | |
| 5. | 4PE-5 | Basic Electrical Machines (Th. + P.) | Electronics | 4 | 1 | 2 | 7 | Paper | 80 | 100 | 40 | 3 | Same as : 4U-5, 4DT-5, 4ET-5, IE-5, 4IN-5, 2PTU-4 |
| | | | | | | | | Coll. Ass. | 20 | 50 | 25 | 2 | |
| | | | Total Load | 19 | 5 | 4 | 28 | Total | | 600 | | | |

BACHELOR OF ENGINEERING
Scheme of Teaching and Examination
Branch: Power Electronics Engineering

Semester : Fifth

| Sr. No. | Subject Code | Subject Name | Board | L | T | P | Total Hr. per week | Maxi. Marks Paper / Practical | | | Mini. Marks for passing | Paper Dur. In Hrs. | Remarks | |
|---------|--------------|---|-------------|----|---|---|--------------------|-------------------------------|------------|-----------|-------------------------|--------------------|---|--|
| | | | | | | | | Paper | Coll. Ass. | Practical | | | | |
| 1. | 5PE-1 | Engineering Economics and Industrial Management | ASH | 3 | 1 | - | 4 | Paper | 80 | 100 | 40 | 3 | Same as : 5U-1, 5DT-1, 5ET-1, 5TE-1, 5IN-1, | |
| 2. | 5PE-2 | Linear Electronic Circuits (Th. + P.) | Electronics | 4 | 1 | 2 | 7 | Paper | 80 | 100 | 40 | 3 | Same as : 5U-2, 5DT-2, 5ET-2, 5IE-2, 5IN-2, | |
| | | | | | | | | Coll. Ass. | 20 | 50 | 25 | | | |
| 3. | 5PE-3 | Power Semiconductor Devices and Circuits (Th.) | Electronics | 4 | 1 | - | 5 | Paper | 80 | 100 | 40 | 3 | Same as : 5U-3, | |
| | | | | | | | | Coll. Ass. | 20 | | | | | |
| 4. | 5PE-4 | Electrical Power System Analysis | Electrical | 4 | 1 | 2 | 7 | Paper | 80 | 100 | 40 | 3 | Same as : 5U-4, 5ET-4, 5IN-4, | |
| | | | | | | | | Coll. Ass. | 20 | 50 | 25 | - | | |
| | | | | | | | | Pract. | 25 | | | | | |
| 5. | 5PE-5 | Micro-processors Interfacing (Th. + P.) | Electronics | 4 | 1 | 2 | 7 | Paper | 80 | 100 | 40 | 3 | Same as : 5U-5, 5DT-5, 5ET-5, 5TE-5 | |
| | | | | | | | | Coll. Ass. | 20 | 50 | 25 | - | | |
| | | | | | | | | Coll. Ass. | 25 | | | | | |
| | | | Total Load | 19 | 5 | 6 | 30 | Total | | 650 | | | | |

BACHELOR OF ENGINEERING
Scheme of Teaching and Examination
Branch: Power Electronics Engineering

Semester : Sixth

| Sr. No. | Subject Code | Subject Name | Board | L | T | P | Total Hr. per week | Maxi. Marks Paper / Practical | | | Mini. Marks for passing | Paper Dur. In Hrs. | Remarks |
|---------|--------------|---------------------------------------|---------------------|----|---|---|--------------------|-------------------------------|------------|-----------|-------------------------|--------------------|------------------------------|
| | | | | | | | | Paper | Coll. Ass. | Practical | | | |
| 1. | 6PE-1 | Power Semi-conducted Circuits-II | Electronics | 4 | 1 | - | 5 | Paper | 80 | 100 | 40 | 3 | |
| 2. | 6PE-2 | Control System Engineering (Th. + P.) | Electrical | 4 | 1 | 2 | 7 | Paper | 80 | 100 | 40 | 3 | Same as : 6U-2, 6DT-2, 6ET-2 |
| | | | | | | | | Coll. Ass. | 20 | 50 | 25 | 2 | |
| 3. | 6PE-3 | Electronic Instrumentation | Electronics | 4 | 1 | - | 5 | Paper | 80 | 100 | 40 | 3 | Same as : 6DT-3, 6ET-3 |
| 4. | 6PE-4 | Power Electronic Workshop (P) | Electronics | 4 | 1 | 2 | 7 | Paper | 80 | 100 | 40 | 3 | Same as : 6U-4, 6DT-4, |
| | | | | | | | | Coll. Ass. | 20 | 50 | 25 | 2 | |
| 5. | 6PE-5 | Computer Organization | Computer Sci. Engg. | 4 | 1 | - | 5 | Paper | 80 | 100 | 40 | 3 | Same as : 6U-5, 6DT-5, 6ET-5 |
| 6. | 6PE-6 | Electronic Workshop Practice (P) | Electronics | - | - | 2 | 2 | Pract. | 25 | 50 | 25 | 2 | Same as : 6U-6 |
| | | | Total Load | 20 | 5 | 6 | 31 | Total | | 650 | | | |

BACHELOR OF ENGINEERING
Scheme of Teaching and Examination
Branch: Power Electronics Engineering

Semester : Seventh

| Sr. No. | Subject Code | Subject Name | Board | L | T | P | Total Hr. per week | Maxi. Marks | | | Mini. Marks for passing | Paper Dur. In Hrs. | Remarks |
|---------|--------------|---|-------------|----|---|---|--------------------|-------------|------------------|-----------|-------------------------|--------------------|---------|
| | | | | | | | | Paper | Coll. Ass-Pract. | Practical | | | |
| 1. | 7PE-1 | Pulse and Switching Circuits (Th. + P.) | Electronics | 4 | 1 | 2 | 7 | 80 | 20 | 100 | 40 | 3 | |
| | | | | | | | | 25 | 25 | 50 | 25 | 2 | |
| 2. | 7PE-2 | Fundamentals of Electric Drives (Th. + P.) | Electrical | 4 | 1 | 2 | 7 | 80 | 20 | 100 | 40 | 3 | |
| | | | | | | | | 25 | 25 | 50 | 25 | 2 | |
| 3. | 7PE-3 | Advanced Microprocessor & Peripheral (Th. + P.) | Electronics | 4 | 1 | 2 | 7 | 80 | 20 | 100 | 40 | 3 | |
| | | | | | | | | 25 | 25 | 50 | 25 | 2 | |
| 4. | 7PE-4 | Applied Power Electronics | Electrical | 3 | 1 | - | 4 | 80 | 20 | 100 | 40 | 3 | |
| 5. | 7PE-5 | Elective - I | - | 3 | 1 | - | 4 | 80 | 20 | 100 | 40 | 3 | |
| 6. | 7PE-6 | Project Seminar | Electronics | - | - | 3 | 3 | 25 | 25 | 50 | 25 | - | |
| | | | Total Load | 18 | 5 | 9 | 32 | Total | | 700 | | | |

LIST OF ELECTIVE: (Any One of the above)
REMARKS

-
-

Electronics

SUBJECTS

i) Principles of Communication Electronics

ii) Control System-II

iii) System Programming

BOARD

Electronics

Electronics

BACHELOR OF ENGINEERING
Scheme of Teaching and Examination
Branch: Power Electronics Engineering

Semester : Eighth

| Sr. No. | Subject Code | Subject Name | Board | L | T | P | Total Hr. per week | Maxi. Marks Paper / Practical | | | Mini. Marks for passing | Paper Dur. In Hrs. | Remarks |
|---------|--------------|---|-------------|----|---|----|--------------------|-------------------------------|------------------|------------|-------------------------|--------------------|---------|
| | | | | | | | | Paper | Coll. Ass-Pract. | Coll. Ass. | | | |
| 1. | 8PE-1 | Design of Power Electronics circuits (Th. + P.) | Electronics | 4 | 1 | 2 | 7 | 80 | 20 | 100 | 40 | 3 | |
| | | | | | | | | 25 | 25 | 50 | 25 | 2 | |
| 2. | 8PE-2 | Drive Controller and Automation (Th. + P.) | Electrical | 4 | 1 | 2 | 7 | 80 | 20 | 100 | 40 | 3 | |
| | | | | | | | | 25 | 25 | 50 | 25 | 2 | |
| 3. | 8PE-3 | Power System Protection (Th. + P.) | Electrical | 3 | 1 | 2 | 6 | 80 | 20 | 100 | 40 | 3 | |
| | | | | | | | | 25 | 25 | 50 | 25 | 2 | |
| 4. | 8PE-4 | High Voltage Engineering | Electrical | 3 | 1 | - | 4 | 80 | 20 | 100 | 40 | 3 | |
| 5. | 8PE-5 | Elective - II | - | 3 | 1 | - | 4 | 80 | 20 | 100 | 40 | 3 | |
| 6. | 8PE-6 | Project | Electronics | - | - | 6 | 6 | 75 | 75 | 150 | 75 | - | |
| | | | Total Load | 17 | 5 | 12 | 34 | Total | | 800 | | | |

LIST OF ELECTIVE: (Any One of the above)

SUBJECTS

BOARD

Remark

| | | | | |
|---------------------------------|-------------|---------------------|-------------------------------|---------|
| 4PE 9 (i) | | i) Switching Theory | Electronics | Same as |
| | Electronics | | ii) Digital Signal Processing | |
| System Stability and Economics. | Electrical | Same as 4PE 9 (iv) | iii) Power | |

BACHELOR OF ENGINEERING
Scheme of Teaching and Examination
Branch: Industrial Electronics Engineering

Semester : Third

| Sr. No. | Subject Code | Subject Name | Board | L | T | P | Total Hr. per week | Maxi. Marks Paper / Practical | | | Mini. Marks for passing | Paper Dur. In Hrs. | Remarks |
|---------|--------------|---|-------------|----|---|---|--------------------|-------------------------------|------------|-----------|-------------------------|--------------------|---|
| | | | | | | | | Paper | Coll. Ass. | Practical | | | |
| 1. | 3IE-1 | Mathematics - III | ASH | 3 | 1 | - | 4 | Paper | 80 | 100 | 40 | 3 | 1PTU-1 |
| 2. | 3IE-2 | Electronic Devices and Circuits (Th. + P) | Electronics | 4 | 1 | 2 | 7 | Paper | 80 | 100 | 40 | 3 | Same as : 3U-2, 3DT-2, 3ET-2,3PE-2, 3IN-2,33CT-4,3IT-17, 3SE-5,3CS-4,IPTU-2 |
| | | | | | | | | Coll. Ass. | 20 | | 25 | 2 | |
| 3. | 3IE-3 | Electronic Measurements (Th. + P) | Electronics | 4 | 1 | 2 | 7 | Paper | 80 | 100 | 40 | 3 | Same as : 3U-3, 3DT-3, 3ET-3,3PE-3, 3IN-3, IPTU-3 |
| | | | | | | | | Coll. Ass. | 20 | | 25 | 2 | |
| 4. | 3IE-4 | Network Theory | Electrical | 4 | 1 | - | 5 | Paper | 80 | 100 | 40 | 3 | Same as : 3U-4, 3DT-4, 3ET-4,3PE-4, 3IN-4, 33CT-2, IPTU-4 |
| | | | | | | | | Coll. Ass. | 20 | | | | |
| 5. | 3IE-5 | C and Data Structure (Th. + P.) | Electronics | 4 | 1 | 2 | 7 | Paper | 80 | 100 | 40 | 3 | Same as : 3U-5, 3DT-5, 3ET-5, 3IN-5, 3PE-5, 3PTU-1 |
| | | | | | | | | Coll. Ass. | 20 | | 25 | 2 | |
| | | | Total Load | 19 | 5 | 6 | 30 | Total | | 650 | | | |

BACHELOR OF ENGINEERING
Scheme of Teaching and Examination
Branch: Industrial Electronics Engineering

Semester : Fourth

| Sr. No. | Subject Code | Subject Name | Board | L | T | P | Total Hr. per week | Maxi. Marks Paper / Practical | | | Mini. Marks for passing | Paper Dur. In Hrs. | Remarks |
|---------|--------------|--|-------------|----|---|---|--------------------|-------------------------------|------------|-----------|-------------------------|--------------------|--|
| | | | | | | | | Paper | Coll. Ass. | Practical | | | |
| 1. | 4IE-1 | Mathematics – IV | ASH | 3 | 1 | - | 4 | Paper | 80 | 100 | 40 | 3 | 2PTU-1 |
| 2. | 4IE-2 | Digital Circuits (Th. + P.) | Electronics | 4 | 1 | 2 | 7 | Paper | 80 | 100 | 40 | 3 | Same as : 4U-2, 4DT-2, 4ET-2, 4PE-2, 4IN-2, 2PTU-2 |
| | | | | | | | | Coll. Ass. | 20 | 50 | 25 | 2 | |
| 3. | 4IE-3 | Electronics Engineering Materials and Components | Electronics | 4 | 1 | - | 5 | Paper | 80 | 100 | 40 | 3 | Same as : 4U-3, 4DT-3, 4ET-3, 4PE-3 4IN-3, 3PTU-2 |
| | | | | | | | | Coll. Ass. | 20 | | | | |
| 4. | 4IE-4 | Electro-magnetic fields | Electronics | 4 | 1 | - | 5 | Paper | 80 | 100 | 40 | 3 | Same as : 4U-4, 4DT-4, 4ET-4, 4PE-4 4IN-4, 2PTU-3 |
| | | | | | | | | Coll. Ass. | 20 | | | | |
| 5. | 4IE-5 | Basic Electrical Machines (Th. + P.) | Electronics | 4 | 1 | 2 | 7 | Paper | 80 | 100 | 40 | 3 | Same as : 4U-5, 4DT-5, 4ET-5, PE-5, 4IN-5, 2PTU-4 |
| | | | | | | | | Coll. Ass. | 20 | 50 | 25 | 2 | |
| | | | Total Load | 19 | 5 | 4 | 28 | Total | | 600 | | | |

BACHELOR OF ENGINEERING
Scheme of Teaching and Examination
Branch: Industrial Electronics Engineering

Semester : Fifth

| Sr. No. | Subject Code | Subject Name | Board | L | T | P | Total Hr. per week | Maxi. Marks Paper / Practical | | | Mini. Marks for passing | Paper Dur. In Hrs. | Remarks |
|---------|--------------|---|-------------|----|---|---|--------------------|-------------------------------|------------|-----------|-------------------------|--------------------|--|
| | | | | | | | | Paper | Coll. Ass. | Practical | | | |
| 1. | 5PE-1 | Engineering Economics and Industrial Management | ASH | 3 | 1 | - | 4 | Paper | 80 | 100 | 40 | 3 | Same as : 5U-1, 5DT-1, 5ET-1,5TE-1, 5IN-1, |
| 2. | 5PE-2 | Linear Electronic Circuits (Th. + P.) | Electronics | 4 | 1 | 2 | 7 | Paper | 80 | 100 | 40 | 3 | Same as : 5U-2, 5DT-2, 5ET-2,5PE-2, 5IN-2, |
| | | | | | | | | Coll. Ass. | 20 | | 25 | | |
| | | | | | | | | Pract. | 25 | 50 | 25 | | |
| 3. | 5PE-3 | Industrial Electronics | Electronics | 4 | 1 | - | 5 | Paper | 80 | 100 | 40 | 3 | Same as : 5U-3, |
| | | | | | | | | Coll. Ass. | 20 | | | | |
| 4. | 5PE-4 | Power Electronics (Th. + P.) | Electrical | 4 | 1 | 2 | 7 | Paper | 80 | 100 | 40 | 3 | Same as : 5U-4, 5ET-4, 5IN-4, |
| | | | | | | | | Coll. Ass. | 20 | | 25 | - | |
| | | | | | | | | Pract. | 25 | 50 | | | |
| | | | | | | | | Coll. Ass. | 25 | | | | |
| 5. | 5PE-5 | Micro-processors Interfacing (Th. + P.) | Electronics | 4 | 1 | 2 | 7 | Paper | 80 | 100 | 40 | 3 | Same as : 5U-5, 5DT-5,5ET-5,5TE-5 |
| | | | | | | | | Coll. Ass. | 20 | | 25 | - | |
| | | | | | | | | Pract. | 25 | 50 | | | |
| | | | | | | | | Coll. Ass. | 25 | | | | |
| | | | Total Load | 19 | 5 | 6 | 30 | Total | | 650 | | | |

BACHELOR OF ENGINEERING
Scheme of Teaching and Examination
Branch: Industrial Electronics Engineering

Semester : Sixth

| Sr. No. | Subject Code | Subject Name | Board | L | T | P | Total Hr. per week | Maxi. Marks Paper / Practical | | | Mini. Marks for passing | Paper Dur. In Hrs. | Remarks |
|---------|--------------|---------------------------------------|---------------------|----|---|---|--------------------|-------------------------------|------------|-----------|-------------------------|--------------------|------------------------------|
| | | | | | | | | Paper | Coll. Ass. | Practical | | | |
| 1. | 6IE-1 | Industrial Drives | Electronics | 4 | 1 | - | 5 | Paper | 80 | 100 | 40 | 3 | |
| 2. | 6IE-2 | Control System Engineering (Th. + P.) | Electrical | 4 | 1 | 2 | 7 | Paper | 80 | 100 | 40 | 3 | Same as : 6U-2, 6DT-2, 6ET-2 |
| | | | | | | | | Coll. Ass. | 20 | 50 | 25 | 2 | |
| 3. | 6IE-3 | Electronic Instrumentation | Electronics | 4 | 1 | - | 5 | Paper | 80 | 100 | 40 | 3 | Same as : 6DT-3, 6ET-3 |
| 4. | 6IE-4 | Communication Electronics (Th+P) | Electronics | 4 | 1 | 2 | 7 | Paper | 80 | 100 | 40 | 3 | Same as : 6U-4, 6DT-4, |
| | | | | | | | | Coll. Ass. | 20 | 50 | 25 | 2 | |
| 5. | 6IE-5 | Computer Organization | Computer Sci. Engg. | 4 | 1 | - | 5 | Paper | 80 | 100 | 40 | 3 | Same as : 6U-5, 6DT-5, 6ET-5 |
| 6. | 6IE-6 | Electronic Workshop Practice (P) | Electronics | - | - | 2 | 2 | Pract. | 25 | 50 | 25 | 2 | Same as : 6U-6 |
| | | | Total Load | 20 | 5 | 6 | 31 | Total | | 650 | | | |

BACHELOR OF ENGINEERING
Scheme of Teaching and Examination
Branch: Industrial Electronics Engineering

Semester : Seventh

| Sr. No. | Subject Code | Subject Name | Board | L | T | P | Total Hr. per week | Maxi. Marks Paper / Practical | | | Mini. Marks for passing | Paper Dur. In Hrs. | Remarks |
|---------|--------------|--------------------------------------|-------------|----|---|---|--------------------|-------------------------------|------------------|------------|-------------------------|--------------------|---------|
| | | | | | | | | Paper | Coll. Ass-Pract. | Coll. Ass. | | | |
| 1. | 7IE-1 | Television Engineering (Th. + P.) | Electronics | 4 | 1 | 2 | 7 | 80 | 20 | 100 | 40 | 3 | |
| | | | | | | | | 25 | 25 | 50 | 25 | 2 | |
| 2. | 7IE-2 | Robotics and CNC | Mechanical | 4 | 1 | - | 5 | 80 | 20 | 100 | 40 | 3 | |
| | | | | | | | | 25 | 25 | 50 | 25 | 2 | |
| 3. | 7IE-3 | Digital Signal Processing (Th. + P.) | Electronics | 4 | 1 | 2 | 7 | 80 | 20 | 100 | 40 | 3 | |
| 4. | 7IE-4 | Power Electronics – II (Th. + P.) | Electrical | 4 | 1 | 2 | 7 | 80 | 20 | 100 | 40 | 3 | |
| | | | | | | | | 25 | 25 | 50 | 25 | 2 | |
| 5. | 7IE-5 | Elective - I | Electrical | 3 | 1 | - | 4 | 80 | 20 | 100 | 40 | 3 | |
| 6. | 7IE-6 | Project Seminar | Electronics | - | - | 3 | 3 | 25 | 25 | 50 | 25 | 2 | |
| | | | Total Load | 19 | 5 | 9 | 33 | Total | | 700 | | | |

LIST OF ELECTIVE: (Any One of the above)
REMARKS

SUBJECTS

BOARD

-

i) Principles of Communication Electronics

Electronics

-

ii) Control System-II

Electronics

-

Electronics

-

iii) System Programming

BACHELOR OF ENGINEERING
Scheme of Teaching and Examination
Board of Studies in Electronics Engineering
Branch: Industrial Electronics Engineering

Semester : Eighth

| Sr. No. | Subject Code | Subject Name | Board | L | T | P | Total Hr. per week | Maxi. Marks Paper / Practical | | | Mini. Marks for passing | Paper Dur. In Hrs. | Remarks |
|---------|--------------|--|-------------|----|---|----|--------------------|-------------------------------|------------------|------------|-------------------------|--------------------|---------|
| | | | | | | | | Paper | Coll. Ass-Pract. | Coll. Ass. | | | |
| 1. | 8IE-1 | Design of Electronics circuits (Th. + P.) | Electronics | 4 | 1 | 2 | 7 | Paper | 80 | 100 | 40 | 3 | |
| | | | | | | | | Coll. Ass-Pract. | 20 | 50 | 25 | 2 | |
| | | | | | | | | Coll. Ass. | 25 | | | | |
| 2. | 8IE-2 | Advanced Microprocessors and Peripheral (Th. + P.) | Electronics | 4 | 1 | 2 | 7 | Paper | 80 | 100 | 40 | 3 | |
| | | | | | | | | Coll. Ass-Pract. | 20 | 50 | 25 | 2 | |
| | | | | | | | | Coll. Ass | 25 | | | | |
| 3. | 8IE-3 | Computer Communication and Networks | Electronics | 4 | 1 | - | 5 | Paper | 80 | 100 | 40 | 3 | |
| | | | | | | | | Coll. Ass. | 20 | | | | |
| 4. | 8IE-4 | Industrial instrumentation | Electronics | 3 | 1 | - | 4 | Paper | 80 | 100 | 40 | 3 | |
| | | | | | | | | Coll. Ass. | 20 | | | | |
| 5. | 8IE-5 | Elective - II | - | 3 | 1 | - | 4 | Paper | 80 | 100 | 40 | 3 | |
| | | | | | | | | Coll. Ass. | 20 | | | | |
| 6. | 8IE-6 | Project | Electronics | - | - | 6 | 6 | Practical | 75 | 150 | 75 | - | |
| | | | | | | | | Coll. Ass. | 75 | | | | |
| | | | Total Load | 18 | 5 | 10 | 33 | Total | | 750 | | | |

ELECTIVE: II (Any One of the above)

SUBJECTS

BOARD

i) Opto Electronics instrumentation

Electronics

ii) Digital Image processing

iii)

Electronics
Electronic System design

Electronics

BACHELOR OF ENGINEERING
Scheme of Teaching and Examination
Branch: Electronics Design Technology

Semester : Third

| Sr. No. | Subject Code | Subject Name | Board | L | T | P | Total Hr. per week | Maxi. Marks Paper / Practical | | | Mini. Marks for passing | Paper Dur. In Hrs. | Remarks |
|---------|--------------|---|-------------|----|---|---|--------------------|-------------------------------|------------|-----------|-------------------------|--------------------|--|
| | | | | | | | | Paper | Coll. Ass. | Practical | | | |
| 1. | 3DT-1 | Mathematics - III | ASH | 3 | 1 | - | 4 | Paper | 80 | 100 | 40 | 3 | |
| | | | | | | | | Coll. Ass. | 20 | | | | |
| 2. | 3DT-2 | Electronic Devices and Circuits (Th. + P) | Electronics | 4 | 1 | 2 | 7 | Paper | 80 | 100 | 40 | 3 | Same as : 3U-2, 3IE-2, 3ET-2, 3PE-2, 3IN-2 |
| | | | | | | | | Pract. | 25 | 50 | 25 | 2 | |
| | | | | | | | | Coll. Ass. | 25 | | | | |
| 3. | 3DT-3 | Electronic Measurements (Th. + P) | Electronics | 4 | 1 | 2 | 7 | Paper | 80 | 100 | 40 | 3 | Same as : 3U-3, 3IE-3, 3ET-3, 3PE-3, 3IN-3 |
| | | | | | | | | Pract. | 25 | 50 | 25 | 2 | |
| | | | | | | | | Coll. Ass. | 25 | | | | |
| 4. | 3DT-4 | Network Theory | Electrical | 4 | 1 | - | 5 | Paper | 80 | 100 | 40 | 3 | Same as : 3U-4, 3IE-4, 3ET-4, 3PE-4, 3IN-4 |
| | | | | | | | | Coll. Ass. | 20 | | | | |
| 5. | 3DT-5 | C and Data Structure (Th. + P.) | Electronics | 4 | 1 | 2 | 7 | Paper | 80 | 100 | 40 | 3 | Same as : 3U-5, 3IE-5, 3ET-5, 3IN-5, 3PE-5 |
| | | | | | | | | Pract. | 25 | 50 | 25 | 2 | |
| | | | | | | | | Coll. Ass. | 25 | | | | |
| | | | Total Load | 19 | 5 | 6 | 30 | Total | | 650 | | | |

BACHELOR OF ENGINEERING
Scheme of Teaching and Examination
Branch: Electronics Design Technology

Semester : Fourth

| Sr. No. | Subject Code | Subject Name | Board | L | T | P | Total Hr. per week | Maxi. Marks Paper / Practical | | | Mini. Marks for passing | Paper Dur. In Hrs. | Remarks |
|---------|--------------|--|-------------|----|---|---|--------------------|-------------------------------|------------|-----|-------------------------|--------------------|--|
| | | | | | | | | Paper | Coll. Ass- | 100 | | | |
| 1. | 4DT-1 | Mathematics – IV | ASH | 3 | 1 | - | 4 | Paper | 80 | 100 | 40 | 3 | |
| | | | | | | | | Coll. Ass- | 20 | | | | |
| 2. | 4DT-2 | Digital Circuits (Th. + P.) | Electronics | 4 | 1 | 2 | 7 | Paper | 80 | 100 | 40 | 3 | Same as : 4U-2, 4IE-2, 4ET-2, 4PE-2, 4IN-2, 2PTU-2 |
| | | | | | | | | Coll. Ass. | 20 | 50 | 25 | 2 | |
| | | | | | | | | Pract. | 25 | | | | |
| | | | | | | | | Coll. Ass. | 25 | | | | |
| 3. | 4DT-3 | Electronics Engineering Materials and Components | Electronics | 4 | 1 | - | 5 | Paper | 80 | 100 | 40 | 3 | Same as : 4U-3, 4IE-3, 4ET-3, 4PE-3 4IN-3, 3PTU-2 |
| | | | | | | | | Coll. Ass. | 20 | | | | |
| 4. | 4DT-4 | Electro-magnetic fields | Electronics | 4 | 1 | - | 5 | Paper | 80 | 100 | 40 | 3 | Same as : 4U-4, 4IE-4, 4ET-4, 4PE-4 4IN-4, 2PTU-3 |
| | | | | | | | | Coll. Ass. | 20 | | | | |
| 5. | 4DT-5 | Basic Electrical Machines (Th. + P.) | Electronics | 4 | 1 | 2 | 7 | Paper | 80 | 100 | 40 | 3 | Same as : 4U-5, 4IE-5, 4ET-5, PE-5, 4IN-5, 2PTU-4 |
| | | | | | | | | Coll. Ass. | 20 | 50 | 25 | 2 | |
| | | | | | | | | Pract. | 25 | | | | |
| | | | | | | | | Coll. Ass. | 25 | | | | |
| | | | Total Load | 19 | 5 | 4 | 28 | Total | | 600 | | | |

BACHELOR OF ENGINEERING
Scheme of Teaching and Examination
Branch: Electronics Design Technology

Semester : Fifth

| Sr. No. | Subject Code | Subject Name | Board | L | T | P | Total Hr. per week | Maxi. Marks Paper / Practical | | | Mini. Marks for passing | Paper Dur. In Hrs. | Remarks | |
|---------|--------------|---|-------------|----|---|---|--------------------|-------------------------------|------------|-----------|-------------------------|--------------------|--|--|
| | | | | | | | | Paper | Coll. Ass. | Practical | | | | |
| 1. | 5DT-1 | Engineering Economics and Industrial Management | ASH | 3 | 1 | - | 4 | Paper | 80 | 100 | 40 | 3 | Same as : 5U-1, 5IE-1, 5ET-1,5TE-1, 5IN-1, | |
| 2. | 5DT-2 | Linear Electronic Circuits (Th. + P.) | Electronics | 4 | 1 | 2 | 7 | Paper | 80 | 100 | 40 | 3 | Same as : 5U-2, 5IE-2, 5ET-2,5PE-2, 5IN-2, | |
| | | | | | | | | Coll. Ass. | 20 | | 25 | | | |
| | | | | | | | | Coll. Ass. | 25 | 50 | 25 | | | |
| 3. | 5DT-3 | Manufacturing Processes | Electronics | 4 | 1 | - | 5 | Paper | 80 | 100 | 40 | 3 | Same as : 5U-3, | |
| | | | | | | | | Coll. Ass. | 20 | | | | | |
| 4. | 5DT-4 | PCB Technology (Th. + P.) | Electrical | 4 | 1 | 2 | 7 | Paper | 80 | 100 | 40 | 3 | Same as : 5U-4, 5ET-4, 5IN-4, | |
| | | | | | | | | Coll. Ass. | 20 | | 25 | - | | |
| | | | | | | | | Pract. | 25 | 50 | | | | |
| | | | | | | | | Coll. Ass. | 25 | | | | | |
| 5. | 5DT-5 | Micro-processors Interfacing (Th. + P.) | Electronics | 4 | 1 | 2 | 7 | Paper | 80 | 100 | 40 | 3 | Same as : 5U-5, 5IE-5,5ET-5,5TE-5 | |
| | | | | | | | | Coll. Ass. | 20 | | 25 | - | | |
| | | | | | | | | Pract. | 25 | 50 | | | | |
| | | | | | | | | Coll. Ass. | 25 | | | | | |
| | | | Total Load | 19 | 5 | 6 | 30 | Total | | 650 | | | | |

BACHELOR OF ENGINEERING
Scheme of Teaching and Examination
Branch: Electronics Design Technology

Semester : Sixth

| Sr. No. | Subject Code | Subject Name | Board | L | T | P | Total Hr. per week | Maxi. Marks Paper / Practical | | | Mini. Marks for passing | Paper Dur. In Hrs. | Remarks |
|---------|--------------|---------------------------------------|---------------------|----|---|---|--------------------|-------------------------------|------------|-----------|-------------------------|--------------------|------------------------------|
| | | | | | | | | Paper | Coll. Ass. | Practical | | | |
| 1. | 6DT-1 | Fields and Radiating Systems | Electronics | 4 | 1 | - | 5 | Paper | 80 | 100 | 40 | 3 | Same as : 6U-1, 6ET-1 |
| 2. | 6DT-2 | Control System Engineering (Th. + P.) | Electrical | 4 | 1 | 2 | 7 | Paper | 80 | 100 | 40 | 3 | Same as : 6U-2, 6PE-2, 6ET-2 |
| | | | | | | | | Coll. Ass. | 20 | | 25 | 2 | |
| | | | | | | | | Pract. Coll. Ass. | 25 | 50 | 25 | | |
| 3. | 6DT-3 | Electronic Instrumentation | Electronics | 4 | 1 | - | 5 | Paper | 80 | 100 | 40 | 3 | Same as : 6U-3, 6PE-3 |
| | | | | | | | | Coll. Ass. | 20 | | | | |
| 4. | 6DT-4 | Communication Electronics (Th. + P.) | Electronics | 4 | 1 | 2 | 7 | Paper | 80 | 100 | 40 | 3 | Same as : 6U-4, 6ET-4, |
| | | | | | | | | Coll. Ass. | 20 | | 25 | 2 | |
| | | | | | | | | Pract. Coll. Ass. | 25 | 50 | 25 | | |
| 5. | 6DT-5 | Computer Organization | Computer Sci. Engg. | 4 | 1 | - | 5 | Paper | 80 | 100 | 40 | 3 | Same as : 6U-5, 6PE-5, 6ET-5 |
| | | | | | | | | Coll. Ass. | 20 | | | | |
| | | | Total Load | 20 | 5 | 4 | 29 | Total | | 650 | | | |

BACHELOR OF ENGINEERING
Scheme of Teaching and Examination
Board of Studies in Electronics Engineering
Branch: Electronics Design Technology

Semester : Seventh

| Sr. No. | Subject Code | Subject Name | Board | L | T | P | Total Hr. per week | Maxi. Marks Paper / Practical | | | Mini. Marks for passing | Paper Dur. In Hrs. | Remarks |
|---------|--------------|--|-------------|----|---|---|--------------------|-------------------------------|------------------|------------|-------------------------|--------------------|---------|
| | | | | | | | | Paper | Coll. Ass-Pract. | Coll. Ass. | | | |
| 1. | 7DT-1 | Advanced Microprocessors and Microcontrollers (Th.+P.) | Electronics | 4 | 1 | 2 | 7 | 80 | 20 | 100 | 40 | 3 | |
| | | | | | | | | 25 | 25 | 50 | 25 | 2 | |
| 2. | 7DT-2 | Industrial Design of Electronic Equipments | Electronics | 4 | 1 | - | 5 | 80 | 20 | 100 | 40 | 3 | |
| 3. | 7DT-3 | Digital Signal Processing (Th. + P.) | Electronics | 4 | 1 | 2 | 7 | 80 | 20 | 100 | 40 | 3 | |
| | | | | | | | | 25 | 25 | 50 | 25 | 2 | |
| 4. | 7DT-4 | CMOS VLSI Design (Th.+P.) | Electronics | 3 | 1 | 2 | 6 | 80 | 20 | 100 | 40 | 3 | |
| | | | | | | | | 25 | 25 | 50 | 25 | 2 | |
| 5. | 7DT-5 | Elective - I | Electronics | 3 | 1 | - | 4 | 80 | 20 | 100 | 40 | 3 | |
| 6. | 7DT-6 | Project Seminar | Electronics | - | - | 3 | 3 | 25 | 25 | 50 | 25 | 1 | |
| | | | Total Load | 18 | 5 | 9 | 32 | Total | | 700 | | | |

LIST OF ELECTIVE: I (Any One of the above)

| | SUBJECTS | BOARD | REMARKS |
|-------------|----------------------------------|--------------|----------------|
| 7U-4 | i) Digital Communication | Electronics | Same as : |
| 8U-4 | ii) Optical Communication | Electronics | Same as : |
| Electronics | iii) Switching Theory | | |
| 7U-5 (ii) | iv) Fuzzy Logic & Neural Network | Electronic | Same as : |

BACHELOR OF ENGINEERING
Scheme of Teaching and Examination
Board of Studies in Electronics Engineering
Branch: Electronics Design Technology

Semester : Eighth

| Sr. No. | Subject Code | Subject Name | Board | L | T | P | Total Hr. per week | Maxi. Marks Paper / Practical | | | Mini. Marks for passing | Paper Dur. In Hrs. | Remarks |
|---------|--------------|-------------------------------------|-------------|----|---|----|--------------------|-------------------------------|------------------|------------|-------------------------|--------------------|---------|
| | | | | | | | | Paper | Coll. Ass-Pract. | Coll. Ass. | | | |
| 1. | 8DT-1 | Digital System Design (Th. + P.) | Electronics | 4 | 1 | 2 | 7 | 80 | 20 | 100 | 40 | 3 | |
| | | | | | | | | 25 | 25 | 50 | 25 | 2 | |
| 2. | 8DT-2 | Electronic System Design (Th. + P.) | Electronics | 4 | 1 | 2 | 7 | 80 | 20 | 100 | 40 | 3 | |
| | | | | | | | | 25 | 25 | 50 | 25 | 2 | |
| 3. | 8DT-3 | Computer Communication and Networks | Electronics | 4 | 1 | - | 5 | 80 | 20 | 100 | 40 | 3 | |
| 4. | 8DT-4 | Reliability of Electronic Equipment | Electronics | 3 | 1 | - | 4 | 80 | 20 | 100 | 40 | 3 | |
| 5. | 8DT-5 | Elective - II | Electronics | 3 | 1 | - | 4 | 80 | 20 | 100 | 40 | 3 | |
| 6. | 8DT-6 | Project | Electronics | - | - | 6 | 6 | 75 | 75 | 150 | 75 | 2 | |
| | | | Total Load | 18 | 5 | 10 | 33 | Total | | 750 | | | |

ELECTIVE: II (Any One of the above)**SUBJECTS****BOARD****REMARKS**

(ii)

Electronics
Embedded Systems

Same as : 8U-5 (iii)
Electronics
iv) Robotics

i) Mobile Communication

Same as : 8U-5
Electronics

Electronics
ii) Digital Image processing

Same as : 8IN-5 (iii)

iii)

BACHELOR OF ENGINEERING

| SEM | SUB CODE | SUBJECT NAME | BOARD | L | T | P | HRS PER WEEK | MAX. MARKS THEORY | PAPER | COLL. ASSES | MAX. MARKS PRACT | PRAC T. | COLL. ASSES | PAPER DURATION |
|-----|----------|-----------------------------------|-------|----|---|---|--------------|-------------------|-------|-------------|------------------|---------|-------------|----------------|
| 3 | 3S-EE-01 | APPLIED MATHEMATICS | ASH | 3 | 1 | 0 | 4 | 100 | 80 | 20 | - | - | - | 3 Hrs. |
| 3 | 3S-EE-02 | STEAM & HYDROTURBINES | ME | 3 | 1 | 0 | 4 | 100 | 80 | 20 | - | - | - | 3 Hrs. |
| 3 | 3S-EE-03 | EMMI | EE | 4 | 1 | 2 | 7 | 100 | 80 | 20 | 50 | 25 | 25 | 3 Hrs. |
| 3 | 3S-EE-04 | NETWORK ANALYSIS | EE | 4 | 1 | 2 | 7 | 100 | 80 | 20 | 50 | 25 | 25 | 3 Hrs. |
| 3 | 3S-EE-05 | ELECTRONIC DEVICES & CIRCUITS | EN | 4 | 1 | 2 | 7 | 100 | 80 | 20 | 50 | 25 | 25 | 3 Hrs. |
| | | TOTAL CREDIT POINTS=18+2.5+3=23.5 | | 18 | 5 | 6 | 29 | 500 | | | 150 | | | TOT.MARKS 650 |

Board of Studies in Electronics Engineering**Branch: Electrical (Electronics and Power)**

| SEM | SUB CODE | SUBJECT NAME | BOARD | L | T | P | HRS PER WEEK | MAX. MARKS THEORY | PAPER | COLL. ASSES | MAX. MARKS PRACT | PRAC T. | COLL. ASSES | PAPER DURATION |
|-----|----------|-----------------------------------|-------|----|---|---|--------------|-------------------|-------|-------------|------------------|---------|-------------|----------------|
| 4 | 4S-EE-01 | ELECTRICAL ENGG MATHS | ASH | 3 | 1 | 0 | 4 | 100 | 80 | 20 | - | - | - | 3 Hrs. |
| 4 | 4S-EE-02 | ELEMENTS OF ELECTROMAGNETICS | EE | 4 | 1 | 0 | 5 | 100 | 80 | 20 | - | - | - | 3 Hrs. |
| 4 | 4S-EE-03 | DIGITAL CIRCUITS | EN | 4 | 1 | 2 | 7 | 100 | 80 | 20 | 50 | 25 | 25 | 3 Hrs. |
| 4 | 4S-EE-04 | ELECTRICAL MACHINES-I | EE | 4 | 1 | 2 | 7 | 100 | 80 | 20 | 50 | 25 | 25 | 3 Hrs. |
| 4 | 4S-EE-05 | COMPUTER PROGRAMMING | EE | 4 | 1 | 2 | 7 | 100 | 80 | 20 | 50 | 25 | 25 | 3 Hrs. |
| | | TOTAL CREDIT POINTS=18+2.5+3=24.5 | | 19 | 5 | 6 | 30 | 500 | | | 150 | | | TOT.MARKS 650 |

| SEM | SUB CODE | SUBJECT NAME | BOARD | L | T | P | HRS PER WEEK | MAX. MARKS THEORY | PAPER | COLL. ASSES | MAX. MARKS PRACT | PRAC T. | COLL. ASSES | PAPER DURATION |
|-----|----------|-----------------------------------|-------|----|---|---|--------------|-------------------|-------|-------------|------------------|---------|-------------|----------------|
| 5 | 5S-EE-01 | ELECTRICAL POWER SYSTEM-1 | EE | 4 | 1 | 0 | 5 | 100 | 80 | 20 | - | - | - | 3 Hrs. |
| 5 | 5S-EE-02 | INSTRUMENTATION | EE | 4 | 1 | 0 | 5 | 100 | 80 | 20 | - | - | - | 3 Hrs. |
| 5 | 5S-EE-03 | ELECTRICAL MACHINE DESIGN | EE | 4 | 1 | 0 | 5 | 100 | 80 | 20 | - | - | - | 3 Hrs. |
| 5 | 5S-EE-04 | MICROPROCESSOR & INTERFACING | EN | 4 | 1 | 2 | 7 | 100 | 80 | 20 | 50 | 25 | 25 | 3 Hrs. |
| 5 | 5S-EE-05 | ELECTRICAL MACHINES-II | EE | 4 | 1 | 2 | 7 | 100 | 80 | 20 | 50 | 25 | 25 | 3 Hrs. |
| 5 | 5S-EE-06 | ELECTRICAL ENGG WORKSHOP | EE | 0 | 0 | 2 | 2 | | | | 50 | 25 | 25 | |
| | | TOTAL CREDIT POINTS=20+2.5+3=25.5 | | 20 | 5 | 6 | 31 | 500 | | | 150 | | | TOT.MARKS 650 |

BACHELOR OF ENGINEERING
Board of Studies in Electronics Engineering
Branch: Electrical (Electronics and Power)

| SEM | SUB CODE | SUBJECT NAME | BOARD | L | T | P | HRS PER WEEK | MAX. MARKS THEORY | PAPER | COLL. ASSES | MAX. MARKS PRACT | PRACT. | COLL. ASSES. | PAPER DURATION |
|-----|----------|-----------------------------------|-------|----|---|---|--------------|-------------------|-------|-------------|------------------|--------|--------------|----------------|
| 6 | 6S-EE-01 | POWER STATION PRACTICE | EE | 4 | 1 | 0 | 5 | 100 | 80 | 20 | - | - | - | 3 Hrs. |
| 6 | 6S-EE-02 | ENGG. ECO. & IND. MGT. | ME | 3 | 1 | 0 | 4 | 100 | 80 | 20 | - | - | - | 3 Hrs. |
| 6 | 6S-EE-03 | ELECT DRIVES & THEIR CONTROL | EE | 4 | 1 | 0 | 5 | 100 | 80 | 20 | - | - | - | 3 Hrs. |
| 6 | 6S-EE-04 | LINEAR ELECTRONIC CIRCUITS | EN | 4 | 1 | 2 | 7 | 100 | 80 | 20 | 50 | 25 | 25 | 3 Hrs. |
| 6 | 6S-EE-05 | CONTROL SYSTEM-I | EE | 4 | 1 | 2 | 7 | 100 | 80 | 20 | 50 | 25 | 25 | 3 Hrs. |
| 6 | 6S-EE-06 | COMP AIDED ELECT ENGG DRAWING | EE | 1 | 0 | 2 | 3 | | | | 50 | 25 | 25 | |
| | | TOTAL CREDIT POINTS=20+2.5+3=25.5 | | 20 | 5 | 6 | 31 | 500 | | | 150 | | | TOT.MARKS 650 |

| SEM | SUB CODE | SUBJECT NAME | BOARD | L | T | P | HRS PER WEEK | MAX. MARKS THEORY | PAPER | COLL. ASSES | MAX. MARKS PRACT | PRACT. | COLL. ASSES. | PAPER DURATION |
|-----|----------|-----------------------------------|-------|----|---|---|--------------|-------------------|-------|-------------|------------------|--------|--------------|----------------|
| 7 | 7S-EE-01 | CONTROL SYSTEM-II | EE | 4 | 1 | 0 | 5 | 100 | 80 | 20 | - | - | - | 3 Hrs. |
| 7 | 7S-EE-02 | ELECTRICAL POWER-II | EE | 4 | 1 | 0 | 5 | 100 | 80 | 20 | - | - | - | 3 Hrs. |
| 7 | 7S-EE-03 | ELECTIVE-1 | EE | 3 | 1 | 0 | 4 | 100 | 80 | 20 | - | - | - | 3 Hrs. |
| 7 | 7S-EE-04 | HIGH VOLTAGE ENGG. | EE | 4 | 1 | 2 | 7 | 100 | 80 | 20 | 50 | 25 | 25 | 3 Hrs. |
| 7 | 7S-EE-05 | POWER ELECTRONICS | EE | 4 | 1 | 2 | 7 | 100 | 80 | 20 | 50 | 25 | 25 | 3 Hrs. |
| 7 | 7S-EE-06 | PROJECT SEMINAR | | 0 | 0 | 3 | 3 | | | | 50 | | 50 | |
| | | TOTAL CREDIT POINTS=19+2.5+3.5=25 | | 19 | 5 | 7 | 31 | 500 | | | 150 | | | TOT.MARKS 650 |

| SEM | SUB CODE | SUBJECT NAME | BOARD | L | T | P | HRS PER WEEK | MAX. MARKS THEORY | PAPER | COLL. ASSES | MAX. MARKS PRACT | PRACT. | COLL. ASSES. | PAPER DURATION |
|-----|----------|--------------------------------|-------|----|---|----|--------------|-------------------|-------|-------------|------------------|--------|--------------|----------------|
| 8 | 8S-EE-01 | POWER SEMICOND BASED DRIVES | EE | 4 | 1 | 0 | 5 | 100 | 80 | 20 | - | - | - | 3 Hrs. |
| 8 | 8S-EE-02 | ELECTIVE-2 | EE | 3 | 1 | 0 | 4 | 100 | 80 | 20 | - | - | - | 3 Hrs. |
| 8 | 8S-EE-03 | SWITCHGEAR & PROTECTION | EE | 4 | 1 | 2 | 7 | 100 | 80 | 20 | 50 | 25 | 25 | 3 Hrs. |
| 8 | 8S-EE-04 | COMP APPL IN ELECTRICAL ENGG | EE | 4 | 1 | 2 | 7 | 100 | 80 | 20 | 50 | 25 | 25 | 3 Hrs. |
| 8 | 8S-EE-05 | PROJECT | EE | 0 | 0 | 6 | 6 | | | | 150 | 75 | 75 | |
| | | TOTAL CREDIT POINTS=15+2.+5=22 | | 15 | 4 | 10 | 29 | 400 | | | 250 | | | TOT.MARKS 650 |

ELE-1

- 1) NON CONVENENERGY SOURCES
 2) ENTREPRENEURSHIP DEVL
 3) FUZZY LOGY AND NEURAL NETWORKS
 BIOMED ENG 5) DSP 6) OPT TECH

2) IT AND ITS APP IN P S CONTROL

ELE-II

- 1) EMVAC AND HVDC TRANS

- 4) FLEX A C TRANSMISSION SYSTEMS 5) EID. 3) ADV MICRO PERI 4)

SCHEME OF EXAMINATION FOR DEGREE OF BACHELOR OF ENGINEERING (MECHANICAL ENGINEERING)

| Subject Code | Subject | University Exam./ College Assessment | Marks | | | | Paper Duration – Hrs. | Lecture – Hrs. | Tutorials – Hrs. | Pract./ Drg – Hrs. |
|--------------|--------------------------|--------------------------------------|----------|---------|-----------|---------|-----------------------|----------------|------------------|--------------------|
| | | | Theory | | Practical | | | | | |
| | | | Maximum | Passing | Minimum | Passing | | | | |
| 3ME1 | Applied mathematics III* | Univ. College | 80 20 | 40 | - | - | 3 | 3 | 1 | - |
| 3ME2 | Theory of machines I | Univ. College | 80 20 | 40 | - | - | 3 | 3 | 1 | - |
| 3ME3 | Fluid Power I | Univ. College | 80 20 | 40 | - | - | 3 | 3 | 1 | - |
| 3ME4 | Manufacturing Process I | Univ. College | 80 20 | 40 | 25 25 | 25 | 3 | 3 | 1 | 2 |
| 3ME5 | Engineering Metallurgy** | Univ. College | 80 20 | 40 | 25 25 | 25 | 3 | 3 | 1 | 2 |
| 3ME6 | Computer Applications I | Univ. College | 80 20 | 40 | 25 25 | 25 | 3 | 3 | 1 | 2 |
| 3ME7 | Industrial Visit | College | - | - | A to D | C | - | - | - | 3 |
| Total | | | 600 | | 150 | | | 18 | 6 | 9 |

SEMESTER PATTERN III Semester B.E (Mechanical)

| Subject Code | Subject | University Exam./ College Assessment | Marks | | | | Paper Duration – Hrs. | Lecture – Hrs. | Tutorials – Hrs. | Pract./ Drg – Hrs. |
|--------------|-------------------------|--------------------------------------|----------|---------|-----------|---------|-----------------------|----------------|------------------|--------------------|
| | | | Theory | | Practical | | | | | |
| | | | Maximum | Passing | Minimum | Passing | | | | |
| 4ME1 | Applied mathematics IV* | Univ. College | 80 20 | 40 | - | - | 3 | 3 | 1 | - |
| 4ME2 | Machine Design I | Univ. College | 80 20 | 40 | - | - | 3 | 3 | 1 | - |
| 4ME3 | Engg. Thermodynamics | Univ. College | 80 20 | 40 | - | - | 3 | 3 | 1 | - |
| 4ME4 | Theory of Machines II | Univ. College | 80 20 | 40 | 25 25 | 25 | 3 | 3 | 1 | 2 |
| 4ME5 | Fluid Power II | Univ. College | 80 20 | 40 | 25 25 | 25 | 3 | 3 | 1 | 2 |
| 4ME6 | Manufacturing II | Univ. College | 80 20 | 40 | 25 25 | 25 | 3 | 3 | 1 | 2 |
| 4ME7 | Mini Project | College | - | - | A to D | C | - | - | - | 3 |
| Total | | | 600 | | 150 | | | 18 | 6 | 9 |

IV Semester BE (Mechanical)

V Semester BE (Mechanical)

| Subject Code | Subject | University Exam./ College Assessment | Marks | | | | Paper Duration - Hrs. | Lecture - Hrs. | Tutorials - Hrs. | Pract./ Drg - Hrs. |
|--------------|---|--------------------------------------|----------|---------|-----------|---------|-----------------------|----------------|------------------|--------------------|
| | | | Theory | | Practical | | | | | |
| | | | Maximum | Passing | Minimum | Passing | | | | |
| 5ME1 | Industrial Economics & * Entrepreneurship Develop | Univ. College | 80 20 | 40 | - | - | 3 | 3 | 1 | - |
| 5ME2 | Machine Design II | Univ. College | 80 20 | 40 | - | - | 3 | 3 | 1 | - |
| 5ME3 | Manufacturing Process III | Univ. College | 80 20 | 40 | - | - | 3 | 3 | 1 | - |
| 5ME4 | Heat Transfer | Univ. College | 80 20 | 40 | 25 25 | 25 | 3 | 3 | 1 | 2 |
| 5ME5 | Mechanical Measurement | Univ. College | 80 20 | 40 | 25 25 | 25 | 3 | 3 | 1 | 2 |
| 5ME6 | Production Technology I | Univ. College | 80 20 | 40 | 25 25 | 25 | 3 | 3 | 1 | 2 |
| 5ME7 | Seminar | College | - | - | A to D | C | - | - | - | 3 |
| Total | | | 600 | | 150 | | | 18 | 6 | 9 |

VI Semester BE (Mechanical)

| Subject Code | Subject | University Exam./ College Assessment | Marks | | | | Paper Duration - Hrs. | Lecture - Hrs. | Tutorials - Hrs. | Pract./ Drg - Hrs. |
|--------------|--------------------------|--------------------------------------|----------|---------|-----------|---------|-----------------------|----------------|------------------|--------------------|
| | | | Theory | | Practical | | | | | |
| | | | Maximum | Passing | Minimum | Passing | | | | |
| 6ME1 | Energy Conversion I | Univ. College | 80 20 | 40 | - | - | 3 | 3 | 1 | - |
| 6ME2 | Automatic Control | Univ. College | 80 20 | 40 | - | - | 3 | 3 | 1 | - |
| 6ME3 | Operation Research | Univ. College | 80 20 | 40 | - | - | 3 | 3 | 1 | - |
| 6ME4 | Industrial Electronics # | Univ. College | 80 20 | 40 | 25 25 | 25 | 3 | 3 | 1 | 2 |
| 6ME5 | Computer Applications II | Univ. College | 80 20 | 40 | 25 25 | 25 | 3 | 3 | 1 | 2 |
| 6ME6 | Machine Drawing | Univ. College | 80 20 | 40 | 25 25 | 25 | 3 | 3 | 1 | 2 |
| 6ME7 | Industrial Case Study | College | - | - | A to D | C | - | - | - | 3 |
| Total | | | 600 | | 150 | | | 18 | 6 | 9 |

VII Semester BE (Mechanical)

| Subject Code | Subject | University Exam./ College Assessment | Marks | | | | Paper Duration - Hrs. | Lecture - Hrs. | Tutorials - Hrs. | Pract./Drg -Hrs. |
|--------------|--------------------------|--------------------------------------|----------|---------|-----------|---------|-----------------------|----------------|------------------|------------------|
| | | | Theory | | Practical | | | | | |
| | | | Maximum | Passing | Minimum | Passing | | | | |
| 7ME1 | Production Technology II | Univ. College | 80 20 | 40 | - | - | 3 | 3 | 1 | - |
| 7ME2 | Elective I | Univ. College | 80 20 | 40 | - | - | 3 | 3 | 1 | - |
| 7ME3 | Elective II | Univ. College | 80 20 | 40 | 25 25 | 25 | 3 | 3 | 1 | 2 |
| 7ME4 | Energy Conversion II | Univ. College | 80 20 | 40 | 25 25 | 25 | 3 | 3 | 1 | 2 |
| 7ME5 | Machine Design III | Univ. College | 80 20 | 40 | 25 25 | 25 | 3 | 3 | 1 | 2 |
| 7ME6 | Project Seminar | College | - | - | 50 | 25 | - | - | - | 3 |
| Total | | | 500 | | 200 | | | 15 | 5 | 9 |

VIII Semester BE (Mechanical)

| Subject Code | Subject | University Exam./ College Assessment | Marks | | | | Paper Duration - Hrs. | Lecture - Hrs. | Tutorials - Hrs. | Pract./Drg -Hrs. |
|--------------|--------------------------|--------------------------------------|----------|---------|-----------|---------|-----------------------|----------------|------------------|------------------|
| | | | Theory | | Practical | | | | | |
| | | | Maximum | Passing | Minimum | Passing | | | | |
| 8ME1 | Industrial Management | Univ. College | 80 20 | 40 | - | - | 3 | 3 | 1 | - |
| 8ME2 | Elective III | Univ. College | 80 20 | 40 | - | - | 3 | 3 | 1 | - |
| 8ME3 | Automation in Production | Univ. College | 80 20 | 40 | 25 25 | 25 | 3 | 3 | 1 | 2 |
| 8ME4 | Energy Conversion III | Univ. College | 80 20 | 40 | 25 25 | 25 | 3 | 3 | 1 | 2 |
| 8ME5 | Computer Aided Design | Univ. College | 80 20 | 40 | 25 25 | 25 | 3 | 3 | 1 | 2 |
| 8ME6 | Project | Univ. College | - | - | 75 75 | 75 | - | - | - | 6 |
| Total | | | 500 | | 300 | | | 15 | 5 | 12 |

* Subject Pertaining to Applied Science & Humanities BOS ** Subject Pertaining to Metallurgy BOS # Subject Pertaining to Electronics BOS

**SCHEME OF EXAMINATION FOR DEGREE OF BACHELOR OF ENGINEERING (METALLURGICAL ENGINEERING)
SEMESTER PATTERN**

Third Semester B.E (METALLURGICAL)

| S.NO. | Subject | Paper/Practical College Assessment | | Max. Marks | Duration of Paper Hours | L | T | P | Total |
|-------|-------------------------|---------------------------------------|-----|------------|----------------------------|----|---|----|-------|
| 3T1 | Mathematics – III | Paper | | 100 | 3 | 4 | 1 | 0 | 5 |
| 3T2 | Testing of Materials | Paper | | 100 | 3 | 3 | 1 | 4 | 8 |
| | | Pract. | 25) | | | | | | |
| | | Coll.Ass. | 25) | 50 | | | | | |
| 3T3 | Furnaces & Refractories | Paper | | 100 | 3 | 4 | 1 | 0 | 5 |
| 3T4 | Engineering Physical | Paper | | 100 | 3 | 3 | 1 | 4 | 8 |
| | | Pract. | 25) | | | | | | |
| | | Coll.Ass. | 25) | 50 | | | | | |
| 3T5 | Metallurgical Analysis | Paper | | 100 | 3 | 4 | 0 | 2 | 6 |
| | | Pract. | 25) | | | | | | |
| | | Coll.Ass. | 25) | 50 | | | | | |
| | | TOTAL | | 650 | | 18 | 4 | 10 | 32 |

Note : Distribution of paper 100 will be : i) Theory : 80 ii) Sessional : 20 = Total 100

Fourth Semester B.E (METALLURGICAL)

| S.NO. | Subject | Paper/Practical College Assessment | | Max. Marks | Duration of Paper Hours | L | T | P | Total |
|-------|------------------------------------|---------------------------------------|-----|------------|----------------------------|----|---|----|-------|
| 4T1 | Computer Programming | Paper | | 100 | 3 | 4 | 0 | 4 | 8 |
| | | Pract. | 25) | | | | | | |
| | | Coll.Ass. | 25) | 50 | | | | | |
| 4T2 | Mechanical Processing of Materials | Paper | | 100 | 3 | 3 | 1 | 2 | 6 |
| | | Pract. | 25) | | | | | | |
| | | Coll.Ass. | 25) | 50 | | | | | |
| 4T3 | Mineral Dressing | Paper | | 100 | 3 | 3 | 1 | 2 | 6 |
| | | Pract. | 25) | | | | | | |
| | | Coll.Ass. | 25) | 50 | | | | | |
| 4T4 | Hear Transfer | Paper | | 100 | 3 | 4 | 1 | 2 | 8 |
| | | Pract. | 25) | | | | | | |
| | | Coll.Ass. | 25) | 50 | | | | | |
| 4T5 | Metallurgical Thermodynamies | Paper | - | 100 | 3 | 4 | 1 | 0 | 5 |
| | | | | | | | | | |
| | | TOTAL | | 700 | | 18 | 4 | 10 | 32 |

Note : Distribution of paper 100 will be : i) Theory : 80 ii) Sessional : 20 = Total 100

Fifth Semester B.E (METALLURGICAL)

| S.NO. | Subject | Paper/Practical College Assessment | | Max. Marks | Duration of Paper Hours | L | T | P | Total |
|-------|---------------------------------------|---------------------------------------|-----|------------|----------------------------|----|---|---|-------|
| 5T1 | Elements of Foundry Technology | Paper | | 100 | 3 | 4 | 1 | 2 | 7 |
| | | Pract. | 25) | | | | | | |
| | | Coll.Ass. | 25) | 50 | | | | | |
| 5T2 | Polymeric & Ceramic Materials | Paper | - | 100 | 3 | 4 | 1 | 0 | 5 |
| 5T3 | Characterization of Materials | Paper | | 100 | 3 | 4 | 1 | 2 | 7 |
| | | Pract. | 25) | | | | | | |
| | | Coll.Ass. | 25) | 50 | | | | | |
| 5T4 | Pyrometallurgy of Non-ferrous Metals. | Paper | | 100 | 3 | 4 | 1 | 2 | 7 |
| | | Pract. | 25) | | | | | | |
| | | Coll.Ass. | 25) | 50 | | | | | |
| 5T5 | Managerial Economics | Paper | - | 100 | 3 | 4 | 1 | 0 | 5 |
| | | TOTAL | | 650 | | 20 | 5 | 6 | 31 |

Note : Distribution of paper 100 will be : i) Theory : 80 ii) Sessional : 20 = Total 100

Sixth Semester B.E (METALLURGICAL)

| S.NO. | Subject | Paper/Practical College Assessment | | Max. Marks | Duration of Paper Hours | L | T | P | Total |
|-------|---|---------------------------------------|-----|------------|----------------------------|----|---|----|-------|
| 6T1 | Theory and Technology of Heat Treatment | Paper | | 100 | 3 | 3 | 1 | 4 | 8 |
| | | Pract. | 25) | | | | | | |
| | | Coll.Ass. | 25) | 50 | | | | | |
| 6T2 | Welding Technology | Paper | - | 100 | 3 | 4 | 1 | 2 | 7 |
| | | Pract. | 25) | | | | | | |
| | | Coll.Ass. | 25) | 50 | | | | | |
| 6T3 | Ferrous Extraction Metallurgy | Paper | | 100 | 3 | 4 | 1 | 0 | 5 |
| 6T4 | Hydro Electro Metallurgy | Paper | | 100 | 3 | 4 | 1 | 2 | 7 |
| | | Pract. | 25) | | | | | | |
| | | Coll.Ass. | 25) | 50 | | | | | |
| 6T5 | Elective – 1 = | Paper | - | 100 | 3 | 3 | 1 | 2 | 6 |
| | | Pract. | 25) | | | | | | |
| | | Coll.Ass. | 25) | 50 | | | | | |
| | | TOTAL | | 700 | | 18 | 5 | 10 | 33 |

=Elective-1 :- (1) Electromagnetic & Electronic Materials (2) Power Metallurgy (3) Light Metal Alloys (4) Instrumentation (5) Wear of Engg. Materials.

Note : Distribution of paper 100 will be : i) Theory : 80 ii) Sessional : 20 = Total 100

Seventh Semester B.E (METALLURGICAL)

| S.NO. | Subject | Paper/Practical College Assessment | | Max. Marks | Duration of Paper Hours | L | T | P | Total |
|-------|-------------------------|---------------------------------------|-----|------------|----------------------------|----|---|---|-------|
| 7T1 | Selection of Materials | Paper | - | 100 | 3 | 4 | 1 | 0 | 5 |
| 7T2 | Structural Metallurgy | Paper | - | 100 | 3 | 4 | 1 | 2 | 7 |
| | | Pract. | 25) | | | | | | |
| | | Coll.Ass. | 25) | 50 | | | | | |
| 7T3 | Steel Making Technology | Paper | - | 100 | 3 | 4 | 1 | 0 | 5 |
| 7T4 | Composite Materials | Paper | - | 100 | 3 | 3 | 1 | 2 | 6 |
| | | Pract. | 25) | | | | | | |
| | | Coll.Ass. | 25) | 50 | | | | | |
| 7T5 | Elective – II = | Paper | - | 100 | 3 | 4 | 1 | 0 | 5 |
| | Project Seminar | | | 50 | | 0 | 0 | 3 | 3 |
| | TOTAL | | | 650 | | 19 | 5 | 7 | 31 |

=Elective-II :- (1) Surface hardening (2) Mechanical Characterization of Materials (3) Alternative Iron Making Technology (4) NDT Techniques

Note : Distribution of paper 100 will be : i) Theory : 80 ii) Sessional : 20 = Total 100

Eighth Semester B.E (METALLURGICAL)

| S.NO. | Subject | Paper/Practical College Assessment | | Max. Marks | Duration of Paper Hours | L | T | P | Total |
|-------|--|---------------------------------------|-----|------------|----------------------------|----|---|----|-------|
| 8T1 | Advanced Foundry Technology | Paper | - | 100 | 3 | 4 | 1 | 2 | 7 |
| | | Pract. | 25) | | | | | | |
| | | Coll.Ass. | 25) | 50 | | | | | |
| 8T2 | Corrosion & Surface Engineering | Paper | - | 100 | 3 | 4 | 1 | 2 | 7 |
| | | Pract. | 25) | | | | | | |
| | | Coll.Ass. | 25) | 50 | | | | | |
| 8T3 | Alloy Steels & High Temperature Alloys | Paper | - | 100 | 3 | 4 | 1 | 0 | 5 |
| 8T4 | Elective – III = | Paper | - | 100 | 3 | 4 | 1 | 0 | 5 |
| 8T5 | Project Viva | Coll. Ass. | 75) | 150 | | 0 | 0 | 6 | 6 |
| | | Viva | 75) | | | | | | |
| | TOTAL | | | 650 | | 16 | 4 | 10 | 30 |

=Elective-III :- (1) Failure Analysis of Engineering Materials (2) Advances in Processing of Materials (3) Secondary and Special Steel Making Processes (4) Waste Management.

Note : Distribution of paper 100 will be : i) Theory : 80 ii) Sessional : 20 = Total 100

**SCHEME OF EXAMINATION AND TEACHING
FOR THE B.E. FOUR YEAR COURSE IN MINING (SEMESTER PATTERN)
THIRD SEMESTER – SECOND YEAR B.E. MINING ENGINEERING**

| S.NO. | Subject | Examination Scheme | | | | Teaching Scheme | | | | Board |
|-------|------------------------|---------------------------------|------------------------|-------------------------------|-------------------------------|-----------------|-------------|-----------------|-----------------|-------------------------|
| | | Paper/ Pract/ C.A. | Max. Marks | Mini. Marks for passing | Duration of Paper Hours | L (hour) | T (hour) | P (hour) | Total (hour) | |
| 3N1 | Geology I | Paper C.A. Pract. C.A. | 80 20 25 25 | 40 25 | 3 | 3 0 | 1 0 | 0 2 | 4 2 | App Sci & Humanities |
| 3N2 | Fluid Mechanics | Paper C.A. Pract. C.A. | 80 20 25) 25) | 40 25 | 3 | 3 0 | 1 0 | 0 2 | 4 2 | Civil |
| 3N3 | Computer Programming | Paper C.A. Pract. C.A. | 80 20 25 25 | 40 25 | 3 | 3 0 | 1 0 | 0 2 | 4 2 | Mining |
| 3N4 | Strength of Materials | Paper C.A. | 80 20 | 40 | 3 | 3 | 1 | 0 | 4 | Civil |
| 3N5 | Concepts of Mining | Paper C.A. | 80 20 | 40 | 3 | 3 | 1 | 0 | 4 | Mining |
| 3N6 | Electrical Engineering | Paper C.A. | 80 20 | 40 | 3 | 3 | 1 | 0 | 4 | Electrical |
| | Mine Visits | | | | | | | 2 | 2 | |
| | TOTAL | | 750 | | | 18 | 6 | 8 | 32 | |

Practical training of one month duration in winter vacation.

**SCHEME OF EXAMINATION AND TEACHING
FOR THE B.E. FOUR YEAR COURSE IN MINING (SEMESTER PATTERN)
FOURTH SEMESTER – SECOND YEAR B.E. MINING ENGINEERING**

| S.NO. | Subject | Examination Scheme | | | | Teaching Scheme | | | | Board |
|-------|---------------------------|---------------------------------|------------------------|-------------------------------|-------------------------------|-----------------|-------------|-----------------|-----------------|-------------------------|
| | | Paper/ Pract/ C.A. | Max. Marks | Mini. Marks for passing | Duration of Paper Hours | L (hour) | T (hour) | P (hour) | Total (hour) | |
| 4N1 | Mine Surveying I | Paper C.A. Pract. C.A. | 80 20 25 25 | 40 25 | 3 | 3 0 | 1 0 | 0 2 | 4 2 | Mining |
| 4N2 | Rock Mechanics | Paper C.A. Pract. C.A. | 80 20 25) 25) | 40 25 | 3 | 3 0 | 1 0 | 0 2 | 4 2 | Mining |
| 4N3 | Mining Machinery I | Paper C.A. Pract. C.A. | 80 20 25 25 | 40 25 | 3 | 3 0 | 1 0 | 0 2 | 4 2 | Mining |
| 4N4 | Geology II | Paper C.A. | 80 20 | 40 | 3 | 3 | 1 | 0 | 4 | App Sci & Humanities |
| 4N5 | Mechanical Engineering | Paper C.A. | 80 20 | 40 | 3 | 3 | 1 | 0 | 4 | Mechanical |
| 4N6 | Statistical and Numerical | Paper C.A. | 80 20 | 40 | 3 | 3 | 1 | 0 | 4 | App Sci & Humanities |
| | Mine Visits | | | | | | | 2 | 2 | |
| | | TOTAL | 750 | | | 18 | 6 | 8 | 32 | |

Practical training of one month duration in summer vacation.

**SCHEME OF EXAMINATION AND TEACHING
FOR THE B.E. FOUR YEAR COURSE IN MINING (SEMESTER PATTERN)
FIFTH SEMESTER – THRID YEAR B.E. MINING ENGINEERING**

| S.NO. | Subject | Examination Scheme | | | | Teaching Scheme | | | | Board |
|-------|---------------------------------|---------------------------------|----------------------|-------------------------------|-------------------------------|-----------------|-------------|-----------------|-----------------|-------------|
| | | Paper/ Pract/ C.A. | Max. Marks | Mini. Marks for passing | Duration of Paper Hours | L (hour) | T (hour) | P (hour) | Total (hour) | |
| 5N1 | Mine Environment I | Paper C.A. Pract. C.A. | 80 20 25 25 | 40 25 | 3 | 3 0 | 1 0 | 0 2 | 4 2 | Mining |
| 5N2 | Mine Surveying II | Paper C.A. Pract. C.A. | 80 20 25 25 | 40 25 | 3 | 3 0 | 1 0 | 0 2 | 4 2 | Mining |
| 5N3 | Mine Supports | Paper C.A. | 80 20 | 40 | 3 | 3 | 1 | 0 | 4 | Mining |
| 5N4 | Development of Mineral Deposits | Paper C.A. | 80 20 | 40 | 3 | 3 | 1 | 0 | 4 | Mining |
| 5N5 | Electronics and instrumentation | Paper C.A. | 80 20 | 40 | 3 | 3 | 1 | 0 | 4 | Electronics |
| 5N6 | Mineral Processing | Paper C.A. | 80 20 | 40 | 3 | 3 | 1 | 0 | 4 | Metallurgy |
| | Mine Visits | Pract. C.A. | 25 25 | 25 | - | 0 | 0 | 2 | 2 | |
| | | TOTAL | 750 | | | 18 | 6 | 8 | 32 | |

Practical training of one month duration in summer vacation.

SCHEME OF EXAMINATION AND TEACHING
FOR THE B.E. FOUR YEAR COURSE IN MINING (SEMESTER PATTERN)
SIXTH SEMESTER – THRID YEAR B.E. MINING ENGINEERING

| S.NO. | Subject | Examination Scheme | | | | Teaching Scheme | | | | |
|-------|-------------------------------------|---------------------------------|----------------------|-------------------------------|-------------------------------|-----------------|-------------|-------------|-----------------|-------------------------|
| | | Paper/ Pract/ C.A. | Max. Marks | Mini. Marks for passing | Duration of Paper Hours | L (hour) | T (hour) | P (hour) | Total (hour) | Board |
| 6N1 | Mining Machinery II | Paper C.A. Pract. C.A. | 80 20 25 25 | 40 25 | 3 | 3 0 | 1 0 | 0 2 | 4 2 | Mining |
| 6N2 | Mine Environment II | Paper C.A. Pract. C.A. | 80 20 25 25 | 40 25 | 3 | 3 0 | 1 0 | 0 2 | 4 2 | Mining |
| 6N3 | Managerial Economics | Paper C.A. | 80 20 | 40 | 3 | 3 | 1 | 0 | 4 | App Sci & Humanities |
| 6N4 | Underground Coal Mining | Paper C.A. | 80 20 | 40 | 3 | 3 | 1 | 0 | 4 | Mining |
| 6N5 | Underground Metalliferous Mining | Paper C.A. | 80 20 | 40 | 3 | 3 | 1 | 0 | 4 | Mining |
| 6N6 | Surface Mining | Paper C.A. | 80 20 | 40 | 3 | 3 | 1 | 0 | 4 | Mining |
| | Training Seminar | C.A. | 75 | | | 0 | 0 | 2 | 2 | |
| | Mine Visits | | | | | 0 | 0 | 2 | 2 | |
| | | TOTAL | 775 | | | 18 | 6 | 8 | 32 | |

Practical training of one month duration in summer vacation.

**SCHEME OF EXAMINATION AND TEACHING
FOR THE B.E. FOUR YEAR COURSE IN MINING (SEMESTER PATTERN)**

| S.NO. | Subject | Examination Scheme | | | | Teaching Scheme | | | | Board |
|-------|---|---------------------------------|----------------------|-------------------------------|-------------------------------|-----------------|-------------|-------------|-----------------|--------|
| | | Paper/ Pract/ C.A. | Max. Marks | Mini. Marks for passing | Duration of Paper Hours | L (hour) | T (hour) | P (hour) | Total (hour) | |
| 7N1 | Ground Control in Mines | Paper C.A. Pract. C.A. | 80 20 25 25 | 40 25 | 3 | 3 0 | 0 0 | 0 2 | 3 2 | Mining |
| 7N2 | Mine Environment III | Paper C.A. Pract. C.A. | 80 20 25 25 | 40 25 | 3 | 3 0 | 0 0 | 0 2 | 3 2 | Mining |
| 7N3 | Computer Applications in Mining | Paper C.A. Pract. C.A. | 80 20 25 25 | 40 25 | 3 | 3 | 0 | 0 2 | 3 2 | Mining |
| 7N4 | Mineral Economics | Paper C.A. | 80 20 | 40 | 3 | 3 | 0 | 0 | 3 | Mining |
| 7N5 | Mine Systems Engineering | Paper C.A. | 80 20 | 40 | 3 | 3 | 0 | 0 | 3 | Mining |
| 7N6 | Elective I | Paper C.A. | 80 20 | 40 | 3 | 3 | 0 | 0 | 3 | Mining |
| | 1. Rock Excavation Engineering 2. Geostatistics 3. Advanced Mine Surveying Project | Pract. C.A. | 50 | | | 0 | 0 | 3 | 3 | Mining |
| | Mine Visits | | | | | 0 | 0 | 2 | 2 | |
| | | TOTAL | 800 | | | 18 | 0 | 11 | 29 | |

SEVENTH SEMESTER – FOURTH YEAR B.E. MINING ENGINEERING

Practical training of one month duration in summer vacation.

**SCHEME OF EXAMINATION AND TEACHING
FOR THE B.E. FOUR YEAR COURSE IN MINING (SEMESTER PATTERN)
EIGHTH SEMESTER – FOURTH YEAR B.E. MINING ENGINEERING**

| S.NO. | Subject | Examination Scheme | | | | Teaching Scheme | | | | |
|-------|---|--------------------------|---------------|-------------------------------|-------------------------------|-----------------|-------------|-------------|-----------------|--------|
| | | Paper/ Pract/ C.A. | Max. Marks | Mini. Marks for passing | Duration of Paper Hours | L (hour) | T (hour) | P (hour) | Total (hour) | Board |
| 8N1 | Mine Management | Paper C.A. | 80 20 | 40 | 3 | 3 | 1 | 0 | 4 | Mining |
| 8N2 | Mine Legislation and Safety | Paper C.A. | 80 20 | 40 | 3 | 3 | 1 | 0 | 4 | Mining |
| 8N3 | Mine Planning | Paper C.A. | 80 20 | 40 | 3 | 3 | 1 | 0 | 4 | Mining |
| 8N4 | Elective II | Paper C.A. | 80 20 | 40 | 3 | 3 | 1 | 0 | 4 | Mining |
| 8N5 | 1. Underground Space Technology 2. Mine Safety Engineering 3. Management Information System Project and Seminar | Pract. C.A. | 75 | 75 | | 0 | 0 | 6 | 6 | |
| | 75 | | | | | | | | | |
| | Training Seminar | C.A. | 75 | | | | | 2 | 2 | |
| | Survey Camp | C.A. | 50 | | | | | 2 | 2 | |
| | | TOTAL | 675 | | | 12 | 4 | 10 | 26 | |

L=Lecture, T=Tutorial, P=Practical, C.A.=College Assessment

Note: Total duration of practical training during vacations between third to eighth semesters should be atleast two months out of which one month practical training should be completed before sixth sem.

RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY
Scheme of Teaching & Examination of B.E. (Civil Engineering)

III Semester

| Sub Code | Name of Subject | Teaching Scheme (Clock hours/week) | | | | Assessment of Marks for Theory | | | | Assessment of Marks for Practical | | | | Duration of Paper in Hrs. |
|----------------|-----------------------|------------------------------------|---|-----|-------|--------------------------------|-----|-------|-----------------|-----------------------------------|------|-------|-----------------|---------------------------|
| | | L | T | P/D | Total | Paper | CA | Total | Min for Passing | Practical | C.A. | Total | Min for Passing | |
| 3CE01 3ST01 | Mathematics-III | 3 | 1 | - | 4 | 80 | 20 | 100 | 40 | - | - | - | - | 3 |
| 3CE02 3ST02 | Strength of Materials | 3 | 1 | 2 | 6 | 80 | 20 | 100 | 40 | 25 | 25 | 50 | 25 | 3 |
| 3CE03 | Fluid Mechanics-I | 3 | 1 | 2 | 6 | 80 | 20 | 100 | 40 | 25 | 25 | 50 | 25 | 3 |
| 3CE04 | Geotechnical Engg-I | 3 | 1 | 2 | 6 | 80 | 20 | 100 | 40 | 25 | 25 | 50 | 25 | 3 |
| 3CE05 3ST05 | Engineering Geology | 3 | 1 | 2 | 6 | 80 | 20 | 100 | 40 | 25 | 25 | 50 | 25 | 3 |
| 3CE06 3ST06 | Computer Programming | 3 | 1 | - | 4 | 40 | 10 | 50 | 20 | - | - | - | - | 3 |
| | | 18 | 6 | 8 | 32 | 440 | 110 | 550 | | 100 | 100 | 200 | | |

Total Credits : $18 + (6+8)/2=25$

Total Marks : $550 + 200 = 750$

IV Semester

| Sub Code | Name of Subject | Teaching Scheme (Clock hours/week) | | | | Assessment of Marks for Theory | | | | Assessment of Marks for Practical | | | | Duration of Paper in Hrs. |
|----------------|----------------------------------|------------------------------------|---|-----|-------|--------------------------------|-----|-------|-----------------|-----------------------------------|------|-------|-----------------|---------------------------|
| | | L | T | P/D | Total | Paper | CA | Total | Min for Passing | Practical | C.A. | Total | Min for Passing | |
| 4CE01 4ST01 | Structural Analysis-I | 3 | 1 | - | 4 | 80 | 20 | 100 | 40 | - | - | - | - | 3 |
| 4CE02 4ST02 | Building Construction & Material | 3 | 1 | - | 4 | 80 | 20 | 100 | 40 | - | - | - | - | 3 |
| 4CE03 | Environmental Engg-I | 3 | 1 | 2 | 6 | 80 | 20 | 100 | 40 | 25 | 25 | 50 | 25 | 3 |
| 4CE04 4ST04 | Concrete Technology | 3 | 1 | 2 | 6 | 80 | 20 | 100 | 40 | 25 | 25 | 50 | 25 | 3 |
| 4CE05 4ST05 | Surveying-I | 3 | 1 | 4 | 8 | 80 | 20 | 100 | 40 | 25 | 25 | 50 | 25 | 3 |
| 4CE06 4ST06 | Hydrology and Water Resources | 3 | 1 | - | 4 | 80 | 20 | 100 | 40 | - | - | - | - | 3 |
| 4CE07 4ST07 | Computer Aided Drafting | - | - | 3 | 3 | - | - | - | - | - | G | - | C | - |
| | | 18 | 6 | 11 | 35 | 480 | 120 | 600 | | 75 | 75 | 150 | | |

Total Credits : $18 + (6+11)/2=26.5$

Total Marks : $600 + 150 = 750$

Note : CAD practical shall contain minimum five sketches drawn with AUTOCAD/MSWORLD or any other package related with Civil Engineering. Grades A,B and C may be assigned depending upon the report.

Scheme of Teaching & Examination of B.E. (Civil Engineering)**V Semester**

| Sub Code | Name of Subject | Teaching Scheme (Clock hours/week) | | | | Assessment of Marks for Theory | | | | Assessment of Marks for Practical | | | | Duration of Paper in Hrs. |
|----------------|------------------------------|------------------------------------|---|-----|-------|--------------------------------|-----|-------|-----------------|-----------------------------------|------|-------|-----------------|---------------------------|
| | | L | T | P/D | Total | Paper | CA | Total | Min for Passing | Practical | C.A. | Total | Min for Passing | |
| 5CE01 5ST01 | Steel Structures | 3 | 1 | 2 | 6 | 80 | 20 | 100 | 40 | 25 | 25 | 50 | 25 | 4 |
| 5CE02 | Environmental Engg.-II | 3 | 1 | - | 4 | 80 | 20 | 100 | 40 | - | - | - | - | 3 |
| 5CE03 | Surveying-II | 3 | 1 | 2 | 6 | 80 | 20 | 100 | 40 | 25 | 25 | 50 | 25 | 3 |
| 5CE04 5ST04 | Transportation Engineering-I | 3 | 1 | 2 | 6 | 80 | 20 | 100 | 40 | 25 | 25 | 50 | 25 | 3 |
| 5CE05 5ST05 | Building Design and Drawing | 1 | - | 4 | 5 | 80 | 20 | 100 | 40 | 25 | 25 | 50 | 25 | 4 |
| 5CE06 5ST06 | Project Management | 3 | 1 | - | 4 | 80 | 20 | 100 | 40 | - | - | - | - | 3 |
| 5CE07 5ST07 | Site Visits | - | - | 3 | 3 | - | - | - | - | - | G | - | C | - |
| | | 16 | 5 | 13 | 34 | 480 | 120 | 600 | - | 100 | 100 | 200 | - | - |

Total Credits : $16 + (5+13)/2=25$ Total Marks : $600 + 200 = 800$

Note : Site visits shall contain minimum five site visits supported by reports to Internal Examiner for evaluations purpose. Grade A,B and C may be assigned depending upon the report .

VI Semester

| Sub Code | Name of Subject | Teaching Scheme (Clock hours/week) | | | | Assessment of Marks for Theory | | | | Assessment of Marks for Practical | | | | Duration of Paper in Hrs. |
|----------------|---|------------------------------------|---|-----|-------|--------------------------------|-----|-------|-----------------|-----------------------------------|------|-------|-----------------|---------------------------|
| | | L | T | P/D | Total | Paper | CA | Total | Min for Passing | Practical | C.A. | Total | Min for Passing | |
| 6CE01 6ST01 | Structural Analysis-II | 3 | 1 | 2 | 6 | 80 | 20 | 100 | 40 | 25 | 25 | 50 | 25 | 3 |
| 6CE02 6ST02 | RCC Structures | 3 | 1 | 2 | 6 | 80 | 20 | 100 | 40 | 25 | 25 | 50 | 25 | 4 |
| 6CE03 | Geotechnical Engg-II | 3 | 1 | - | 4 | 80 | 20 | 100 | 40 | - | - | - | - | 3 |
| 6CE04 | Fluid Mechanics-II | 3 | 1 | 2 | 6 | 80 | 20 | 100 | 40 | 25 | 25 | 50 | 25 | 3 |
| 6CE05 6ST05 | Computer Application in Civil Engineering | 3 | 1 | 4 | 8 | 80 | 20 | 100 | 40 | 25 | 25 | 50 | 25 | 3 |
| 6CE06 6ST06 | Technical Writing | - | - | 3 | 3 | - | - | - | - | - | G | - | C | - |
| | | 15 | 5 | 13 | 33 | 400 | 100 | 500 | - | 100 | 100 | 200 | - | - |

Total Credits : $15 + (5+13)/2=24.0$ Total Marks : $500 + 200 = 700$

Note : 1. Professional Training of 3 to 4 weeks duration in between VI and VII semester (in summer)

Note : 2. Technical Writing shall contain minimum one report writing about any topic with MSWORD or any other package related with Civil Engineering Grades A,B and C may be assigned depending upon the report.

Scheme of Teaching & Examination of B.E. (Civil Engineering)

VII Semester

| Sub Code | Name of Subject | Teaching Scheme (Clock hours/week) | | | | Assessment of Marks for Theory | | | | Assessment of Marks for Practical | | | | Duration of Paper in Hrs. |
|----------------|--|------------------------------------|---|-----|-------|--------------------------------|-----|-------|-----------------|-----------------------------------|------|-------|-----------------|---------------------------|
| | | L | T | P/D | Total | Paper | CA | Total | Min for Passing | Practical | C.A. | Total | Min for Passing | |
| 7CE01 7ST01 | Structural Analysis-III | 4 | 1 | 2 | 7 | 80 | 20 | 100 | 40 | 25 | 25 | 50 | 25 | 4 |
| 7CE02 7ST02 | Advanced Concrete Structures | 3 | 1 | 4 | 8 | 80 | 20 | 100 | 40 | 50 | 50 | 100 | 50 | 3 |
| 7CE03 | Irrigation Engineering | 3 | 1 | 2 | 6 | 80 | 20 | 100 | 40 | 25 | 25 | 50 | 25 | 3 |
| 7CE04 | Maintenance & Rehabilitation of Civil Engineering Structures | 3 | 1 | - | 4 | 80 | 20 | 100 | 40 | - | - | - | - | 3 |
| 7CE05 | Elective - I | 3 | 1 | - | 4 | 80 | 20 | 100 | 40 | - | - | - | - | 3 |
| 7CE06 | Industrial Case Study | - | - | 2 | 2 | - | - | - | - | 25 | 25 | 50 | 25 | - |
| 7CE07 | Project & Seminar | - | - | 3 | 3 | - | - | - | - | - | 50 | 50 | 25 | - |
| | | 16 | 5 | 13 | 34 | 400 | 100 | 500 | | 125 | 175 | 300 | | |

Total Credits : $18 + (5+13)/2=25$

Total Marks : $500 + 300 = 800$

Note : Site visits shall contain minimum five site visits supported by reports to Internal Examiner for evaluations purpose. Grade A,B and C may be assigned depending upon the report .

VIII Semester

| Sub Code | Name of Subject | Teaching Scheme (Clock hours/week) | | | | Assessment of Marks for Theory | | | | Assessment of Marks for Practical | | | | Duration of Paper in Hrs. |
|----------------|-------------------------------|------------------------------------|---|-----|-------|--------------------------------|----|-------|-----------------|-----------------------------------|------|-------|-----------------|---------------------------|
| | | L | T | P/D | Total | Paper | CA | Total | Min for Passing | Practical | C.A. | Total | Min for Passing | |
| 8CE01 8ST01 | Estimating & Costing | 3 | 1 | 4 | 8 | 80 | 20 | 100 | 40 | 50 | 50 | 100 | 50 | 4 |
| 8CE02 8ST02 | Transportation Engineering-II | 3 | 1 | - | 4 | 80 | 20 | 100 | 40 | - | - | - | - | 3 |
| 8CE03 | Elective-II | 4 | 1 | - | 5 | 80 | 20 | 100 | 40 | - | - | - | - | 3 |
| 8CE04 | Elective-III | 3 | 1 | 2 | 6 | 80 | 20 | 100 | 40 | 25 | 25 | 50 | 25 | 3 |
| 8CE05 | Project | - | - | 6 | 6 | - | - | - | - | 75 | 75 | 150 | 75 | - |
| | | 13 | 4 | 12 | 29 | 320 | 80 | 400 | - | 150 | 150 | 300 | - | - |

Total Credits : $13 + (4+12)/2=21$

Total Marks : $400 + 300 = 700$

Total Credits : $25+26.5+25+24+25+21=146.5$

Scheme of Teaching & Examination of B.E. (Structural Engineering)**III Semester**

| Sub Code | Name of Subject | Teaching Scheme (Clock hours/week) | | | | Assessment of Marks for Theory | | | | Assessment of Marks for Practical | | | | Duration of Paper in Hrs. |
|----------------|----------------------|------------------------------------|---|-----|-------|--------------------------------|-----|-------|-----------------|-----------------------------------|------|-------|-----------------|---------------------------|
| | | L | T | P/D | Total | Paper | CA | Total | Min for Passing | Practical | C.A. | Total | Min for Passing | |
| 3ST01 3CE01 | Mathematics-III | 3 | 1 | - | 4 | 80 | 20 | 100 | 40 | - | - | - | - | 3 |
| 3ST02 3CE02 | Strength of Material | 3 | 1 | 2 | 6 | 80 | 20 | 100 | 40 | 25 | 25 | 50 | 25 | 3 |
| 3ST03 | Fluid Mechanics | 3 | 1 | 2 | 6 | 80 | 20 | 100 | 40 | 25 | 25 | 50 | 25 | 3 |
| 3ST04 | Geotechnical Engg. | 3 | 1 | 2 | 6 | 80 | 20 | 100 | 40 | 25 | 25 | 50 | 25 | 3 |
| 3ST05 3CE05 | Engineering Geology | 3 | 1 | 2 | 6 | 80 | 20 | 100 | 40 | 25 | 25 | 50 | 25 | 3 |
| 3ST06 3CE06 | Computer Programming | 3 | 1 | - | 4 | 40 | 10 | 50 | 20 | - | - | - | - | 3 |
| | | 18 | 6 | 8 | 32 | 440 | 110 | 550 | | 100 | 100 | 200 | | |

Total Credits : $18 + (6+8)/2=25$ Total Marks : $550 + 200 = 750$ **IV Semester**

| Sub Code | Name of Subject | Teaching Scheme (Clock hours/week) | | | | Assessment of Marks for Theory | | | | Assessment of Marks for Practical | | | | Duration of Paper in Hrs. |
|----------------|----------------------------------|------------------------------------|---|-----|-------|--------------------------------|-----|-------|-----------------|-----------------------------------|------|-------|-----------------|---------------------------|
| | | L | T | P/D | Total | Paper | CA | Total | Min for Passing | Practical | C.A. | Total | Min for Passing | |
| 4ST01 4CE01 | Structural Analysis-I | 3 | 1 | - | 4 | 80 | 20 | 100 | 40 | - | - | - | - | 3 |
| 4ST02 4CE02 | Building Construction & Material | 3 | 1 | - | 4 | 80 | 20 | 100 | 40 | - | - | - | - | 3 |
| 4ST03 | Environmental Engg.-I | 3 | 1 | 2 | 6 | 80 | 20 | 100 | 40 | 25 | 25 | 50 | 25 | 3 |
| 4ST04 4CE04 | Concrete Technology | 3 | 1 | 2 | 6 | 80 | 20 | 100 | 40 | 25 | 25 | 50 | 25 | 3 |
| 4ST05 4CE05 | Surveying-I | 3 | 1 | 4 | 8 | 80 | 20 | 100 | 40 | 25 | 25 | 50 | 25 | 3 |
| 4ST06 4CE06 | Hydrology and Water Resources | 3 | 1 | - | 4 | 80 | 20 | 100 | 40 | - | - | - | - | 3 |
| 4ST07 4CE07 | Computer Aided Drafting | - | - | 3 | 3 | - | - | - | - | - | G | - | C | - |
| | | 18 | 6 | 11 | 35 | 480 | 120 | 600 | | 75 | 75 | 150 | | |

Total Credits : $18 + (6+11)/2=26.5$ Total Marks : $600 + 150 = 750$

Note : CAD practical shall contain minimum five sketches drawn with AUTOCAD/MSWORLD or any other package related with Civil Engineering. Grades A,B and C may be assigned depending upon the report.

**Scheme of Teaching & Examination of B.E. (Structural Engineering)
V Semester**

| Sub Code | Name of Subject | Teaching Scheme (Clock hours/week) | | | | Assessment of Marks for Theory | | | | Assessment of Marks for Practical | | | | Duration of Paper in Hrs. |
|----------------|-----------------------------|------------------------------------|---|-----|-------|--------------------------------|-----|-------|-----------------|-----------------------------------|------|-------|-----------------|---------------------------|
| | | L | T | P/D | Total | Paper | CA | Total | Min for Passing | Practical | C.A. | Total | Min for Passing | |
| 5ST01 5CE01 | Steel Structures | 3 | 1 | 2 | 6 | 80 | 20 | 100 | 40 | 25 | 25 | 50 | 25 | 4 |
| 5ST02 | Ad Mechanics | 3 | 1 | - | 4 | 80 | 20 | 100 | 40 | - | - | - | - | 3 |
| 5ST03 | RCC Structures | 3 | 1 | 2 | 6 | 80 | 20 | 100 | 40 | 25 | 25 | 50 | 25 | 3 |
| 5ST04 | Transportation Engineering | 3 | 1 | 2 | 6 | 80 | 20 | 100 | 40 | 25 | 25 | 50 | 25 | 3 |
| 5ST05 5CE05 | Building Design and Drawing | 1 | - | 4 | 5 | 80 | 20 | 100 | 40 | 25 | 25 | 50 | 25 | 4 |
| 5ST06 5CE06 | Project Management | 3 | 1 | - | 4 | 80 | 20 | 100 | 40 | - | - | - | - | 3 |
| 5ST07 | Site Visits | - | - | 3 | 3 | - | - | - | - | - | G | - | C | - |
| | | 16 | 5 | 13 | 34 | 480 | 120 | 600 | - | 100 | 100 | 200 | - | - |

Total Credits : $16 + (5+13)/2=25$

Total Marks : $600 + 200 = 800$

Note : Site visits shall contain minimum five site visits supported by reports to Internal Examiner for evaluations purpose. Grade A,B and C may be assigned depending upon the report .

VI Semester

| Sub Code | Name of Subject | Teaching Scheme (Clock hours/week) | | | | Assessment of Marks for Theory | | | | Assessment of Marks for Practical | | | | Duration of Paper in Hrs. |
|----------------|--|------------------------------------|---|-----|-------|--------------------------------|-----|-------|-----------------|-----------------------------------|------|-------|-----------------|---------------------------|
| | | L | T | P/D | Total | Paper | CA | Total | Min for Passing | Practical | C.A. | Total | Min for Passing | |
| 6ST01 6CE01 | Structural Analysis-II | 3 | 1 | 2 | 6 | 80 | 20 | 100 | 40 | 25 | 25 | 50 | 25 | 3 |
| 6ST02 | Prestress Concrete | 3 | 1 | 2 | 6 | 80 | 20 | 100 | 40 | 25 | 25 | 50 | 25 | 3 |
| 6ST03 | Steel and Concrete | 3 | 1 | - | 4 | 80 | 20 | 100 | 40 | - | - | - | - | 3 |
| 6ST04 | Steel and Concrete Composite Structures | 3 | 1 | 2 | 6 | 80 | 20 | 100 | 40 | 25 | 25 | 50 | 25 | 3 |
| 6ST05 | Computer Application in Structural Engineering | 3 | 1 | 4 | 8 | 80 | 20 | 100 | 40 | 25 | 25 | 50 | 25 | 3 |
| 6ST06 6CE06 | Technical Writing | - | - | 3 | 3 | - | - | - | - | - | G | - | C | - |
| | | 15 | 5 | 13 | 33 | 400 | 100 | 500 | - | 100 | 100 | 200 | - | - |

Total Credits : $15 + (5+13)/2=24.0$

Total Marks : $500 + 200 = 700$

Note : 1. Professional Training of 3 to 4 weeks duration in between VI and VII semester (in summer)

Note : 2. Technical Writing shall contain minimum one report writing about any topic with MSWORLD or any other package related with Civil Engineering Grades A,B and C may be assigned depending upon the report.

Scheme of Teaching & Examination of B.E. (Structural Engineering)**VII Semester**

| Sub Code | Name of Subject | Teaching Scheme (Clock hours/week) | | | | Assessment of Marks for Theory | | | | Assessment of Marks for Practical | | | | Duration of Paper in Hrs. |
|----------------|------------------------------------|------------------------------------|---|-----|-------|--------------------------------|-----|-------|-----------------|-----------------------------------|------|-------|-----------------|---------------------------|
| | | L | T | P/D | Total | Paper | CA | Total | Min for Passing | Practical | C.A. | Total | Min for Passing | |
| 7ST01 7CE01 | Structural Analysis-III | 4 | 1 | 2 | 7 | 80 | 20 | 100 | 40 | 25 | 25 | 50 | 25 | 4 |
| 7ST02 | Advanced RCC | 3 | 1 | 2 | 6 | 80 | 20 | 100 | 40 | 25 | 25 | 50 | 25 | 4 |
| 7ST03 | Foundation Design | 3 | 1 | - | 4 | 80 | 20 | 100 | 40 | - | - | - | - | 3 |
| 7ST04 | Object Oriented Programming in C+A | 3 | 1 | 2 | 6 | 80 | 20 | 100 | 40 | 25 | 25 | 50 | 25 | 3 |
| 7ST05 | Elective - I | 3 | - | - | 4 | 80 | 20 | 100 | 40 | - | - | - | - | 3 |
| 7ST06 | Industrial Case Study | - | - | 3 | 3 | - | - | - | - | 50 | 50 | 100 | 50 | - |
| 7ST07 | Project & Seminar | - | - | 3 | 3 | - | - | - | - | - | 50 | 50 | 25 | - |
| | | 16 | 5 | 12 | 33 | 400 | 100 | 500 | | 125 | 175 | 300 | | |

Total Credits : $16 + (5+12)/2=24.5$ Total Marks : $500 + 300 = 800$ **VIII Semester**

| Sub Code | Name of Subject | Teaching Scheme (Clock hours/week) | | | | Assessment of Marks for Theory | | | | Assessment of Marks for Practical | | | | Duration of Paper in Hrs. |
|----------------|--|------------------------------------|---|-----|-------|--------------------------------|----|-------|-----------------|-----------------------------------|------|-------|-----------------|---------------------------|
| | | L | T | P/D | Total | Paper | CA | Total | Min for Passing | Practical | C.A. | Total | Min for Passing | |
| 8ST01 8CE01 | Estimating & Costing | 3 | 1 | 2 | 6 | 80 | 20 | 100 | 40 | 25 | 25 | 50 | 25 | 4 |
| 8ST02 | Instrumentation and Rehabilitation of Structures | 3 | 1 | 2 | 6 | 80 | 20 | 100 | 40 | 25 | 25 | 50 | 25 | 3 |
| 8ST03 | Elective-II | 4 | 1 | - | 4 | 80 | 20 | 100 | 40 | - | - | - | - | 3 |
| 8ST04 | Elective-III | 3 | 1 | 2 | 6 | 80 | 20 | 100 | 40 | 25 | 25 | 50 | 25 | 3 |
| 8ST05 | Project | - | - | 6 | 6 | - | - | - | - | 75 | 75 | 150 | 75 | - |
| | | 13 | 4 | 12 | 28 | 320 | 80 | 400 | | 150 | 150 | 300 | | |

Total Credits : $13 + (4+12)/2=21$ Total Marks : $400 + 300 = 700$ Total Credits= $25+26.5+25+24+24.5+21.0=146$ **ELECTIVES:**

| 7ST05 Elective-I | 8ST03 Elective-II | 8ST04 Elective-III |
|---------------------------------|---|---|
| 1. Advanced Structural | 1. Elements of Finite Element Method | 1. Structural Dynamics |
| 2. Structural Stability | 2. Wind Load Analysis | 2. Earthquake Analysis and Design of structures |
| 3. Hydraulic System Engineering | 3. Object Oriented Programming in FORTRAN | 3. Computer Graphics in structural Engg. |

**Scheme of Teaching and Examination for Degree of Bachelor of Engineering
(Production Engineering) Semester Pattern
III Semester B.E. (Production)**

| Subject Code | Board | Subject | Marks | | | | Paper Duration Hrs. | L Hrs. | T Hrs. | P / D Hrs. | |
|--------------|-------|-------------------------------|------------------------|----------|-----------|----------|---------------------|--------|--------|------------|---------|
| | | | Theory | | Practical | | | | | | |
| | | | Uni.Exam./ Coll.Asses. | Maximum | Passing | Maximum | | | | | Passing |
| 3PR01 | ASH | Mathematics III | Univer. College | 80 20 | 40 | - | -- | 3 | 3 | 1 | - |
| 3PR02 | PR | Casting and Joining Processes | Univer. College | 80 20 | 40 | 25 25 | 25 | 3 | 3 | 1 | 2 |
| 3PR03 | PR | Machine Design I | Univer. College | 80 20 | 40 | 25 25 | 25 | 3 | 3 | 1 | 2 |
| 3PR04 | PR | Computer Programming | Univer. College | 80 20 | 40 | 25 25 | 25 | 3 | 3 | 1 | 2 |
| 3PR05 | PR | Fluid Power | Univer. College | 80 20 | 40 | 25 25 | 25 | 3 | 3 | 1 | 2 |
| 3PR06 | PR | Machine Graphics | Univer. College | 80 20 | 40 | - | - | 3 | 3 | 1 | - |
| Total | | | | 600 | | 200 | | | 18 | 6 | 8 |

IV Semester B.E. (Production)

| Subject Code | Board | Subject | Marks | | | | Paper Duration Hrs. | L Hrs. | T Hrs. | P / D Hrs. | |
|--------------|-------|--------------------------------------|------------------------|----------|-----------|----------|---------------------|--------|--------|------------|---------|
| | | | Theory | | Practical | | | | | | |
| | | | Uni.Exam./ Coll.Asses. | Maximum | Passing | Maximum | | | | | Passing |
| 4PR01 | ASH | Industrial Statistics | Univer. College | 80 20 | 40 | - | -- | 3 | 3 | 1 | - |
| 4PR02 | PR | Engg. Thermodynamics & Heat Transfer | Univer. College | 80 20 | 40 | - | - | 3 | 3 | 1 | - |
| 4PR03 | PR | Metal and Plastics Working Processes | Univer. College | 80 20 | 40 | - | - | 3 | 3 | 1 | - |
| 4PR04 | PR | Theory of Machines | Univer. College | 80 20 | 40 | 25 25 | 25 | 3 | 3 | 1 | 2 |
| 4PR05 | MET | Materials' Science & Metallurgy | Univer. College | 80 20 | 40 | 25 25 | 25 | 3 | 3 | 1 | 2 |
| 4PR06 | PR | Machining Processes I | Univer. College | 80 20 | 40 | 25 25 | 25 | 3 | 3 | 1 | 2 |
| 4PR07 | PR | Industrial Visit | College | Grade | - | - | - | - | - | - | 2 |
| Total | | | | 600 | | 150 | | | 18 | 6 | 8 |

**Scheme of Teaching and Examination for Degree of Bachelor of Engineering
(Production Engineering) Semester Pattern
V Semester B.E. (Production)**

| Subject Code | Board | Subject | Marks | | | | | Paper Duration Hrs. | L Hrs. | T Hrs. | P/D Hrs. |
|--------------|-------|-------------------------|-------------------------|----------|---------|-----------|---------|---------------------|--------|--------|----------|
| | | | Theory | | | Practical | | | | | |
| | | | Uni.Exam. / Coll.Asses. | Maximum | Passing | Maximum | Passing | | | | |
| 5PR01 | PR | Human Engineering | Univer. College | 80 20 | 40 | - | -- | 3 | 3 | 1 | - |
| 5PR02 | PR | Machine Design II | Univer. College | 80 20 | 40 | 25 25 | 25 | 3 | 3 | 1 | 2 |
| 5PR03 | PR | Plant Engineering | Univer. College | 80 20 | 40 | - | - | 3 | 3 | 1 | - |
| 5PR04 | PR | Energy Conversion | Univer. College | 80 20 | 40 | 25 25 | 25 | 3 | 3 | 1 | 2 |
| 5PR05 | PR | Mechanical Measurements | Univer. College | 80 20 | 40 | 25 25 | 25 | 3 | 3 | 1 | 2 |
| 5PR06 | PR | Machining Processes II | Univer. College | 80 20 | 40 | 25 25 | 25 | 3 | 3 | 1 | 2 |
| | PR | Seminar Allotment | - | - | - | - | - | - | - | - | - |
| Total | | | | 600 | | 200 | | | 18 | 6 | 8 |

VI Semester B.E. (Production)

| Subject Code | Board | Subject | Marks | | | | | Paper Duration Hrs. | L Hrs. | T Hrs. | P/D Hrs. |
|--------------|-------|----------------------------------|-------------------------|----------|---------|-----------|---------|---------------------|--------|--------|----------|
| | | | Theory | | | Practical | | | | | |
| | | | Uni.Exam. / Coll.Asses. | Maximum | Passing | Maximum | Passing | | | | |
| 6PR01 | PR | Machine Tool Design Engineering | Univer. College | 80 20 | 40 | - | -- | 3 | 3 | 1 | - |
| 6PR02 | PR | Economics | Univer. College | 80 20 | 40 | - | - | 3 | 3 | 1 | - |
| 6PR03 | PR | Tool Design | Univer. College | 80 20 | 40 | - | - | 3 | 3 | 1 | - |
| 6PR04 | PR | Mechatronics | Univer. College | 80 20 | 40 | 25 25 | 25 | 3 | 3 | 1 | 2 |
| 6PR05 | PR | Engineering Metrology | Univer. College | 80 20 | 40 | 25 25 | 25 | 3 | 3 | 1 | 2 |
| 6PR06 | PR | Manufacturing System Engineering | Univer. College | 80 20 | 40 | - | - | 3 | 3 | 1 | 2 |
| 4PR07 | PR | Seminar | College | - | - | 50 | 25 | - | - | - | - |
| Total | | | | 600 | | 150 | | | 18 | 6 | 6 |

**Scheme of Teaching and Examination for Degree of Bachelor of Engineering
(Production Engineering) Semester Pattern
VII Semester B.E. (Production)**

| Subject Code | Board | Subject | Marks | | | | Paper Duration Hrs. | L Hrs. | T Hrs. | P/D Hrs. | |
|--------------|-------|---|-------------------------|----------|-----------|----------|---------------------|--------|--------|----------|---------|
| | | | Theory | | Practical | | | | | | |
| | | | Uni.Exam. / Coll.Asses. | Maximum | Passing | Maximum | | | | | Passing |
| 7PR01 | PR | Quality Engineering | Univer. College | 80 20 | 40 | - | -- | 3 | 3 | 1 | - |
| 7PR02 | PR | Automation | Univer. College | 80 20 | 40 | - | - | 3 | 3 | 1 | 2 |
| 7PR03 | PR | Computer Aided Design & System Analysis | Univer. College | 80 20 | 40 | 25 25 | 25 | 3 | 3 | 1 | 2 |
| 7PR04 | PR | Elective I | Univer. College | 80 20 | 40 | - | - | 3 | 3 | 1 | 2 |
| 7PR05 | PR | Operation Research | Univer. College | 80 20 | 40 | - | - | 3 | 3 | 1 | - |
| 7PR06 | PR | Project Seminar | Univer. College | - | - | - | 25 | - | - | - | 3 |
| Total | | | | 500 | | 100 | | | 15 | 5 | 5 |

VIII Semester B.E. (Production)

| Subject Code | Board | Subject | Marks | | | | Paper Duration Hrs. | L Hrs. | T Hrs. | P/D Hrs. | |
|--------------|-------|------------------------------|-------------------------|----------|-----------|----------|---------------------|--------|--------|----------|---------|
| | | | Theory | | Practical | | | | | | |
| | | | Uni.Exam. / Coll.Asses. | Maximum | Passing | Maximum | | | | | Passing |
| 8PR01 | PR | Engineering Costing | Univer. College | 80 20 | 40 | - | -- | 3 | 3 | 1 | - |
| 8PR02 | PR | Industrial Management | Univer. College | 80 20 | 40 | - | - | 3 | 3 | 1 | - |
| 8PR03 | PR | Elective II | Univer. College | 80 20 | 40 | - | - | 3 | 3 | 1 | - |
| 8PR04 | PR | Maintenance Management | Univer. College | 80 20 | 40 | - | - | 3 | 3 | 1 | - |
| 8PR05 | PR | Computer Aided Manufacturing | Univer. College | 80 20 | 40 | 25 25 | 25 | 3 | 3 | 1 | 2 |
| 8PR06 | PR | Project | Univer. College | - | - | 75 75 | 75 | - | - | - | 6 |
| Total | | | | 500 | | 200 | | | 15 | 5 | 8 |

Seventh Semester: Elective I – 1. Entrepreneurship Development 2. Entrepreneur Resource Management 3. Technology Management 4. Science Technology and Society 5. Knowledge Management 6. Human Values

Eighth Semester: Elective II – 1. Advanced Techniques in Operation Research 2. Product Design 3. Simulation and Modelling 4. Product Management and Software Tools 5. Modern Production Techniques 6. Cybernetics and Artificial Intelligence.

**Scheme of Teaching and Examination for Degree of Bachelor of Engineering
(Industrial Engineering) Semester Pattern
III Semester B.E. (Industrial)**

| Subject Code | Subject | Marks | | | | | Paper Duration Hrs. | L Hrs. | T Hrs. | P/D Hrs. |
|--------------|---|------------------------|----------|---------|-----------|---------|---------------------|--------|--------|----------|
| | | Theory | | | Practical | | | | | |
| | | Uni.Exam./ Coll.Asses. | Maximum | Passing | Maximum | Passing | | | | |
| 3IE01 (ASH) | Quantitative Methods-I | Univer. College | 80 20 | 40 | - | -- | 3 | 3 | 1 | - |
| 3IE02 | Heat Power Engg. | Univer. College | 80 20 | 40 | - | - | 3 | 4 | 1 | - |
| 3IE03 | Principles of Management & Managerial Economics | Univer. College | 80 20 | 40 | - | - | 3 | 4 | 1 | - |
| 3IE04 | Manufacturing Technology-I | Univer. College | 80 20 | 40 | 25 25 | 25 | 3 | 4 | 1 | 2 |
| 3IE05 (EN) | Logic Processing Technique | Univer. College | 80 20 | 40 | 25 25 | 25 | 3 | 3 | 1 | 2 |
| 3IE06 | M/c Drawing & Industrial Layout | Univer. College | - | - | 50 50 | 50 | 3 | - | - | 2 |
| 3IE07 | Industrial Visit | - College | - | - | - G | C | - | - | - | 3 |
| | | Total | 500 | | 200 | | 18 | 18 | 05 | 09 |

Total Credits : 18+2.5+4.5=25

IV Semester B.E. (Industrial)

| Subject Code | Subject | Marks | | | | | Paper Duration Hrs. | L Hrs. | T Hrs. | P/D Hrs. |
|--------------|-----------------------------|------------------------|----------|---------|-----------|---------|---------------------|--------|--------|----------|
| | | Theory | | | Practical | | | | | |
| | | Uni.Exam./ Coll.Asses. | Maximum | Passing | Maximum | Passing | | | | |
| 4IE01 (ASH) | Quantitative Methods-II | Univer. College | 80 20 | 40 | - | -- | 3 | 3 | 1 | - |
| 4IE02 | Theory of Machines | Univer. College | 80 20 | 40 | - | - | 3 | 4 | 1 | - |
| 4IE03 | Methods Engg. – I | Univer. College | 80 20 | 40 | 25 25 | 25 | 3 | 4 | 1 | 2 |
| 4IE04 | Computer Programming-I | Univer. College | 80 20 | 40 | 25 25 | 25 | 3 | 4 | 1 | 2 |
| 4IE05 | Instrumentation & Metrology | Univer. College | 80 20 | 40 | 25 25 | 25 | 3 | 4 | 1 | 2 |
| | | Total | 500 | | 150 | | - | 19 | 05 | 06 |

Total Credits : 19+2.5+3=24.5

**Scheme of Teaching and Examination for Degree of Bachelor of Engineering
(Industrial Engineering) Semester Pattern
V Semester B.E. (Industrial)**

| Subject Code | Subject | Marks | | | | | Paper Duration Hrs. | L Hrs. | T Hrs. | P/D Hrs. |
|--------------|---|------------------------|----------|-----------|----------|---------|---------------------|--------|--------|----------|
| | | Theory | | Practical | | Passing | | | | |
| | | Uni.Exam./ Coll.Asses. | Maximum | Maximum | Passing | | | | | |
| 5IE01 | Computer Programming-II | Univer. College | 80 20 | 40 | 25 25 | 25 | 3 | 3 | 1 | 2 |
| 5IE02 | Plant Engg. - I | Univer. College | 80 20 | 40 | - | - | 3 | 4 | 1 | - |
| 5IE03 | Operations Research-I | Univer. College | 80 20 | 40 | 25 25 | 25 | 3 | 4 | 1 | 2 |
| 5IE04 | Fluid Power Engg. | Univer. College | 80 20 | 40 | - | - | 3 | 3 | 1 | - |
| 5IE05 | Machine Design | Univer. College | 80 20 | 40 | - | - | 3 | 4 | 1 | - |
| 5IE06 | Marketing Management & Logistics Management | Univer. College | 80 20 | 40 | - | - | 3 | 4 | 1 | - |
| | | Total | 600 | | 100 | | 18 | 22 | 06 | 04 |

Total Credits : 22+3+2.=27

VI Semester B.E. (Industrial)

| Subject Code | Subject | Marks | | | | | Paper Duration Hrs. | L Hrs. | T Hrs. | P/D Hrs. |
|--------------|---|------------------------|----------|-----------|----------|---------|---------------------|--------|--------|----------|
| | | Theory | | Practical | | Passing | | | | |
| | | Uni.Exam./ Coll.Asses. | Maximum | Maximum | Passing | | | | | |
| 6IE01 | System Engg. & Business Data Processing | Univer. College | 80 20 | 40 | 25 25 | 25 | 3 | 4 | 1 | 2 |
| 6IE02 | Manufacturing Technology-II | Univer. College | 80 20 | 40 | 25 25 | 25 | 3 | 4 | 1 | 2 |
| 6IE03 | Production & Materials Management | Univer. College | 80 20 | 40 | - | - | 3 | 4 | 1 | - |
| 6IE04 | Energy Management | Univer. College | 40 10 | 20 | - | - | 3 | 2 | 1 | - |
| 6IE05 | Methods Engg.-II | Univer. College | 80 20 | 40 | 25 25 | 25 | 3 | 4 | 1 | 2 |
| 6IE06 | Project work | Univer. College | - | - | - 50 | 25 | - | - | - | 4 |
| | | Total | 450 | | 200 | | - | 18 | 05 | 10 |

Total Credits : 18+2.5+5=25.5

Scheme of Teaching and Examination for Degree of Bachelor of Engineering (Industrial Engineering)
Semester Pattern VII Semester B.E. (Industrial)

| Subject Code | Subject | Marks | | | | | Paper Duration Hrs. | L Hrs. | T Hrs. | P/D Hrs. |
|--------------|--|------------------------|----------|-----------|----------|---------|---------------------|--------|--------|----------|
| | | Theory | | Practical | | | | | | |
| | | Uni.Exam./ Coll.Asses. | Maximum | Passing | Maximum | Passing | | | | |
| 7IE01 | Human Resource Management | Univer. College | 80 20 | 40 | - - | - - | 3 | 4 | 1 | - |
| 7IE02 | Quality Management | Univer. College | 80 20 | 40 | 25 25 | 25 | 3 | 4 | 1 | 2 |
| 7IE03 | Industrial Automation | Univer. College | 80 20 | 40 | - - | - | 3 | 4 | 1 | - |
| 7IE04 | Ergonomics & Value Engg. | Univer. College | 80 20 | 40 | 25 25 | 25 | 3 | 4 | 1 | 2 |
| 7IE05 | Relational Data base Management System | Univer. College | 80 20 | 40 | 25 25 | 25 | 3 | 3 | 1 | 2 |
| 7IE06 | Project Seminar | Univer. College | - | - | - 50 | 25 | - | - | - | 03 |
| | | Total | 500 | | 200 | | 15 | 19 | 05 | 09 |

Total Credits : 19+2.5+4.5=26

VIII Semester B.E. (Industrial)

| Subject Code | Subject | Marks | | | | | Paper Duration Hrs. | L Hrs. | T Hrs. | P/D Hrs. |
|--------------|------------------------------------|------------------------|----------|-----------|----------|---------|---------------------|--------|--------|----------|
| | | Theory | | Practical | | | | | | |
| | | Uni.Exam./ Coll.Asses. | Maximum | Passing | Maximum | Passing | | | | |
| 8IE01 | Engineering Economy & Cost Control | Univer. College | 80 20 | 40 | - - | - | 3 | 4 | 1 | - |
| 8IE02 | Operations Research-II | Univer. College | 80 20 | 40 | 25 25 | 25 | 3 | 4 | 1 | 2 |
| 8IE03 | Plant Engg. - II | Univer. College | 80 20 | 40 | - - | - | 3 | 4 | 1 | - |
| 8IE04 | Management Information System | Univer. College | 80 20 | 40 | 25 25 | 25 | 3 | 3 | 1 | 2 |
| 8IE05 | Elective | Univer. College | 80 20 | 40 | - - | - | 3 | 4 | 1 | - |
| 8IE06 | Project | Univer. College | - | - | 75 75 | 75 | - | - | - | 06 |
| | | Total | 500 | | 250 | | - | 19 | 05 | 10 |

Total Credits : 19+2.5+5=26.5

List of Electives: 1. Advanced Production Technology, 2. Optimisation Techniques, 3. Business Process Re-engineering, 4. Total Quality Management 5. Entrepreneurship Development, 6. Software Engineering, 7. Modern Improvement Techniques.

FOUR YEAR BACHELOR OF ENGINEERING (B.E.) DEGREE COURSE**BRANCH COMPUTER TECHNOLOGY****ABBREVATIONS**

| | | | |
|---|--|---|--|
| L: Theory T: Tutorial P: Practical IA: Internal Assessment | MXM: Maximum Marks MNM: Minimum Marks | A: Paper Duration in Hrs. B: MXM Theory C: MXM – IA D: Total (B+C) E: MNM Passing Marks | F: MXM Ext G: MXM –IA H: Total (F+G) I: MNM Passing Marks |
|---|--|---|--|

Semester : THIRD

| SR NO | SUBJECT CODE | SUBJECT | TEACHING SCHEME | | | | EXAMINATION SCHEME | | | | | | | | | |
|-------|--------------|-------------------------------|-----------------|---|---|----------------|--------------------|----|----|-----|----|-----------|----|-----|----|--|
| | | | L | T | P | Total Hrs/Week | THEORY | | | | | PRACTICAL | | | | |
| | | | | | | | A | B | C | D | E | F | G | H | I | |
| 1 | 33CT-1 | APPLIED MATHEMATICS-III | 4 | 1 | - | 5 | 3 | 80 | 20 | 100 | 40 | - | - | - | - | |
| 2 | 33CT-2 | NETWORK ANALYSIS | 3 | 1 | - | 4 | 3 | 80 | 20 | 100 | 40 | - | - | - | - | |
| 3 | 33CT-3 | INTRODUCTION TO PROGRAMMING | 4 | 1 | 2 | 7 | 3 | 80 | 20 | 100 | 40 | 25 | 25 | 50 | 25 | |
| 4 | 33CT-4 | ELECTRONIC DEVICES & CIRCUITS | 4 | 1 | 2 | 7 | 3 | 80 | 20 | 100 | 40 | 25 | 25 | 50 | 25 | |
| 5 | 33CT-5 | DIGITAL ELECTRONICS | 4 | 1 | 2 | 7 | 3 | 80 | 20 | 100 | 40 | 25 | 25 | 50 | 25 | |
| 6 | 33CT-6 | COMPUTER WORKSHOP-I | - | - | 2 | 2 | - | - | - | - | - | - | 50 | 50 | IA | |
| | | TOTAL : | 19 | 5 | 8 | 32 | | | | 500 | | | | 200 | | |
| | | CREDIT : 19+6.5=25.5 | | | | | GRAND TOTAL : | | | | | 700 | | | | |

FOUR YEAR BACHELOR OF ENGINEERING (B.E.) DEGREE COURSE**BRANCH COMPUTER TECHNOLOGY****ABBREVATIONS**

| | | | |
|---|--|---|--|
| L: Theory T: Tutorial P: Practical IA: Internal Assessment | MXM: Maximum Marks MNM: Minimum Marks | A: Paper Duration in Hrs. B: MXM Theory C: MXM – IA D: Total (B+C) E: MNM Passing Marks | F: MXM Ext G: MXM –IA H: Total (F+G) I: MNM Passing Marks |
|---|--|---|--|

Semester : FOURTH

| SR NO | SUBJECT CODE | SUBJECT | TEACHING SCHEME | | | | EXAMINATION SCHEME | | | | | | | | | |
|-------|--------------|--------------------------------------|-----------------|---|---|----------------|--------------------|----|----|-----|----|-----------|----|-----|----|--|
| | | | L | T | P | Total Hrs/Week | THEORY | | | | | PRACTICAL | | | | |
| | | | | | | | A | B | C | D | E | F | G | H | I | |
| 1 | 44CT-1 | DISCRETE MATHEMATICS & GRAPH THEORY | 4 | 1 | - | 5 | 3 | 80 | 20 | 100 | 40 | - | - | - | - | |
| 2 | 44CT-2 | DATA STRUCTURES | 4 | 1 | 2 | 7 | 3 | 80 | 20 | 100 | 40 | 25 | 25 | 50 | 25 | |
| 3 | 44CT-3 | FUNDAMENTALS OF MICROPROCESSOR | 4 | 1 | 2 | 7 | 3 | 80 | 20 | 100 | 40 | 25 | 25 | 50 | 25 | |
| 4 | 44CT-4 | COMPUTER ARCHITECTURE & ORGANISATION | 4 | 1 | - | 5 | 3 | 80 | 20 | 100 | 40 | - | - | - | - | |
| 5 | 44CT-5 | ELECTRICAL MACHINES & MEASUREMENTS | 3 | 1 | 2 | 6 | 3 | 80 | 20 | 100 | 40 | 25 | 25 | 50 | 25 | |
| 6 | 44CT-6 | COMPUTER WORKSHOP-II | - | - | 2 | 2 | - | - | - | - | - | - | 50 | 50 | IA | |
| | | TOTAL : | 19 | 5 | 8 | 32 | | | | 500 | | | | 200 | | |
| | | CREDIT : 19+6.5=25.5 | | | | | GRAND TOTAL : | | | | | 700 | | | | |

FOUR YEAR BACHELOR OF ENGINEERING (B.E.) DEGREE COURSE**BRANCH COMPUTER TECHNOLOGY****ABBREVATIONS**

| | | | |
|---|--|---|--|
| L: Theory T: Tutorial P: Practical IA: Internal Assessment | MXM: Maximum Marks MNM: Minimum Marks | A: Paper Duration in Hrs. B: MXM Theory C: MXM – IA D: Total (B+C) E: MNM Passing Marks | F: MXM Ext G: MXM –IA H: Total (F+G) I: MNM Passing Marks |
|---|--|---|--|

Semester : FIFTH

| SR NO | SUBJECT CODE | SUBJECT | TEACHING SCHEME | | | | EXAMINATION SCHEME | | | | | | | | | |
|-------|--------------|-------------------------------|-----------------|---|---|----------------|--------------------|----|----|-----|----|-----------|----|-----|----|--|
| | | | L | T | P | Total Hrs/Week | THEORY | | | | | PRACTICAL | | | | |
| | | | | | | | A | B | C | D | E | F | G | H | I | |
| 1 | 55CT-1 | OBJECT ORIENTED METHODOLOGIES | 3 | 1 | 2 | 6 | 3 | 80 | 20 | 100 | 40 | 25 | 25 | 50 | 25 | |
| 2 | 55CT-2 | COMMUNICATION SYSTEM | 3 | 1 | 2 | 6 | 3 | 80 | 20 | 100 | 40 | 25 | 25 | 50 | 25 | |
| 3 | 55CT-3 | ADVANCED MICROPROCESSORS | 4 | 1 | 2 | 7 | 3 | 80 | 20 | 100 | 40 | 25 | 25 | 50 | 25 | |
| 4 | 55CT-4 | SYSTEM PROGRAMMING | 3 | 1 | - | 4 | 3 | 80 | 20 | 100 | 40 | - | - | - | - | |
| 5 | 55CT-5 | THEORY OF COMPUTATION | 3 | 1 | - | 4 | 3 | 80 | 20 | 100 | 40 | - | - | - | - | |
| 6 | 55CT-6 | CONTROL SYSTEMS | 3 | 1 | - | 4 | 3 | 80 | 20 | 100 | 40 | - | - | - | - | |
| | | TOTAL : | 19 | 6 | 6 | 31 | | | | 600 | | | | 150 | | |
| | | CREDIT : 19+6=25 | | | | | GRAND TOTAL : | | | | | 750 | | | | |

FOUR YEAR BACHELOR OF ENGINEERING (B.E.) DEGREE COURSE**BRANCH COMPUTER TECHNOLOGY****ABBRIATIONS**

| | | | |
|---|--|---|--|
| L: Theory T: Tutorial P: Practical IA: Internal Assessment | MXM: Maximum Marks MNM: Minimum Marks | A: Paper Duration in Hrs. B: MXM Theory C: MXM – IA D: Total (B+C) E: MNM Passing Marks | F: MXM Ext G: MXM –IA H: Total (F+G) I: MNM Passing Marks |
|---|--|---|--|

Semester : SIXTH

| SR NO | SUBJECT CODE | SUBJECT | TEACHING SCHEME | | | | EXAMINATION SCHEME | | | | | | | | | |
|-------|--------------|--|-----------------|---|----|----------------|--------------------|----|----|-----|----|-----------|----|-----|----|--|
| | | | L | T | P | Total Hrs/Week | THEORY | | | | | PRACTICAL | | | | |
| | | | | | | | A | B | C | D | E | F | G | H | I | |
| 1 | 66CT-1 | IND MANAGEMENT/ECONOMICS | 3 | 1 | - | 4 | 3 | 80 | 20 | 100 | 40 | - | - | - | - | |
| 2 | 66CT-2 | SOFTWARE ENGG. | 4 | 1 | 2 | 7 | 3 | 80 | 20 | 100 | 40 | 25 | 25 | 50 | 25 | |
| 3 | 66CT-3 | DESIGN & ANALYSIS OF ALGORITHMS | 4 | 1 | - | 5 | 3 | 80 | 20 | 100 | 40 | - | - | - | - | |
| 4 | 66CT-4 | DATA PROCESSING & FILE SYSTEM | 4 | 1 | -2 | 7 | 3 | 80 | 20 | 100 | 40 | 25 | 25 | 50 | 25 | |
| 5 | 66CT-5 | DESIGN PRINCIPLES OF PROGRAMMING LANGUAGES | 4 | 1 | - | 5 | 3 | 80 | 20 | 100 | 40 | - | - | - | - | |
| 6 | 66CT-6 | MINI PROJECT | - | - | 3 | 3 | - | - | - | - | - | 25 | 25 | 50 | 25 | |
| | | TOTAL : | 19 | 5 | 7 | 31 | | | | 500 | | | | 150 | | |
| | | CREDIT : 19+6=25 | | | | | GRAND TOTAL : | | | | | 650 | | | | |

FOUR YEAR BACHELOR OF ENGINEERING (B.E.) DEGREE COURSE**BRANCH COMPUTER TECHNOLOGY****ABBREVATIONS**

| | | | |
|-------------------------|--------------------|---------------------------|----------------------|
| L: Theory | MXM: Maximum Marks | A: Paper Duration in Hrs. | F: MXM Ext |
| T: Tutorial | MNM: Minimum Marks | B: MXM Theory | G: MXM -IA |
| P: Practical | | C: MXM - IA | H: Total (F+G) |
| IA: Internal Assessment | | D: Total (B+C) | I: MNM Passing Marks |
| | | E: MNM Passing Marks | |

Semester : SEVENTH

| SR NO | SUBJECT CODE | SUBJECT | TEACHING SCHEME | | | | EXAMINATION SCHEME | | | | | | | | |
|-------|--------------|-----------------------------|-----------------|---|---|----------------|--------------------|----|----|-----|----|-----------|----|-----|----|
| | | | L | T | P | Total Hrs/Week | THEORY | | | | | PRACTICAL | | | |
| | | | | | | | A | B | C | D | E | F | G | H | I |
| 1 | 77CT-1 | OPERATING SYSTEMS | 4 | 1 | - | 5 | 3 | 80 | 20 | 100 | 40 | - | - | - | - |
| 2 | 77CT-2 | DATABASE MANAGEMENT SYSTEM | 4 | 1 | 2 | 7 | 3 | 80 | 20 | 100 | 40 | 25 | 25 | 50 | 25 |
| 3 | 77CT-3 | COMPUTER COMM. & NETWORKING | 4 | 1 | 2 | 7 | 3 | 80 | 20 | 100 | 40 | 25 | 25 | 50 | 25 |
| 4 | 77CT-4 | ELECTIVE-I | 4 | 1 | - | 5 | 3 | 80 | 20 | 100 | 40 | - | - | - | - |
| 5 | 77CT-5 | ELECTIVE-II | 4 | 1 | - | 5 | 3 | 80 | 20 | 100 | 40 | - | - | - | - |
| 6 | 77CT-6 | PROJECT SEMINAR | - | - | 3 | 3 | - | - | - | - | - | 25 | 25 | 50 | 25 |
| | | TOTAL : | 20 | 5 | 7 | 32 | | | | 500 | | | | 150 | |
| | | CREDIT : 20+6=26 | | | | | GRAND TOTAL : | | | | | 650 | | | |

ELECTIVE - I :

1. DISTRIBUTED COMPUTING & INTERNETWORKING
2. ARTIFICIAL INTELLIGENCE
3. DIGITAL SIGNAL PROCESSING

ELECTIVE-II

1. MULTIMEDIA & WEB DESIGN
2. MULTILINGUAL INFORMATION PROCESSING
3. CAD/CAM

FOUR YEAR BACHELOR OF ENGINEERING (B.E.) DEGREE COURSE**BRANCH COMPUTER TECHNOLOGY****ABBRIATIONS**

| | | | |
|---|--|---|--|
| L: Theory T: Tutorial P: Practical IA: Internal Assessment | MXM: Maximum Marks MNM: Minimum Marks | A: Paper Duration in Hrs. B: MXM Theory C: MXM – IA D: Total (B+C) E: MNM Passing Marks | F: MXM Ext G: MXM –IA H: Total (F+G) I: MNM Passing Marks |
|---|--|---|--|

Semester : EIGHTH

| SR NO | SUBJECT CODE | SUBJECT | TEACHING SCHEME | | | | EXAMINATION SCHEME | | | | | | | | |
|------------------|--------------|-----------------------|-----------------|---|----|----------------|--------------------|----|----|-----|----|-----------|----|-----|----|
| | | | L | T | P | Total Hrs/Week | THEORY | | | | | PRACTICAL | | | |
| | | | | | | | A | B | C | D | E | F | G | H | I |
| 1 | 88CT-1 | COMPUTER GRAPHICS | 4 | 1 | 2 | 7 | 3 | 80 | 20 | 100 | 40 | - | - | - | - |
| 2 | 88CT-2 | COMPILER CONSTRUCTION | 4 | 1 | 2 | 7 | 3 | 80 | 20 | 100 | 40 | 25 | 25 | 50 | 25 |
| 3 | 88CT-3 | ELECTIVE - III | 4 | 1 | - | 5 | 3 | 80 | 20 | 100 | 40 | - | - | - | - |
| 4 | 88CT-4 | ELECTIVE - IV | 4 | 1 | - | 5 | 3 | 80 | 20 | 100 | 40 | 25 | 25 | 50 | 25 |
| 5 | 88CT-5 | PROJECT | - | - | 6 | 6 | - | - | - | - | - | 75 | 75 | 150 | 75 |
| TOTAL : | | | 16 | 4 | 10 | 30 | | | | 400 | | | | 250 | |
| CREDIT : 16+7=23 | | | | | | | GRAND TOTAL : | | | | | 650 | | | |

ELECTIVE – III :

1. NEURAL NETWORK & FUZZY LOGIC
2. IMAGE PROCESSING

ELECTIVE-IV

1. E-COMMERCE
2. DATA MINING & WAREHOUSING
3. RECENT TRENDS IN COMPUTATION & INFORMATION

FOUR YEAR BACHELOR OF ENGINEERING (B.E.) DEGREE COURSE**SEMESTER : THIRD****BRANCH COMPUTER SCIENCE & ENGINEERING****ABBREVATIONS**

| | | | |
|-------------------------|----------------------|---------------------------|----------------------|
| L: Theory Lectures | S: Semester | A: Paper Duration in Hrs. | F: MXM Ext |
| T: Tutorial | CS: Computer Science | B: MXM Theory | G: MXM -IA |
| P: Practical | MXM: Maximum Marks | C: MXM - IA | H: Total |
| IA: Internal Assessment | MNM: Minimum Marks | D: Total | I: MNM Passing Marks |
| | | E: MNM Passing Marks | |

| SR NO | SUBJECT CODE | SUBJECT | TEACHING SCHEME | | | | EXAMINATION SCHEME | | | | | | | | | |
|----------|-----------------|--|-------------------|---|---|-------------------|--------------------|----|----|-----|----|-----------|----|-----|----|--|
| | | | L | T | P | Total Hrs/Week | THEORY | | | | | PRACTICAL | | | | |
| | | | | | | | A | B | C | D | E | F | G | H | I | |
| 1 | 33CS-1 | Applied Mathematics | 4 | 1 | 0 | 5 | 3 | 80 | 20 | 100 | 40 | - | - | - | - | |
| 2 | 33CS-2 | Programming Fundamentals In "C" | 4 | 1 | 3 | 8 | 3 | 80 | 20 | 100 | 40 | 25 | 25 | 50 | 25 | |
| 3 | 33CS-3 | Digital Circuits & Fundamentals of Microprocessors | 4 | 1 | 2 | 7 | 3 | 80 | 20 | 100 | 40 | 25 | 25 | 50 | 25 | |
| 4 | 33CS-4 | Combinatorial Theories | 4 | 1 | 0 | 5 | 3 | 80 | 20 | 100 | 40 | - | - | - | - | |
| 5 | 33CS-5 | Principles of Management | 4 | 1 | 0 | 5 | 3 | 80 | 20 | 100 | 40 | - | - | - | - | |
| 6 | 33CS-6 | Computer Workshop | 0 | 0 | 2 | 2 | - | - | - | - | - | - | 50 | 50 | 25 | |
| | | TOTAL : | 20 | 5 | 7 | 32 | | | | 500 | | | | 150 | | |
| | | CREDITS: 20+6=26 | GRAND TOTAL = 650 | | | | | | | | | | | | | |

FOUR YEAR BACHELOR OF ENGINEERING (B.E.) DEGREE COURSE**SEMESTER : FOURTH****BRANCH COMPUTER SCIENCE & ENGINEERING****ABBREVATIONS**

| | | | |
|-------------------------|----------------------|---------------------------|----------------------|
| L: Theory Lectures | S: Semester | A: Paper Duration in Hrs. | F: MXM Ext |
| T: Tutorial | CS: Computer Science | B: MXM Theory | G: MXM –IA |
| P: Practical | MXM: Maximum Marks | C: MXM – IA | H: Total |
| IA: Internal Assessment | MNM: Minimum Marks | D: Total | I: MNM Passing Marks |
| | | E: MNM Passing Marks | |

| SR NO | SUBJECT CODE | SUBJECT | TEACHING SCHEME | | | | EXAMINATION SCHEME | | | | | | | | | |
|-------|--------------|---|-----------------|---|---|----------------|--------------------|----|----|-----|----|-----------|----|-----|----|--|
| | | | L | T | P | Total Hrs/Week | THEORY | | | | | PRACTICAL | | | | |
| | | | | | | | A | B | C | D | E | F | G | H | I | |
| 1 | 44CS-1 | Discrete Maths & Graph Theory | 4 | 1 | 0 | 5 | 3 | 80 | 20 | 100 | 40 | - | - | - | - | |
| 2 | 44CS-2 | Data Structures & Program design in “C” | 4 | 1 | 3 | 8 | 3 | 80 | 20 | 100 | 40 | 25 | 25 | 50 | 25 | |
| 3 | 44CS-3 | Business Data Processing | 4 | 1 | 2 | 7 | 3 | 80 | 20 | 100 | 40 | 25 | 25 | 50 | 25 | |
| 4 | 44CS-4 | Theoretical Foundations of Computer Science | 4 | 1 | 0 | 5 | 3 | 80 | 20 | 100 | 40 | - | - | - | - | |
| 5 | 44CS-5 | Computer Architecture & Organization | 4 | 1 | 0 | 5 | 3 | 80 | 20 | 100 | 40 | - | - | - | - | |
| 6 | 44CS-6 | Internet Technologies | 0 | 0 | 2 | 2 | - | - | - | - | - | - | 50 | 50 | 25 | |
| | | TOTAL | 20 | 5 | 7 | 32 | | | | 500 | | | | 150 | | |
| | | CRADITS: 20+6+26 | | | | | GRAND TOTAL: 650 | | | | | | | | | |

FOUR YEAR BACHELOR OF ENGINEERING (B.E.) DEGREE COURSE**SEMESTER : FIFTH****BRANCH COMPUTER SCIENCE & ENGINEERING****ABBREVATIONS**

| | | | |
|-------------------------|----------------------|---------------------------|----------------------|
| L: Theory Lectures | S: Semester | A: Paper Duration in Hrs. | F: MXM Ext |
| T: Tutorial | CS: Computer Science | B: MXM Theory | G: MXM –IA |
| P: Practical | MXM: Maximum Marks | C: MXM – IA | H: Total |
| IA: Internal Assessment | MNM: Minimum Marks | D: Total | I: MNM Passing Marks |
| | | E: MNM Passing Marks | |

| SR NO | SUBJECT CODE | SUBJECT | TEACHING SCHEME | | | | EXAMINATION SCHEME | | | | | | | | |
|----------|-----------------|-----------------------------------|-----------------|---|---|-------------------|--------------------|----|----|-----|----|-----------|----|-----|----|
| | | | L | T | P | Total Hrs/Week | THEORY | | | | | PRACTICAL | | | |
| | | | | | | | A | B | C | D | E | F | G | H | I |
| 1 | 55CS-1 | Data Communication | 3 | 1 | 0 | 4 | 3 | 80 | 20 | 100 | 40 | - | - | - | - |
| 2 | 55CS-2 | Numerical Computing | 3 | 1 | 2 | 6 | 3 | 80 | 20 | 100 | 40 | 25 | 25 | 50 | 25 |
| 3 | 55CS-3 | Object Oriented Methodologies | 4 | 1 | 2 | 7 | 3 | 80 | 20 | 100 | 40 | 25 | 25 | 50 | 25 |
| 4 | 55CS-4 | Operating Systems | 4 | 1 | 0 | 5 | 3 | 80 | 20 | 100 | 40 | - | - | - | - |
| 5 | 55CS-5 | Concepts In Programming Languages | 4 | 1 | 0 | 5 | 3 | 80 | 20 | 100 | 40 | - | - | - | - |
| 6 | 55CS-6 | Systems Programming | 4 | 1 | 0 | 5 | 3 | 80 | 20 | 100 | 40 | - | - | - | - |
| 7 | 55CS-7 | Software Technology Lab-I | 0 | 0 | 2 | 2 | - | - | - | - | - | - | 50 | 50 | IA |
| | | TOTAL : | 22 | 6 | 6 | 34 | | | | 600 | | | | 150 | |
| | | CREDITS:22+6=28 | | | | | Grand total: 750 | | | | | | | | |

FOUR YEAR BACHELOR OF ENGINEERING (B.E.) DEGREE COURSE**SEMESTER : SIXTH****BRANCH COMPUTER SCIENCE & ENGINEERING****ABBREVATIONS**

| | | | |
|-------------------------|----------------------|---------------------------|----------------------|
| L: Theory Lectures | S: Semester | A: Paper Duration in Hrs. | F: MXM Ext |
| T: Tutorial | CS: Computer Science | B: MXM Theory | G: MXM –IA |
| P: Practical | MXM: Maximum Marks | C: MXM – IA | H: Total |
| IA: Internal Assessment | MNM: Minimum Marks | D: Total | I: MNM Passing Marks |
| | | E: MNM Passing Marks | |

| SR NO | SUBJECT CODE | SUBJECT | TEACHING SCHEME | | | | EXAMINATION SCHEME | | | | | | | | | |
|-------|--------------|---|-----------------|---|----|----------------|--------------------|----|----|-----|----|-----------|----|-----|----|--|
| | | | L | T | P | Total Hrs/Week | THEORY | | | | | PRACTICAL | | | | |
| | | | | | | | A | B | C | D | E | F | G | H | I | |
| 1 | 66CS-1 | Design & Analysis of Algorithm | 4 | 1 | 0 | 5 | 3 | 80 | 20 | 100 | 40 | - | - | - | - | |
| 2 | 66CS-2 | Data Base Management System | 4 | 1 | 2 | 7 | 3 | 80 | 20 | 100 | 40 | 25 | 25 | 50 | 25 | |
| 3 | 66CS-3 | Computer Networks | 4 | 1 | 2 | 7 | 3 | 80 | 20 | 100 | 40 | 25 | 25 | 50 | 25 | |
| 4 | 66CS-4 | Microprocessors & Interfacing | 4 | 1 | 2 | 7 | 3 | 80 | 20 | 100 | 40 | 25 | 25 | 50 | 25 | |
| 5 | 66CS-5 | Software Engineering & Project Management | 4 | 1 | 2 | 7 | 3 | 80 | 20 | 100 | 40 | 25 | 25 | 50 | 25 | |
| 6 | 66CS-6 | Software Technology Lab.-II | 0 | 0 | 2 | 2 | - | - | - | - | - | - | 50 | 50 | IA | |
| | | TOTAL : | 20 | 5 | 10 | 35 | | | | 500 | | | | 250 | | |
| | | CREDITS:20+7.5=27.5 | GRAND TOTAL:750 | | | | | | | | | | | | | |

FOUR YEAR BACHELOR OF ENGINEERING (B.E.) DEGREE COURSE**SEMESTER : SEVENTH****BRANCH COMPUTER SCIENCE & ENGINEERING****ABBREVIATIONS**

| | | | |
|-------------------------|----------------------|---------------------------|-------------------|
| L: Theory Lectures | S: Semester | A: Paper Duration in Hrs. | F: MXM Ext |
| T: Tutorial | CS: Computer Science | B: MXM Theory | G: MXM –IA |
| P: Practical | MXM: Maximum Marks | C: MXM – IA | H: Total |
| IA: Internal Assessment | MNM: Minimum Marks | D: Total | I: MNM Pass Marks |
| | | E: MNM Pass Marks | |

| SR NO | SUBJECT CODE | SUBJECT | TEACHING SCHEME | | | | EXAMINATION SCHEME | | | | | | | | | |
|-------|--------------|---------------------|-----------------|---|---|----------------|--------------------|----|----|-----|----|-----------|----|-----|----|--|
| | | | L | T | P | Total Hrs/Week | THEORY | | | | | PRACTICAL | | | | |
| | | | | | | | A | B | C | D | E | F | G | H | I | |
| 1 | 77CS-1 | TCP/IP & Internet | 4 | 1 | 2 | 7 | 3 | 80 | 20 | 100 | 40 | 25 | 25 | 50 | 25 | |
| 2 | 77CS-2 | Language Processors | 4 | 1 | 2 | 7 | 3 | 80 | 20 | 100 | 40 | 25 | 25 | 50 | 25 | |
| 3 | 77CS-3 | Elective-I | 4 | 1 | 0 | 5 | 3 | 80 | 20 | 100 | 40 | - | - | - | - | |
| 4 | 77CS-4 | Elective-II | 4 | 1 | 0 | 5 | 3 | 80 | 20 | 100 | 40 | - | - | - | - | |
| 5 | 77CS-5 | Project Seminar | 0 | 0 | 3 | 3 | - | - | - | - | - | - | 50 | 50 | 25 | |
| | | TOTAL : | 16 | 4 | 7 | 27 | | | | 400 | | | | 150 | | |
| | | | | | | | Credits : 21.5 | | | | | | | | | |

ELECTIVE: I

1. Digital Signal Processing Architecture
2. Computer Graphics
3. Real Time Operating System
4. Fundamentals of Multimedia

ELECTIVE: IV

1. Advanced Computer
2. Artificial Intelligence
3. Enterprise Resource Planning
4. Operating System Design

FOUR YEAR BACHELOR OF ENGINEERING (B.E.) DEGREE COURSE**SEMESTER : EIGHTH****BRANCH COMPUTER SCIENCE & ENGINEERING****ABBREVATIONS**

| | | | |
|-------------------------|----------------------|---------------------------|-------------------|
| L: Theory Lectures | S: Semester | A: Paper Duration in Hrs. | F: MXM Ext |
| T: Tutorial | CS: Computer Science | B: MXM Theory | G: MXM -IA |
| P: Practical | MXM: Maximum Marks | C: MXM - IA | H: Total |
| IA: Internal Assessment | MNM: Minimum Marks | D: Total | I: MNM Pass Marks |
| | | E: MNM Pass Marks | |

| SR NO | SUBJECT CODE | SUBJECT | TEACHING SCHEME | | | | EXAMINATION SCHEME | | | | | | | | |
|----------|-----------------|---|-----------------|---|----|-------------------|--------------------|----|----|-----|----|-----------|----|-----|----|
| | | | L | T | P | Total Hrs/Week | THEORY | | | | | PRACTICAL | | | |
| | | | | | | | A | B | C | D | E | F | G | H | I |
| 1 | 88CS-1 | Distributed & Object Oriented Database Management | 4 | 1 | 2 | 7 | 3 | 80 | 20 | 100 | 40 | 25 | 25 | 50 | 25 |
| 2 | 88CS-2 | Computer System Security | 4 | 1 | 2 | 7 | 3 | 80 | 20 | 100 | 40 | 25 | 25 | 50 | 25 |
| 3 | 88CS-3 | Elective - III | 4 | 1 | 0 | 5 | 3 | 80 | 20 | 100 | 40 | - | - | - | - |
| 4 | 88CS-4 | Elective - IV | 4 | 1 | 0 | 5 | 3 | 80 | 20 | 100 | 40 | - | - | - | - |
| 5 | 88CS-5 | Project | - | - | 6 | 6 | - | - | - | - | - | 75 | 75 | 150 | 75 |
| | | TOTAL : | 16 | 4 | 10 | 30 | | | | 400 | | | | 250 | |
| | | CREDITS: 16+7=23 | | | | | GRAND TOTAL: 650 | | | | | | | | |

ELECTIVE: III

1. Natural Language Processing
2. Mobile Computing
3. Soft Computing

ELECTIVE: IV

1. Data Warehousing and Mining
2. Grid Computing
3. Digital Image Processing
4. Topics in Distribute

FOUR YEAR BACHELOR OF ENGINEERING (B.E.) DEGREE COURSE**SEMESTER : THIRD****BRANCH COMPUTER ENGINEERING****ABBREVATIONS**

| | | | |
|-------------------------|----------------------|---------------------------|-------------------|
| L: Theory Lectures | S: Semester | A: Paper Duration in Hrs. | F: MXM Ext |
| T: Tutorial | CS: Computer Science | B: MXM Theory | G: MXM –IA |
| P: Practical | MXM: Maximum Marks | C: MXM – IA | H: Total |
| IA: Internal Assessment | MNM: Minimum Marks | D: Total | I: MNM Pass Marks |
| | | E: MNM Pass Marks | |

| SR NO | SUBJECT CODE | SUBJECT | TEACHING SCHEME | | | | EXAMINATION SCHEME | | | | | | | | |
|----------|-----------------|------------------------------|-----------------|---|---|-------------------|--------------------|----|----|-----|-----|-----------|----|-----|-----|
| | | | L | T | P | Total Hrs/Week | THEORY | | | | | PRACTICAL | | | |
| | | | | | | | A | B | C | D | E | F | G | H | I |
| 1 | 33CE-1 | Mathematics – III | 3 | 1 | - | 4 | 3 | 80 | 20 | 100 | 40 | - | - | - | - |
| 2 | 33CE-2 | Electronics Devices * Ckts | 4 | 1 | 2 | 7 | 3 | 80 | 20 | 100 | 40 | 25 | 25 | 50 | 25 |
| 3 | 33CE-3 | Network Theory | 4 | 1 | - | 5 | 3 | 80 | 20 | 100 | 40 | - | - | - | - |
| 4 | 33CE-4 | Digital Electronics circuits | 4 | 1 | 2 | 7 | 3 | 80 | 20 | 100 | 40 | 25 | 25 | 50 | 25 |
| 5 | 33CE-5 | Introduction to Programming | 4 | 1 | 2 | 7 | 3 | 80 | 20 | 100 | 40 | 25 | 25 | 50 | 25 |
| 6 | 33CE-6 | Computer Workshop-I | - | - | 2 | 2 | - | - | - | - | - | 25 | 25 | 50 | 25 |
| | | TOTAL : | 19 | 5 | 8 | 32 | | - | - | 500 | 200 | | | 200 | 100 |

Grant Total : 700

FOUR YEAR BACHELOR OF ENGINEERING (B.E.) DEGREE COURSE**SEMESTER : FOURTH****BRANCH COMPUTER ENGINEERING****ABBREVATIONS**

| | | | |
|-------------------------|----------------------|---------------------------|-------------------|
| L: Theory Lectures | S: Semester | A: Paper Duration in Hrs. | F: MXM Ext |
| T: Tutorial | CS: Computer Science | B: MXM Theory | G: MXM –IA |
| P: Practical | MXM: Maximum Marks | C: MXM – IA | H: Total |
| IA: Internal Assessment | MNM: Minimum Marks | D: Total | I: MNM Pass Marks |
| | | E: MNM Pass Marks | |

| SR NO | SUBJECT CODE | SUBJECT | TEACHING SCHEME | | | | EXAMINATION SCHEME | | | | | | | | | |
|----------|-----------------|-------------------------------|-----------------|---|---|-------------------|--------------------|----|----|-----|-----|-----------|----|---|----|--|
| | | | L | T | P | Total Hrs/Week | THEORY | | | | | PRACTICAL | | | | |
| | | | | | | | A | B | C | D | E | F | G | H | I | |
| 1 | 44CE-1 | Discrete Maths & Graph Theory | 3 | 1 | - | 4 | 3 | 80 | 20 | 100 | 40 | - | - | - | - | |
| 2 | 44CE-2 | Basic Electronics Machines | 4 | 1 | 2 | 7 | 3 | 80 | 20 | 100 | 40 | 25 | 25 | 5 | 25 | |
| 3 | 44CE-3 | Digital Logic Design | 4 | 1 | - | 5 | 3 | 80 | 20 | 100 | 40 | - | - | - | - | |
| 4 | 44CE-4 | Data Structures | 4 | 1 | 2 | 7 | 3 | 80 | 20 | 100 | 40 | 25 | 25 | 5 | 25 | |
| 5 | 44CE-5 | Electronics Measurement | 4 | 1 | 2 | 7 | 3 | 80 | 20 | 100 | 40 | 25 | 25 | 5 | 25 | |
| 6 | 44CE-6 | Computer Workshop – II | - | - | 2 | 2 | - | - | - | - | - | 25 | 25 | 5 | 25 | |
| | | TOTAL : | 19 | 5 | 8 | 32 | - | - | - | 500 | 200 | | | 2 | 10 | |
| | | | | | | | | | | | | | | 0 | 0 | |
| | | | | | | | | | | | | | | 0 | 0 | |

GraGrant Total : 700

**Scheme of Examination and Teaching for B.E.
(Four Year Degree Course) in Computer Engineering
(B.E. Fifth Semester)**

| Subject Code | Subject | Paper/Practical College Assessment | Max. Marks | Min. Marks | Dur. of paper Hours | L | T | P | Total Hrs/Week |
|----------------------------------|--|--|-------------------|-------------------|----------------------------|----------|----------|------------|-----------------------|
| 5 CE-1 | Numerical Computational Techniques | Paper 80 College Assess 20 | 100 | 40 | 3 | 4 | 1 | - | 5 |
| 5 CE-2 (Same as 51T33) | Computer Graphics | Paper 80 College Assess 20 Practical 25 College Assess 25 | 100 50 | 40 25 | 3 | 4 | 1 | - 2 | 5 2 |
| 5 CE-3 | Microprocessor and Inter facing techniques | Paper 80 College Assess 20 Practical 25 College Assess 25 | 100 50 | 40 25 | 3 | 4 | 1 | - 2 | 5 2 |
| 5 CE-4 | Data Communication | Paper 80 College Assess 20 Practical 25 College Assess 20 | 100 50 | 40 25 | 3 | 4 | 1 | - 2 | 5 2 |
| 5 CE-5 (Same as 55CT4) | System Programming | Paper 80 College Assess 20 | 100 | 40 | 3 | 4 | 1 | - | 5 |
| | | Total | 650 | | | 20 | 5 | 6 | 31 |

**Scheme of Examination and Teaching for B.E.
(Four Year Degree Course) in Computer Engineering
(B.E. Sixth Semester)**

| Subject Code | Subject | Paper/Practical College Assessment | Max. Marks | Min. Marks | Dur. of paper Hours | L | T | P | Total Hrs/Week |
|---------------------|--|--|-------------------|-------------------|----------------------------|----------|----------|----------------|-----------------------|
| 6 CE-1 | Computer Architecture And organization | Paper 80 College Assess 20 | 100 | 40 | 3 | 4 | 1 | - | 5 |
| 6 CE-2 | Data base Management System | Paper 80 College Assess 20 Practical 25 College Assess 25 | 100 50 | 40 25 | 3 | 4 | 1 | - 2 | 5 2 |
| 6 CE-3 | Computer Network | Paper 80 College Assess 20 | 100 | 40 | 3 | 4 | 1 | - | 5 |
| 6 CE-4 | Object Oriented Programming in C++ | Paper 80 College Assess 20 Practical 25 College Assess 25 | 100 50 | 40 25 | 3 | 4 | 1 | - 2 | 5 2 |
| 6 CE-5 | Digital Signal Processing | Paper 80 College Assess 20 | 100 | 40 | 3 | 4 | 1 | - | 5 |
| | | Total | 600 | | | 20 | 5 | 4 | 29 |

**Scheme of Examination and Teaching for B.E.
(Four Year Degree Course) in Computer Engineering
(B.E. Seventh Semester)**

| Subject Code | Subject | Paper/Practical College Assessment | Max. Marks | Min. Marks | Dur. of paper Hours | L | T | P | Total Hrs/Week |
|---------------------|---|--|-------------------|-------------------|----------------------------|----------|----------|------------|-----------------------|
| 7 CE-1 | Operating System | Paper 80 College Assess 20 | 100 | 40 | 3 | 4 | 1 | - | 5 |
| 7 CE-2 | Principles of Compiler Design | Paper 80 College Assess 20 | 100 | 40 | 3 | 4 | 1 | - | 5 |
| 7 CE-3 | Visual Techniques | Paper 80 College Assess 20 Practical 25 College Assess 25 | 100 50 | 40 25 | 3 | 4 | 1 | - 2 | 5 2 |
| 7 CE-4 | Internet and JAVA Programming | Paper 80 College Assess 20 Practical 25 College Assess 25 | 100 50 | 40 25 | 3 | 4 | 1 | - 2 | 5 2 |
| 7 CE-5 | Artificial Neural Network & Fuzzy logic | Paper 80 College Assess 20 | 100 | 40 | 3 | 4 | 1 | - | 5 |
| | | Total | 600 | | | 20 | 5 | 4 | 29 |

**Scheme of Examination and Teaching for B.E.
(Four Year Degree Course) in Computer Engineering
(B.E. Eight Semester)**

| Subject Code | Subject | Paper/Practical College Assessment | Max. Marks | Min. Marks | Dur. of paper Hours | L | T | P | Total Hrs/Week |
|--------------|--|---|------------|------------|---------------------|----|---|----|----------------|
| 8 CE-1 | Unix and shell Programming | Paper 80 | 100 | 40 | 3 | 4 | 1 | - | 5 |
| | | College Assess 20 Practical 25 College Assess 25 | 50 | 25 | | | | 2 | 2 |
| 8 CE-2 | Advance Microprocessor & Microcontroller | Paper 80 | 100 | 40 | 3 | 4 | 1 | - | 5 |
| | | College Assess 20 Practical 25 College Assess 25 | 50 | 25 | | | | 2 | 2 |
| 8 CE-3 | Elective - I | Paper 80 College Assess 20 | 100 | 40 | 3 | 4 | 1 | - | 5 |
| 8 CE-4 | Elective-II | Paper 80 College Assess 20 | 100 | 40 | 3 | 4 | 1 | - | 5 |
| 8 CE-5 | Project & Seminar | College Assess 50 Seminar 25 Vive-voce 75 | 150 | 75 | - | - | - | 6 | 6 |
| | | Total | 650 | | | 16 | 4 | 10 | 30 |

Elective – I - 1. Modern Computer Networking 2. Computer vision
Elective – II - 1. Object Oriented Software Engineering 2. Object Oriented Modeling & Design

**Scheme of Examination for the B.E. four year course in Information Technology
(Semester Pattern III Semester)**

| Subject Code | Subject | Paper/Practical College Assessment | Max. Marks | Min. Marks | Dur. of paper Hours | L | T | P | Total Hrs/Week |
|---------------------|---|--|-------------------|-------------------|----------------------------|----------|----------|------------|-----------------------|
| 3IT15 | Applied Mathematics (Th) | Paper 80 College Assess 20 | 100 | 40 | 3 | 3 | 1 | - | 4 |
| 3IT16 | Programming Language 'C' (Th+P) | Paper 80 College Assess 20 Practical 25 College Assess 25 | 100 50 | 40 25 | 3 | 3 | 1 | - 2 | 4 2 |
| 3IT17 | Electronic Devices and Circuits (Th+P) | Paper 80 College Assess 20 Practical 25 College Assess 25 | 100 50 | 40 25 | 3 | 3 | 1 | - 2 | 4 2 |
| 3IT18 | Electrical Sciences (Th) | Paper 80 College Assess 20 | 100 | 40 | 3 | 3 | 1 | - | 4 |
| 3IT19 | Digital Electronics and Design (Th+P) | Paper 80 College Assess 20 Practical 25 College Assess 25 | 100 50 | 40 25 | 3 | 2 | 1 | - 2 | 3 2 |
| 3IT20 | Managerial Economics and Accountancy (Th) | Paper 80 College Assess 20 | 100 | 40 | 3 | 2 | 1 | - | 3 |
| 3IT21 | Computer Workshop-I | Practical 25 College Assess 25 | 50 | 25 | - | - | - | 2 | 2 |
| | | Total | 800 | | | 16 | 6 | 8 | 30 |

**Scheme of Examination for the B.E. four year course in Information Technology
(Semester Pattern IV Semester)**

| Subject Code | Subject | Paper/Practical College Assessment | Max. Marks | Min. Marks | Dur. of paper Hours | L | T | P | Total Hrs/Week |
|---------------------|---|--|-------------------|-------------------|----------------------------|----------|----------|------------|-----------------------|
| 4IT22 | Discrete Mathematics and Graph Theory (Th) | Paper 80 College Assess 20 | 100 | 40 | 3 | 3 | 1 | - | 4 |
| 4IT23 | Algorithms and Data Structures (Th+P) | Paper 80 College Assess 20 Practical 25 College Assess 25 | 100 50 | 40 25 | 3 | 3 | 1 | - 2 | 4 2 |
| 4IT24 | Communication Electronics (Th+P) | Paper 80 College Assess 20 Practical 25 College Assess 25 | 100 50 | 40 25 | 3 | 2 | 1 | - 2 | 3 2 |
| 4IT25 | Data Processing & File Organization (Th+P) | Paper 80 College Assess 20 Practical 25 College Assess 25 | 100 50 | 40 25 | 3 | 2 | 1 | - 2 | 3 2 |
| 4IT26 | Theory of Computation (Th) | Paper 80 College Assess 20 | 100 | 40 | 3 | 3 | 1 | - | 4 |
| 4IT27 | Computer Architecture and Organization (Th) | Paper 80 College Assess 20 | 100 | 40 | 3 | 3 | 1 | - | 4 |
| 4IT28 | Computer Workshop-II | Practical 25 College Assess 25 | 50 | 25 | - | - | - | 2 | 2 |
| | | Total | 800 | | | 16 | 6 | 8 | 30 |

**Scheme of Examination for the B.E. four year course in Information Technology
(Semester Pattern V Semester)**

| Subject Code | Subject | Paper/Practical College Assessment | Max. Marks | Min. Marks | Dur. of paper Hours | L | T | P | Total Hrs/Week |
|---------------------|--|--|-------------------|-------------------|----------------------------|----------|----------|----------------|-----------------------|
| 5IT29 | Information Theory and Data Communication (Th+P) | Paper 80 College Assess 20 Practical 25 College Assess 25 | 100 50 | 40 25 | 3 | 3 | 1 | - 2 | 4 2 |
| 5IT30 | Discrete and Integrated Circuits (Th+P) | Paper 80 College Assess 20 Practical 25 College Assess 25 | 100 50 | 40 25 | 3 | 3 | 1 | - 2 | 4 2 |
| 5IT31 | Object Oriented Methodologies (Th+P) | Paper 80 College Assess 20 Practical 25 College Assess 25 | 100 50 | 40 25 | 3 | 3 | 1 | - 2 | 4 2 |
| 5IT32 | System Software (Th) | Paper 80 College Assess 20 | 100 | 40 | 3 | 2 | 1 | - | 3 |
| 5IT33 | Computer Graphics (Th+P) | Paper 80 College Assess 20 Practical 25 College Assess 25 | 100 50 | 40 25 | 3 | 3 | 1 | - 2 | 4 2 |
| 5IT34 | Principles of Management | Paper 80 College Assess 20 | 100 | 40 | 3 | 2 | 1 | - | 3 |
| | | Total | 800 | | | 16 | 6 | 8 | 30 |

**Scheme of Examination for the B.E. four year course in Information Technology
(Semester Pattern VI Semester)**

| Subject Code | Subject | Paper/Practical College Assessment | Max. Marks | Min. Marks | Dur. of paper Hours | L | T | P | T o t a l H r s / W e e k | |
|--------------|-------------------------------------|------------------------------------|------------|------------|---------------------|---|----|---|---------------------------|----|
| 6IT35 | Microprocessors (Th+P) | Paper | 80 | 100 | 40 | 3 | 3 | 1 | - | 4 |
| | | College Assess | 20 | | | | | | | |
| | | Practical | 25 | | | | | | | |
| | | College Assess | 25 | 50 | 25 | | | | 2 | 2 |
| 6IT36 | Visual Techniques (Th+P) | Paper | 80 | 100 | 40 | 3 | 2 | 1 | - | 3 |
| | | College Assess | 20 | | | | | | | |
| | | Practical | 25 | | | | | | | |
| | | College Assess | 25 | 50 | 25 | | | | 2 | 2 |
| 6IT37 | Data base Management Systems (Th+P) | Paper | 80 | 100 | 40 | 3 | 3 | 1 | - | 4 |
| | | College Assess | 20 | | | | | | | |
| | | Practical | 25 | | | | | | | |
| | | College Assess | 25 | 50 | 25 | | | | 2 | 2 |
| 6IT38 | JAVA Programming (Th+P) | Paper | 80 | 100 | 40 | 3 | 3 | 1 | - | 4 |
| | | College Assess | 20 | | | | | | | |
| | | Practical | 25 | | | | | | | |
| | | College Assess | 25 | 50 | 25 | | | | 2 | 2 |
| 6IT39 | Software Engineering (Th) | Paper | 80 | 100 | 40 | 3 | 2 | 1 | - | 3 |
| | | College Assess | 20 | | | | | | | |
| 6IT40 | Operating Systems (Th) | Paper | 80 | 100 | 40 | 3 | 3 | 1 | - | 4 |
| | | College Assess | 20 | | | | | | | |
| | | Total | | 800 | | | 16 | 6 | 8 | 30 |

**Scheme of Examination for the B.E. four year course in Information Technology
(Semester Pattern VII Semester)**

| Subject Code | Subject | Paper/Practical College Assessment | Max. Marks | Min. Marks | Dur. of paper Hours | L | T | P | Total Hrs / Week | |
|--------------|---------------------------------------|------------------------------------|------------|------------|---------------------|---|----|---|------------------|----|
| 7IT41 | Computer Networks and Internet (Th+P) | Paper | 80 | 100 | 40 | 3 | 3 | 1 | - | 4 |
| | | College Assess | 20 | | | | | | | |
| | | Practical | 25 | | | | | | | |
| | | College Assess | 25 | 50 | 25 | | | | 2 | 2 |
| 7IT42 | Digital Signal Processing (Th+P) | Paper | 80 | 100 | 40 | 3 | 3 | 1 | - | 4 |
| | | College Assess | 20 | | | | | | | |
| | | Practical | 25 | | | | | | | |
| | | College Assess | 25 | 50 | 25 | | | | 2 | 2 |
| 7IT43 | Computer System Security (Th) | Paper | 80 | 100 | 40 | 3 | 3 | 1 | - | 4 |
| | | College Assess | 20 | | | | | | | |
| 7IT44 | Elective - I (Th) | Paper | 80 | 100 | 40 | 3 | 3 | 1 | - | 4 |
| | | College Assess | 20 | | | | | | | |
| 7IT45 | Elective – II (Th) | Paper | 80 | 100 | 40 | 3 | 3 | 1 | - | 4 |
| | | College Assess | 20 | | | | | | | |
| 7IT46 | Mini Project | College Assess | 50 | 100 | - | - | - | - | 4 | 4 |
| | | Viva voce | 50 | | | | | | | |
| | | Total | | 700 | | | 15 | 5 | 8 | 28 |

Elective-I (7IT44) 1. Operation Research 2. Artificial Intelligence 3. VLSI Design

Elective-II (7IT45) 1. Fuzzy System and Neural Networks 2. Multimedia Systems 3. Digital Image Processing 4. CAD/CAM 5. Management Information Systems.

Note : As and when changes in technology occurs new Elective subjects will be introduced.

**Scheme of Examination for the B.E. four year course in Information Technology
(Semester Pattern VIII Semester)**

| Subject Code | Subject | Paper/Practical College Assessment | Max. Marks | Min. Marks | Dur. of paper Hours | L | T | P | Total Hrs/Week |
|--------------|--|--|-------------------|------------------|---------------------|----|---|----|----------------|
| 8IT47 | Distributed Databases and Object Oriented Databases (Th+P) | Paper 80 College Assess 20 Practical 25 College Assess 25 | 100 50 | 40 25 | 3 | 3 | 1 | - | 4 2 |
| 8IT48 | Web Technologies (Th+P) | Paper 80 College Assess 20 Practical 25 College Assess 25 | 100 50 | 40 25 | 3 | 2 | 1 | - | 3 2 |
| 8IT49 | E-Commerce (Th) | Paper 80 College Assess 20 | 100 | 40 | 3 | 2 | 1 | - | 3 |
| 8IT50 | Elective - I (Th) | Paper 80 College Assess 20 | 100 | 40 | 3 | 3 | 1 | - | 4 |
| 8IT51 | Elective – II (Th) | Paper 80 College Assess 20 | 100 | 40 | 3 | 3 | 1 | - | 4 |
| 8IT52 | Project | College Assess 75 Viva Voce 75 | 150 | - | - | - | - | 6 | 6 |
| | | Total | 750 | | | 13 | 5 | 10 | 28 |

Elective-I (8IT50) 1. Enterprise Resource Planning 2. Fibre Optical Communication 3. Modeling & Simulation 4. Real Time Systems

Elective-II (8IT51) 1. Mobile Communication 2. Pattern Recognition 3. Advanced Microprocessor 4. Parallel Processing

Note : As and when changes in technology occurs new Elective subjects will be introduced.

**Scheme of Examination for Degree of Bachelor of Engineering
(Power Engineering)**

III Semester)

| Subject Code | Subject | Uni.Exam./ Coll.Asses. | Marks | | | | Paper Durati on Hrs. | L Hrs. | T Hrs. | P/D Hrs. | Board | Existing Subject Code |
|--------------|----------------------------------|---------------------------|----------|------|-----------|------|-------------------------|-----------|-----------|-------------|-------|-----------------------------|
| | | | Theory | | Practical | | | | | | | |
| | | | Max. | Pass | Min. | Pass | | | | | | |
| 3POE1 | Applied Mathematics-III | Univer. College | 80 20 | 40 | - | -- | 3 | 3 | 1 | - | GSH | 3ME1 |
| 3POE2 | Fluid Power-I | Univer. College | 80 20 | 40 | - | - | 3 | 3 | 1 | - | ME | 3ME3 |
| 3POE3 | Manufacturing Process | Univer. College | 80 20 | 40 | 25 25 | 25 | 3 | 3 | 1 | 2 | ME | |
| 3POE4 | Network Analysis | Univer. College | 80 20 | 40 | - | - | 3 | 4 | 1 | - | EE | 3SEEO4 |
| 3POE5 | Electronic Devices & Circuits | Univer. College | 80 20 | 40 | 25 25 | 25 | 3 | 4 | 1 | 2 | EN | 3SEE05 |
| 3POE6 | Computer Programming | Univer. College | 80 20 | 40 | 25 25 | 25 | 3 | 3 | 1 | 2 | PR | 3PR04 |
| | | Total | 600 | | 150 | | | 20 | 6 | 6 | | |

IV Semester

| Subject Code | Subject | Uni.Exam./ Coll.Asses. | Marks | | | | Paper Durati on Hrs. | L Hrs. | T Hrs. | P/D Hrs. | Board | Existing Subject Code |
|--------------|----------------------------------|---------------------------|----------|------|-----------|------|-------------------------|-----------|-----------|-------------|-------|-----------------------------|
| | | | Theory | | Practical | | | | | | | |
| | | | Max. | Pass | Min. | Pass | | | | | | |
| 4POE1 | Theory of Machines | Univer. College | 80 20 | 40 | - | -- | 3 | 3 | 1 | - | PR | 4PR4 |
| 4POE2 | Engg. Thermodynamics | Univer. College | 80 20 | 40 | - | - | 3 | 3 | 1 | - | ME | 4ME3 |
| 4POE3 | Digital Circuits | Univer. College | 80 20 | 40 | 25 25 | 25 | 3 | 4 | 1 | 2 | EN | 4SEE03 |
| 4POE4 | Basic elect m/c | Univer. College | 80 20 | 40 | 25 25 | 25 | 3 | 4 | 1 | 2 | ET | 4U5 |
| 4POE5 | Fluid Power - II | Univer. College | 80 20 | 40 | 25 25 | 25 | 3 | 3 | 1 | 2 | EE | 4ME5 |
| 4POE6 | Material Science & Metallurgy | Univer. College | 80 20 | 40 | | | 3 | 3 | 1 | 0 | MET | 4PRO5 |
| | | Total | 600 | | 150 | | | 20 | 6 | 6 | | |

| Subject Code | Subject | Uni.Exam./ Coll.Asses. | Marks | | | | Paper Duration on Hrs. | L Hrs. | T Hrs. | P/D Hrs. | Board | Existing Subject Code |
|--------------|---|------------------------|----------|------|-----------|------|------------------------|--------|--------|----------|-------|-----------------------|
| | | | Theory | | Practical | | | | | | | |
| | | | Max. | Pass | Min. | Pass | | | | | | |
| 6POE1 | Energy Conversion- I | Univer. College | 80 20 | 40 | - | -- | 3 | 3 | 1 | - | ME | 6ME1 |
| 6POE2 | Ind. Economics & Management | Univer. College | 80 20 | 40 | - | - | 3 | 3 | 1 | - | ME | 6SEE02 |
| 6POE3 | Thermal Power Plant Control & Instrumentation | Univer. College | 80 20 | 40 | 25 25 | 25 | 3 | 3 | 1 | 2 | POE | |
| 6POE4 | Power generation technology | Univer. College | 80 20 | 40 | - | - | 3 | 3 | 1 | - | POE | |
| 6POE5 | Steam Generators & its Aux. | Univer. College | 80 20 | 40 | 25 25 | 25 | 3 | 3 | 1 | 2 | POE | |
| 6POE6 | Power plant Training/visits | College | | | A TO D | | | | | 3 | POE | |
| | | Total | 500 | | 100 | | | 15 | 5 | 7 | | |

V Semester)

| Subject Code | Subject | Uni.Exam./ Coll.Asses. | Marks | | | | Paper Duration on Hrs. | L Hrs. | T Hrs. | P/D Hrs. | Board | Existing Subject Code |
|--------------|--|------------------------|----------|------|-----------|------|------------------------|--------|--------|----------|-------|-----------------------|
| | | | Theory | | Practical | | | | | | | |
| | | | Max. | Pass | Min. | Pass | | | | | | |
| 5POE1 | Heat Transfer | Univer. College | 80 20 | 40 | 25 25 | 25 | 3 | 3 | 1 | 2 | ME | 5ME4 |
| 5POE2 | Auto Control | Univer. College | 80 20 | 40 | - | - | 3 | 3 | 1 | 0 | ME | 6ME2 |
| 5POE3 | Thermal Power Station Layout, Common Aux. & Safety | Univer. College | 80 20 | 40 | - | - | 3 | 3 | 1 | 0 | PGE | |
| 5POE4 | Machine Design-I | Univer. College | 80 20 | 40 | 25 25 | 25 | 3 | 3 | 1 | 2 | PR | 3PRO3 |
| 5POE5 | Environmental. Management | Univer. College | 80 20 | 40 | | | 3 | 3 | 1 | 0 | POE | |
| 5POE6 | Power Plant Visit | College | | | A to D | | | | | 4 | | |
| | | Total | 500 | | 100 | | | 15 | 5 | 8 | | |

VI Semester)

| Subject Code | Subject | Uni.Exam./ Coll.Asses. | Marks | | | | Paper Durati on Hrs. | L Hrs. | T Hrs. | P/D Hrs. | Board | Existing Subject Code |
|--------------|--|---------------------------|----------|------|-----------|----------|-------------------------|-----------|-----------|-------------|-------|-----------------------------|
| | | | Theory | | Practical | | | | | | | |
| | | | Max. | Pass | Min. | Pass | | | | | | |
| 8POE1 | Switchgear & Protections | Univer. College | 80 20 | 40 | - | -- | 3 | 4 | 1 | - | EE | 8SSEE03 |
| 8POE2 | Thermal Power Plant Operation & Performance | Univer. College | 80 20 | 40 | - | - | 3 | 3 | 1 | - | POE | |
| 8POE3 | Power Plant Maint Practices | Univer. College | 80 20 | 40 | - | - | 3 | 3 | 1 | - | POE | |
| 8POE4 | Power plant operation practices | Univer. College | - | - | 100 50 | 50 25 | - | - | 1 | 3 | POE | |
| 8POE5 | Elective I | Univer. College | 80 20 | 40 | - | - | 3 | 3 | 1 | - | POE | |
| 8POE6 | Project work | Univer. College | | | 75 75 | 75 | - | - | 1 | 6 | POE | |
| | | Total | 400 | | 300 | | | 13 | 6 | 9 | | |

VII Semester)

| Subject Code | Subject | Uni.Exam./ Coll.Asses. | Marks | | | | Paper Durati on Hrs. | L Hrs. | T Hrs. | P/D Hrs. | Board | Existing Subject Code |
|--------------|--------------------------------------|---------------------------|----------|------|-----------|------|-------------------------|-----------|-----------|-------------|-------|-----------------------------|
| | | | Theory | | Practical | | | | | | | |
| | | | Max. | Pass | Min. | Pass | | | | | | |
| 7POE1 | Steam Turbines & its Aux. | Univer. College | 80 20 | 40 | - | - | 3 | 3 | 1 | - | POE | - |
| 7POE2 | Machine Design II | Univer. College | 80 20 | 40 | 25 25 | 25 | 3 | 3 | 1 | 2 | ME | 5PRO2 |
| 7POE3 | Thermal Power Plant Commissioning | Univer. College | 80 20 | 40 | - | - | 3 | 3 | 1 | - | POE | |
| 7POE4 | Energy Conversion II | Univer. College | 80 20 | 40 | 25 25 | 25 | 3 | 3 | 1 | 2 | ME | 7ME4 |
| 7POE5 | Turbo Generator and its Aux. | Univer. College | 80 20 | 40 | | - | 3 | 3 | 1 | - | POE | |
| 7POE6 | Project Seminar | College | - | - | 50 | 25 | - | | | 3 | | |
| | | Total | 500 | | 150 | | | 15 | 5 | 7 | | |

VIII Semester)

- Elective I – 1. IT and its applications in Power engg. (Board-POE)**
2. Materials Handling System (Board-Mech.7ME2)
3. Non-conventional Energy Sources

***ORDINANCE NO. 3 OF 2010**

**ORDINANCE RELATING TO AWARD OF DEGREE OF BACHELOR OF
(SEMESTER PATTERN) FULL TIME IN THE
ENGINEERING & TECHNOLOGY.**

**TECHNOLOGY
FACULTY OF**

Whereas, it is expedient to provide for an Ordinance relating to the award of Degree of Bachelor of Technology (Semester Pattern) Full time, in the Faculty of Engineering & Technology, the Management Council is hereby pleased to make the following Ordinance. :

1. This Ordinance may be called "Relating to the award of Degree of Bachelor of Technology (Semester Pattern) Full time, in the Faculty of Engineering & Technology, Ordinance, 2010", in the branches enlisted in Annexure – I.
2. This Ordinance shall come in to force with effect from the date of its approval by the Management Council.
3. That subject to the compliance with the provisions of this Ordinance and any other Ordinance(s) in force, from time to time, an applicant for admission to the Course (i.e. Bachelor of Technology) shall:
 - (a) have passed XII standard examination of the new (10+2) pattern examination of the Maharashtra State Board of Secondary & Higher Secondary Education/ Statutory Board/ Examination recognized by this University, as equivalent thereto, with following subjects:
 - (i) English (Higher or Lower)
 - (ii) Modern India Language (Higher or Lower)
 - (iii) Mathematics and Statistics
 - (iv) Physics
 - (v) Chemistry
 - (vi) Any other optional subject/ vocational subject from out of the list prescribed by the said Secondary & Higher Secondary Education Board of Maharashtra or its equivalent, recognized by this University,

OR

 - (a) have passed three years diploma in Engineering & Technology from the Technical Board of Maharashtra or its equivalent, recognized by this University;

* Accepted by the Management Council on dt. 22nd March, 2010, vide item No. 9, under the draft Ordinance No. 2 of 2009

AND

- (b) Comply with the rules & condition(s) prescribed by the AICTE and adopted by the Govt. of Maharashtra & this University, from time to time in respect of the Common Entrance Test, minimum percentage of marks (composite or individual subjects at H.S.C. or its equivalent level), for different categories of applicants.
4. The degree of Bachelor of Technology in respective branch shall be awarded to an examinee, who in accordance with the provisions of this Ordinance, qualifies himself/ herself.
 5. There shall be Four years semester pattern examinations, except First year B. Tech. which shall be of yearly pattern held by the University leading to the degree of Bachelor of Technology, in respective branch of Engineering, in the Faculty of Engineering & Technology. Also,
 - (i) First Year B. Tech. examination shall be common for all the branches of Technology.
 - (ii) Second year B. Tech. and onwards, the examinations shall be on the semester pattern basis. There shall be one examination at the end of each semester conducted by this University, whereby, in each academic year, there shall be two "Semester Examinations". Thus, from second year B.Tech. and onwards up to Fourth (Final) year B.Tech., there shall be six Semesters i.e. III, IV, V, VI, VII and VIII, each followed by a University examination.
 6. The period of the academic session shall be such as may be notified by the University.
 7. That subject to examinee's compliance with the provisions of this Ordinance & the Ordinance pertaining to examinations in general in force from time to time, the applicant for admission to a higher examination, at the end of the course of study of a particular year/ semester shall be eligible, if,
 - (i) he/she satisfies the conditions prescribed in the ATKT (Allowed to keep Term) rules, as enlisted in Annexure-II, revised & made applicable, from time to time.
 - (ii) He/she has complied with the provisions of paragraphs 5,7,8,10 and 31 of Ordinance No.6, relating to the Examinations in general.
 - (iii) He/she has prosecuted a regular & full time course of study in a College affiliated to this University,
 - (iv) He/she in the opinion of the concerned College Principal has shown satisfactory progress in his/her studies.

8. That an examinee shall be entitled for exemption in the subject(s) provided:
- (i) he/she who has passed in any subject (Theory or Practical) or subjects shall, at his/her opinion, be exempted from appearing in that subject(s), at the subsequent examination. The Theory and the Practical with their respective 'College Assessment' being separate heads of passing (though of the same subject), an examinee passing under any one of these but failing in another, shall at his option, be entitled to get "Exemption" in that part of the subject (either Theory or Practical), in which he/she has secured the pass marks, as mentioned in the respective scheme of examination, provided in the appendices.
 - (ii) He/she who holds three years first class diploma in the relevant branch of Engineering & Technology from any of the recognized Polytechnic in the State or Maharashtra or its equivalent from outside the state, with its equivalence duly established by this University shall be eligible for admission, directly to the III semester of the respective B. Tech. degree course, subject to fulfillment of condition, if any, prescribed by the Govt. of Maharashtra.
9. The fee for the Theory & Practical examinations shall be as prescribed by the Management Council, from time to time. Whenever, any change is made in the fee prescribed for any particular examination, the same shall be notified through a Notification, for information of the examinees concerned.
10. The scheme of examinations for different year/ semester shall be as prescribed by the University for various branches of Engineering, as provided in the respective branch appendix, changed & adopted from time to time.
- (i) The subjects, Theories & Practicals and the College Assessments in which an examinee is to be examined, the maximum marks for these heads and the minimum marks which an examinee must obtain in order to pass in the respective subject head and the examination are detailed in the appendix of the respective branch, as per Annexure – I.
 - (ii) The College Assessment marks for the practical shall be carried out in two stages (First) at the end of the First Term/Mid semester, as the case may be, which shall be out of 40% of the total & shall be intimated to the student and the (Second) at the end of the semester/ Academic term, as the case may be for remaining 60%.
 - (iii) The College Assessment marks for theory shall be based on examinee's performance in Sessional Exams. & Assignments, if any.
11. The scope of the subject shall be as indicated in the Syllabus.
12. The medium of instruction & examination shall be English.

13. The provisions of Ordinance No. 3 of 2007 relating to “Award of Grace Marks for passing an examination, securing higher division/ class and for securing Distinction in Subject(s)” as amended up to date shall apply to the examinations under this Ordinance.
14. As examinee who does not pass or who fails to present himself/herself for the examination shall be eligible for “Re-admission” to the same examination on payment of a fresh fee and such other fees, as may be prescribed from time to time.
15. An un-successful examinee, at any of the above examinations shall have an option to carry his/her “College Assessment Marks” for theory and/ or practical examination to his/her successive attempt at the examination. The examinee, however, can forgo his/her College Assessment marks in Subject(s), in which case he/she shall be examined for a total of marks comprising the Theory/ Practical examination and College Assessment together, at his/ her successive attempts at the examination. Such an option may be availed by the examinee by indicating the same in his/her **‘Application for the Examination’** and the option once exercised, shall be final & binding on the examinee concerned.
16. As soon as possible, after the examinations, the Board of Examinations shall publish a list of successful examinees. The result of all examinations shall be classified and the branch wise merit list shall be notified, as per Ordinance No. 6.
17. Notwithstanding anything to the contrary in this Ordinance, no one shall be admitted to an examination under this ordinance, if he/she has already passed the same examination or an equivalent examination thereto of any statutory University.
18.
 - (i) The examinees who have passed in all the subjects prescribed for all the examinations in the course & particular branch of Technology shall be eligible for award of Degree of Bachelor of Technology, in the respective branch of Technology, in the Faculty of Engineering & Tech.
 - (ii) The classification of Division of Examinees for the award of Degree of Bachelor of Technology shall be based on aggregate of marks obtained in last four semester i.e. V, VI, VII and VIII Semesters.
 - (iii) The degree in prescribed form shall be signed by the Vice-Chancellor.
19. Upon promulgation of this Ordinance, Direction Nos. 20 and 21 of 2001 shall stand repealed.

STATEMENT OF OBJECT & REASONS

The Academic Council in its meeting held on 10th Nov., 2001, vide item No. 3 & 187(1) and Management Council in its meeting held on 29th Jan., 2002, vide item No. 158, had considered & approved the afore mentioned Directions and thereafter referred to the Draft Ordinance Committee, for the preparation of ordinance. Accordingly, the Committee has prepared this Draft Ordinance for the consideration of the concerned authorities, hence this Ordinance.

While implementing the provisions of this Ordinance, no financial implications are involved at the Government as well as university level as of now or in future and the same is in consonance with the orders of the State Government and guidelines of the All India Council for Technical Education.

ANNEXURE - I

LIST OF BRANCHES IN WHICH B. TECH. (SEMESTER PATTERN) FULL TIME DEGREE IN THE FACULTY OF ENGINEERING & TECH. IS AWARDED & THEIR RESPECTIVE APPENDIX CODES FOR SCHEME

| SR. NO. | TECHNOLOGY BRANCH TITLE | BRANCH CODE | APPENDIX CODE FOR EXAM. SCHEME |
|---------|----------------------------|-------------|--------------------------------------|
| 01 | CHEMICAL ENGINEERING | CHME | CHME-I |
| 02 | CHEMICAL TECHNOLOGY | CHMT | CHMT-I |

ANNEXURE - II

A.T.K.T. RULES FOR B. TECH. FULL TIME (SEMESTER PATTERN) COURSE IN THE FACULTY OF ENGINEERING & TECHNOLOGY

| Admission to Semester/ Year | Candidate should have passed in all the subjects of following examination | Candidate should have appeared for the examination of year/ Semester | Candidate should have passed in all the subjects except in four or less number of passing heads of the following examinations taken together |
|--------------------------------|---|---|--|
| I YEAR | As per paragraph '3' of the Ordinance | - | - |
| III SEM | - | I YEAR | I YEAR |
| IV SEM | - | III SEM | - |
| V SEM | I YEAR | IV SEM | III & IV SEMS |
| VI SEM | - | V SEM | - |
| VII SEM | III & IV SEM | VI SEM | V & VI SEM |
| VIII SEM | - | VII SEM | - |

Scheme of Examination for Bachelor of Technology.
(Four Year Degree Course in Chemical Engineering –Annual Pattern for First Year only)
FIRST YEAR B.TECH (CHEMICAL ENGINEERING) EXAMINATION

| Sub No (Board) | Subject | Examination Scheme | | | | Teaching Scheme | | |
|-------------------|------------------------------|------------------------------------|--------------|--------------------------|----------------------------|-----------------|----|---------------------------|
| | | Paper/Practical Sessional | Max Marks | Min Marks for Passing | Duration of Exam in hrs | L | P | Total (Hours per Week) |
| CE01 (BGE)* | Applied Physical Chemistry-I | Paper 80 Sessional 20 | 100 | 40 | 03 | 03 | - | 03 |
| CE02 (BGE) | Applied Inorganic Chemistry | Paper 80 Sessional 20 | 100 | 40 | 03 | 03 | - | 03 |
| CE03 (BGE) | Applied Organic Chemistry | Paper 80 Sessional 20 | 100 | 40 | 03 | 03 | - | 03 |
| CE04 (BGE) | Applied Mathematics I | Paper 80 Sessional 20 | 100 | 40 | 03 | 03 | - | 03 |
| CE05 (BGE) | Applied Physics | Paper 80 Sessional 20 | 100 | 40 | 03 | 03 | - | 03 |
| CE06 (BGE) | Computer Programming | Paper 80 Sessional 20 | 100 | 40 | 03 | 03 | - | 03 |
| CE07 (BGE) | Applied Mechanics | Paper 80 Sessional 20 | 100 | 40 | 03 | 03 | - | 03 |
| CE08 (BGE) | Production Engineering | Paper 80 Sessional 20 | 100 | 40 | 03 | 03 | - | 03 |
| CE09 (BGE) | Applied Physical Chemistry-I | Practical 50 Sessional 50 | 100 | 50 | 06 | - | 03 | 03 |
| CE10 (BGE) | Applied Inorganic Chemistry | Practical 50 Sessional 50 | 100 | 50 | 06 | - | 03 | 03 |
| CE11 (BGE) | Applied Organic Chemistry | Practical 50 Sessional 50 | 100 | 50 | 06 | - | 03 | 03 |
| CE12 (BGE) | Applied Physics | Practical 50 Sessional 50 | 100 | 50 | 06 | - | 03 | 03 |
| CE13 (BGE) | Engineering Drawing I | Practical 50 Sessional 50 | 100 | 50 | 06 | - | 03 | 03 |
| CE14 | Workshop Practice | Practical | 100 | 50 | 06 | - | 03 | 03 |

| | | | | | | | | |
|-------|--|-----------------------|--|--|--|--|--|--|
| (BGE) | | 50 Sessional 50 | | | | | | |
|-------|--|-----------------------|--|--|--|--|--|--|

BGE - : Board of General Engineering
L=LECTURE, P=PRACTICAL

BCT : Board of Chemical Technology

**Scheme of Examination for Bachelor of Technology.
(Four Year Degree Course in Chemical Engineering –Semester Pattern)**

THIRD SEMESTER B.TECH (CHEMICAL ENGINEERING) EXAMINATION

| Sub No (Board) | Subject | Examination Scheme | | | | Teaching Scheme | | | | |
|-------------------|-------------------------------|----------------------------------|--------------|--------------------------|----------------------------|-----------------|----|----|------------------------------|----|
| | | Paper/ Practical Sessional | Max Marks | Min Marks for Passing | Duration of Exam in hrs | L | T | P | Total (Hours per Week) | |
| 3SCE1 (BGE)* | Applied Physical Chemistry II | Paper Sessional | 80 20 | 100 | 40 | 03 | 03 | 01 | - | 04 |
| 3S.CE2 (BGE) | Applied Mathematics II | Paper Sessional | 80 20 | 100 | 40 | 03 | 03 | 01 | - | 04 |
| 3S.CE3 (BGE) | Electrical Engineering | Paper Sessional | 80 20 | 100 | 40 | 03 | 03 | 01 | - | 04 |
| 3S.CE4 (BGE) | Strength of Materials | Paper Sessional | 80 20 | 100 | 40 | 03 | 03 | 01 | - | 04 |
| 3S.CE5 (BGE) | Plant Utilities | Paper Sessional | 80 20 | 100 | 40 | 03 | 03 | 01 | - | 04 |
| 3S.CE6 (BGE) | Applied Physical Chemistry II | Practical Sessional | 50 50 | 100 | 50 | 06 | - | - | 04 | 04 |
| 3S.CE7 (BGE) | Electrical Engineering | Practical Sessional | 50 50 | 100 | 50 | 06 | - | - | 04 | 04 |
| 3S.CE8 (BGE) | Machine Drawing | Practical Sessional | 50 50 | 100 | 50 | 06 | - | - | 04 | 04 |
| | | TOTAL | | 800 | | | 15 | 05 | 12 | 32 |

*BGE : Board of General Engineering

**Scheme of Examination for Bachelor of Technology.
(Four Year Degree Course in Chemical Engineering –Semester Pattern)**

FOURTH SEMESTER B.TECH (CHEMICAL ENGINEERING) EXAMINATION

| Sub No (Board) | Subject | Examination Scheme | | | | Teaching Scheme | | | | |
|-----------------------|--|------------------------------|--------------|--------------------------|----------------------------|-----------------|----|----|------------------------------|----|
| | | Paper/Practical Sessional | Max Marks | Min Marks for Passing | Duration of Exam in hrs | L | T | P | Total (Hours per Week) | |
| 4SCE1 (BGE)* | Inorganic Chemical Process Industries | Paper Sessional | 80 20 | 100 | 40 | 03 | 03 | 01 | - | 04 |
| 4S.CE2 (BGE) | Electronics and Instrumentation | Paper Sessional | 80 20 | 100 | 40 | 03 | 03 | 01 | - | 04 |
| 4S.CE3 (BChE) * | Computer Applications | Paper Sessional | 80 20 | 100 | 40 | 03 | 03 | 01 | - | 04 |
| 4S.CE4 (BChE) | Mechanical Operations | Paper Sessional | 80 20 | 100 | 40 | 03 | 03 | 01 | - | 04 |
| 4S.CE5 (BChE) | Process Calculations | Paper Sessional | 80 20 | 100 | 40 | 03 | 03 | 01 | - | 04 |
| 4S.CE6 (BGE) | Inorganic Chemical Technology | Practical Sessional | 50 50 | 100 | 50 | 06 | - | - | 04 | 04 |
| 4S.CE7 (BGE) | Electronics and Instrumentation | Practical Sessional | 50 50 | 100 | 50 | 06 | - | - | 04 | 04 |
| 4S.CE8 (BChE) | Mechanical Operations | Practical Sessional | 50 50 | 100 | 50 | 06 | - | - | 04 | 04 |
| | | TOTAL | | 800 | | | 15 | 05 | 12 | 32 |

*BGE : Board of General Engineering

*BChE : Board of Chemical Engineering

**Scheme of Examination for Bachelor of Technology.
(Four Year Degree Course in Chemical Engineering –Semester Pattern)**

FIFTH SEMESTER B.TECH (CHEMICAL ENGINEERING) EXAMINATION

| Sub No (Board) | Subject | Examination Scheme | | | | Teaching Scheme | | | | |
|-------------------|---|----------------------------------|--------------|--------------------------|----------------------------|-----------------|----|----|------------------------------|----|
| | | Paper/ Practical Sessional | Max Marks | Min Marks for Passing | Duration of Exam in hrs | L | T | P | Total (Hours per Week) | |
| 5SCE1 (BChE) | Fluid Mechanics | Paper Sessional | 80 20 | 100 | 40 | 03 | 03 | 01 | - | 04 |
| 5S.CE2 (BGE) | Chemical Engineering Thermodynamics | Paper Sessional | 80 20 | 100 | 40 | 03 | 03 | 01 | - | 04 |
| 5S.CE3 (BChE) | Environmental Engineering and Bio Technology | Paper Sessional | 80 20 | 100 | 40 | 03 | 03 | 01 | - | 04 |
| 5S.CE4 (BGE) | Applied Mathematics III | Paper Sessional | 80 20 | 100 | 40 | 03 | 03 | 01 | - | 04 |
| 5S.CE5 (BChE) | Plant Design I | Paper Sessional | 80 20 | 100 | 40 | 03 | 03 | 01 | - | 04 |
| 5S.CE6 (BGE) | Fluid Mechanics | Practical Sessional | 50 50 | 100 | 50 | 06 | - | - | 04 | 04 |
| 5S.CE7 (BGE) | Industrial Waste Treatment | Practical Sessional | 50 50 | 100 | 50 | 06 | - | - | 04 | 04 |
| | | TOTAL | | 700 | | | 15 | 05 | 8 | 28 |

***BGE : Board of General Engineering**

***BchE : Board of Chemical Engineering**

**Scheme of Examination for Bachelor of Technology.
(Four Year Degree Course in Chemical Engineering –Semester Pattern)**

SIXTH SEMESTER B.TECH (CHEMICAL ENGINEERING) EXAMINATION

| Sub No (Board) | Subject | Examination Scheme | | | | Teaching Scheme | | | | |
|-----------------------|--|----------------------------------|--------------|--------------------------|----------------------------|-----------------|----|----|------------------------------|----|
| | | Paper/ Practical Sessional | Max Marks | Min Marks for Passing | Duration of Exam in hrs | L | T | P | Total (Hours per Week) | |
| 6SCE1 (BGE)* | Organic Chemical Process Industries | Paper Sessional | 80 20 | 100 | 40 | 03 | 03 | 01 | - | 04 |
| 6S.CE2 (BChE) * | Heat Transfer | Paper Sessional | 80 20 | 100 | 40 | 03 | 03 | 01 | - | 04 |
| 6S.CE3 (BChE) | Mass Transfer - I | Paper Sessional | 80 20 | 100 | 40 | 03 | 03 | 01 | - | 04 |
| 6S.CE4 (BChE) | Chemical Reaction Engineering I | Paper Sessional | 80 20 | 100 | 40 | 03 | 03 | 01 | - | 04 |
| 6S.CE5 (BChE) | Process Control - I | Paper Sessional | 80 20 | 100 | 40 | 03 | 03 | 01 | - | 04 |
| 6S.CE6 (BGE) | Organic Chemical Technology | Practical Sessional | 50 50 | 100 | 50 | 06 | - | - | 04 | 04 |
| 6S.CE7 (BChE) | Heat Transfer | Practical Sessional | 50 50 | 100 | 50 | 06 | - | - | 04 | 04 |
| 6S.CE8 (BGE) | Instrumental Method of Analysis | Practical Sessional | 50 50 | 100 | 50 | 06 | - | - | 04 | 04 |
| | | TOTAL | | 800 | | | 15 | 05 | 12 | 32 |

*BGE : Board of General Engineering

*BChE : Board of Chemical Engineering

**Scheme of Examination for Bachelor of Technology.
(Four Year Degree Course in Chemical Engineering –Semester Pattern)**

SEVENTH SEMESTER B.TECH (CHEMICAL ENGINEERING) EXAMINATION

| Sub No (Board) | Subject | Examination Scheme | | | | Teaching Scheme | | | | |
|----------------------|-------------------------------------|----------------------------------|--------------|--------------------------|----------------------------|-----------------|----|----|------------------------------|----|
| | | Paper/ Practical Sessional | Max Marks | Min Marks for Passing | Duration of Exam in hrs | L | T | P | Total (Hours per Week) | |
| 7SCE1 (BChE) * | Transport Phenomena | Paper Sessional | 80 20 | 100 | 40 | 03 | 03 | 01 | - | 04 |
| 7S.CE2 (BChE) | Mass Transfer - II | Paper Sessional | 80 20 | 100 | 40 | 03 | 03 | 01 | - | 04 |
| 7S.CE3 (BChE) | Chemical Reaction Engineering II | Paper Sessional | 80 20 | 100 | 40 | 03 | 03 | 01 | - | 04 |
| 7S.CE4 (BChE) | Plant Design II | Paper Sessional | 80 20 | 100 | 40 | 03 | 03 | 01 | - | 04 |
| 7S.CE5 (BChE) | Mass Transfer | Practical Sessional | 50 50 | 100 | 50 | 06 | - | - | 04 | 04 |
| 7S.CE6 (BChE) | Process Equipment Drawing | Practical Sessional | 50 50 | 100 | 50 | 06 | - | - | 04 | 04 |
| (BChE) | Seminar ** | - | - | - | - | - | - | - | - | 03 |
| (BChE) | Dissertation/Project Work ** | - | - | - | - | - | - | - | - | 03 |
| | | TOTAL | | 600 | | | 12 | 04 | 08 | 30 |

***BchE : Board of Chemical Engineering**

**** Continuous Assessment Throughout The Year (Both 7th & 8th Semesters) for Seminar (8SCE7) and Dissertation/
Project Work (8SCE6).**

**Scheme of Examination for Bachelor of Technology.
(Four Year Degree Course in Chemical Engineering –Semester Pattern)**

EIGHTH SEMESTER B.TECH (CHEMICAL ENGINEERING) EXAMINATION

| Sub No (Board) | Subject | Examination Scheme | | | | Teaching Scheme | | | | |
|----------------------|--|------------------------------|--------------|--------------------------|----------------------------|-----------------|----|----|------------------------------|----|
| | | Paper/Practical Sessional | Max Marks | Min Marks for Passing | Duration of Exam in hrs | L | T | P | Total (Hours per Week) | |
| 8SCE1 (BChE) * | Mathematical Methods and Computer Aided Design in Chemical Engineering | Paper Sessional | 80 20 | 100 | 40 | 03 | 03 | 01 | - | 04 |
| 8S.CE2 (BChE) | Process Control - II | Paper Sessional | 80 20 | 100 | 40 | 03 | 03 | 01 | - | 04 |
| 8S.CE3 (BChE) | Project Management & Industrial Economics | Paper Sessional | 80 20 | 100 | 40 | 03 | 03 | 01 | - | 04 |
| 8S.CE4 (BChE) | Elective | Paper Sessional | 80 20 | 100 | 40 | 03 | 03 | 01 | - | 04 |
| 8S.CE5 (BChE) | Process Control | Practical Sessional | 50 50 | 100 | 50 | 06 | - | - | 04 | 04 |
| 8S.CE6 (BChE) | Dissertation | - | - | 200 | 100 | - | - | - | - | 03 |
| 8S.CE7 (BChE) | Seminar | - | - | 100 | - | - | - | - | - | 03 |
| | | TOTAL | | 800 | | | 12 | 04 | 08 | 30 |

*BChE : Board of Chemical Engineering

** 8S.CE.6 and 8S.CE.7 together

Scheme of Examination for Bachelor of Technology.
(Four Year Degree Course in Chemical Engineering –Annual Pattern for First Year only)
FIRST YEAR B.TECH (CHEMICAL TECHNOLOGY) EXAMINATION

| Sub No (Board) | Subject | Examination Scheme | | | | Teaching Scheme | | |
|-------------------|-----------------------------|------------------------------|--------------|--------------------------|----------------------------|-----------------|----|---------------------------|
| | | Paper/Practical Sessional | Max Marks | Min Marks for Passing | Duration of Exam in hrs | L | P | Total (Hours per Week) |
| CT01 (BGE) | Applied Inorganic Chemistry | Paper 80 Sessional 20 | 100 | 40 | 03 | 03 | - | 03 |
| CT02 (BGE) | Applied Organic Chemistry | Paper 80 Sessional 20 | 100 | 40 | 03 | 03 | - | 03 |
| CT03 (BGE) | Applied Physical Chemistry | Paper 80 Sessional 20 | 100 | 40 | 03 | 03 | - | 03 |
| CT04 (BGE) | Applied Physics | Paper 80 Sessional 20 | 100 | 40 | 03 | 03 | - | 03 |
| CT05 (BGE) | Applied Mathematics | Paper 80 Sessional 20 | 100 | 40 | 03 | 03 | - | 03 |
| CT06 (BGE) | Production Technology | Paper 80 Sessional 20 | 100 | 40 | 03 | 03 | - | 03 |
| CT07 (BGE) | Applied Mechanics | Paper 80 Sessional 20 | 100 | 40 | 03 | 03 | - | 03 |
| CT08 (BGE) | Special Technology I | Paper 80 Sessional 20 | 100 | 40 | 03 | 03 | - | 03 |
| CT09 (BGE) | Applied Inorganic Chemistry | Practical 50 Sessional 50 | 100 | 50 | 06 | - | 03 | 03 |
| CE10 (BGE) | Applied Organic Chemistry | Practical 50 Sessional 50 | 100 | 50 | 06 | - | 03 | 03 |
| CE11 (BGE) | Applied Physical Chemistry | Practical 50 Sessional 50 | 100 | 50 | 06 | - | 03 | 03 |
| CT12 (BGE) | Applied Physics | Practical 50 Sessional 50 | 100 | 50 | 06 | - | 03 | 03 |
| CT13 (BGE) | Workshop Practice | Practical 50 Sessional 50 | 100 | 50 | 06 | - | 03 | 03 |
| CT14 (BGE) | Engineering Drawing I | Practical 50 Sessional 50 | 100 | 50 | 06 | - | 03 | 03 |

BGE - : Board of General Engineering

BCT : Board of Chemical Technology

L=LECTURE, P=PRACTICAL

Special Technology subject includes: 1. Food Technology 2. Pulp and Paper Technology 3. Petroleum Refining and Petrochemical Technology

4. Technology of Oils, Fats and Surfactants 5. Plastics and Polymer Technology 6. Surface Coating Technology

**Scheme of Examination for Bachelor of Technology.
(Four Year Degree Course in Chemical Engineering –Semester Pattern)**

THIRD SEMESTER B.TECH (CHEMICAL TECHNOLOGY) EXAMINATION

| Sub No (Board) | Subject | Examination Scheme | | | | Teaching Scheme | | | |
|-------------------|--|------------------------------|--------------|--------------------------|----------------------------|-----------------|----|----|---------------------------|
| | | Paper/Practical Sessional | Max Marks | Min Marks for Passing | Duration of Exam in hrs | L | T | P | Total (Hours per Week) |
| 3SCT1 (BGE)* | Inorganic Chemical Process Industries | Paper 80 Sessional 20 | 100 | 40 | 03 | 03 | 01 | - | 04 |
| 3S.CT2 (BChE) | Process Calculations | Paper 80 Sessional 20 | 100 | 40 | 03 | 03 | 01 | - | 04 |
| 3S.CT3 (BCT) | Special Technology II | Paper 80 Sessional 20 | 100 | 40 | 03 | 03 | 01 | - | 04 |
| 3S.CT4 (BGE) | Applied Mathematics II | Paper 80 Sessional 20 | 100 | 40 | 03 | 03 | 01 | - | 04 |
| 3S.CT5 (BGE) | Electronics and Instrumentation | Paper 80 Sessional 20 | 100 | 40 | 03 | 03 | 01 | - | 04 |
| 3S.CT6 (BGE) | Inorganic Chemical Technology | Practical 50 Sessional 50 | 100 | 50 | 06 | - | - | 04 | 04 |
| 3S.CT7 (BGE) | Electronics and Instrumentation | Practical 50 Sessional 50 | 100 | 50 | 06 | - | - | 04 | 04 |
| 3S.CT8 (BCT) | Special Technology I | Practical 50 Sessional 50 | 100 | 50 | 06 | - | - | 04 | 04 |
| | | TOTAL | 800 | 350 | | 15 | 05 | 12 | 32 |

BGE - : Board of General Engineering

BCT : Board of Chemical Technology

BChE : Board of Chemical Engineering

L=LECTURE, P=PRACTICAL, T=TUTORIAL

Special Technology subject includes:

- 1. Food Technology**
- 2. Pulp and Paper Technology**
- 3. Petroleum Refining and Petrochemical Technology**
- 4. Technology of Oils, Fats and Surfactants**
- 5. Plastics and Polymer Technology**
- 6. Surface Coating Technology**

Scheme of Examination for Bachelor of Technology.
(Four Year Degree Course in Chemical Engineering –Semester Pattern)

FOURTH SEMESTER B.TECH (CHEMICAL TECHNOLOGY) EXAMINATION

| Sub No (Board) | Subject | Examination Scheme | | | | Teaching Scheme | | | |
|-------------------|-------------------------------|------------------------------|--------------|--------------------------|----------------------------|-----------------|----|----|---------------------------|
| | | Paper/Practical Sessional | Max Marks | Min Marks for Passing | Duration of Exam in hrs | L | T | P | Total (Hours per Week) |
| 4SCT1 (BGE) | Strength of Materials | Paper 80 Sessional 20 | 100 | 40 | 03 | 03 | 01 | - | 04 |
| 4S.CT2 (BGE) | Plant Utilities | Paper 80 Sessional 20 | 100 | 40 | 03 | 03 | 01 | - | 04 |
| 4S.CT3 (BGE) | Electrical Technology | Paper 80 Sessional 20 | 100 | 40 | 03 | 03 | 01 | - | 04 |
| 4S.CT4 (BChE) | Computer Applications | Paper 80 Sessional 20 | 100 | 40 | 03 | 03 | 01 | - | 04 |
| 4S.CT5 (BGE) | Applied Physical Chemistry II | Paper 80 Sessional 20 | 100 | 40 | 03 | 03 | 01 | - | 04 |
| 4S.CT6 (BGE) | Electrical Technology | Practical 50 Sessional 50 | 100 | 50 | 06 | - | - | 04 | 04 |
| 4S.CT7 (BGE) | Machine Drawing | Practical 50 Sessional 50 | 100 | 50 | 06 | - | - | 04 | 04 |
| 4S.CT8 (BGE) | Applied Physical Chemistry II | Practical 50 Sessional 50 | 100 | 50 | 06 | - | - | 04 | 04 |
| | | TOTAL | 800 | 350 | | 15 | 05 | 12 | 32 |

BGE - : Board of General Engineering

BCT : Board of Chemical Technology

BChE : Board of Chemical Engineering

L=LECTURE, P=PRACTICAL, T=TUTORIAL

Special Technology subject includes:

1. Food Technology
2. Pulp and Paper Technology
3. Petroleum Refining and Petrochemical Technology
4. Technology of Oils, Fats and Surfactants
5. Plastics and Polymer Technology
6. Surface Coating Technology

**Scheme of Examination for Bachelor of Technology.
(Four Year Degree Course in Chemical Engineering –Semester Pattern)**

FIFTH SEMESTER B.TECH (CHEMICAL TECHNOLOGY) EXAMINATION

| Sub No (Board) | Subject | Examination Scheme | | | | Teaching Scheme | | | | |
|-------------------|---|------------------------------|--------------|--------------------------|----------------------------|-----------------|----|----|---------------------------|----|
| | | Paper/Practical Sessional | Max Marks | Min Marks for Passing | Duration of Exam in hrs | L | T | P | Total (Hours per Week) | |
| 5SCT1 (BChE) | Fluid Mechanics and Mechanical Operation | Paper Sessional | 80 20 | 100 | 40 | 03 | 03 | 01 | - | 04 |
| 5S.CT2 (BChE) | Plant Design | Paper Sessional | 80 20 | 100 | 40 | 03 | 03 | 01 | - | 04 |
| 5S.CT3 (BChE) | Heat Transfer | Paper Sessional | 80 20 | 100 | 40 | 03 | 03 | 01 | - | 04 |
| 5S.CT4 (BGE) | Organic Chemical Process Industries | Paper Sessional | 80 20 | 100 | 40 | 03 | 03 | 01 | - | 04 |
| 5S.CT5 (BCT) | Special Technology III | Paper Sessional | 80 20 | 100 | 40 | 03 | 03 | 01 | - | 04 |
| 5S.CT6 (BChE) | Unit Operations | Practical Sessional | 50 50 | 100 | 50 | 06 | - | - | 04 | 04 |
| 5S.CT7 (BChE) | Heat Transfer | Practical Sessional | 50 50 | 100 | 50 | 06 | - | - | 04 | 04 |
| 5S.CT8 (BGE) | Organic Chemical Technology | Practical Sessional | 50 50 | 100 | 50 | 06 | - | - | 04 | 04 |
| | | TOTAL | | 800 | 350 | | 15 | 05 | 12 | 32 |

BGE - : Board of General Engineering

BChE : Board of Chemical Engineering

L=LECTURE, P=PRACTICAL, T=TUTORIAL

Special Technology subject includes:

- 1. Food Technology**
- 2. Pulp and Paper Technology**
- 3. Petroleum Refining and Petrochemical Technology**
- 4. Technology of Oils, Fats and Surfactants**
- 5. Plastics and Polymer Technology**
- 6. Surface Coating Technology**

BCT : Board of Chemical Technology

**Scheme of Examination for Bachelor of Technology.
(Four Year Degree Course in Chemical Engineering –Semester Pattern)**

SIXTH SEMESTER B.TECH (CHEMICAL TECHNOLOGY) EXAMINATION

| Sub No (Board) | Subject | Examination Scheme | | | | Teaching Scheme | | | | |
|-------------------|---|------------------------------|--------------|--------------------------|----------------------------|-----------------|----|----|---------------------------|----|
| | | Paper/Practical Sessional | Max Marks | Min Marks for Passing | Duration of Exam in hrs | L | T | P | Total (Hours per Week) | |
| 6SCT1 (BGE) | Applied Mathematics III | Paper Sessional | 80 20 | 100 | 40 | 03 | 03 | 01 | - | 04 |
| 6S.CT2 (BChE) | Mass Transfer | Paper Sessional | 80 20 | 100 | 40 | 03 | 03 | 01 | - | 04 |
| 6S.CT3 (BChE) | Environmental Engineering and Bio Technology | Paper Sessional | 80 20 | 100 | 40 | 03 | 03 | 01 | - | 04 |
| 6S.CT4 (BGE) | Chemical Engineering Thermodynamics | Paper Sessional | 80 20 | 100 | 40 | 03 | 03 | 01 | - | 04 |
| 6S.CT5 (BCT) | Special Technology IV | Paper Sessional | 80 20 | 100 | 40 | 03 | 03 | 01 | - | 04 |
| 6S.CT6 (BChE) | Mass Transfer | Practical Sessional | 50 50 | 100 | 50 | 06 | - | - | 04 | 04 |
| 6S.CT7 (BGE) | Industrial Waste Treatment | Practical Sessional | 50 50 | 100 | 50 | 06 | - | - | 04 | 04 |
| 6S.CT8 (BCT) | Special Technology II | Practical Sessional | 50 50 | 100 | 50 | 06 | - | - | 04 | 04 |
| | | TOTAL | | 800 | 350 | | 15 | 05 | 12 | 32 |

BGE - : Board of General Engineering

BCT : Board of Chemical Technology

BChE : Board of Chemical Engineering

L=LECTURE, P=PRACTICAL, T=TUTORIAL

Special Technology subject includes:

- 1. Food Technology**
- 2. Pulp and Paper Technology**
- 3. Petroleum Refining and Petrochemical Technology**
- 4. Technology of Oils, Fats and Surfactants**
- 5. Plastics and Polymer Technology**
- 6. Surface Coating Technology**

**Scheme of Examination for Bachelor of Technology.
(Four Year Degree Course in Chemical Engineering –Semester Pattern)**

SEVENTH SEMESTER B.TECH (CHEMICAL TECHNOLOGY) EXAMINATION

| Sub No (Board) | Subject | Examination Scheme | | | | Teaching Scheme | | | | |
|-------------------|--|------------------------------|--------------|--------------------------|----------------------------|-----------------|----|----|---------------------------|----|
| | | Paper/Practical Sessional | Max Marks | Min Marks for Passing | Duration of Exam in hrs | L | T | P | Total (Hours per Week) | |
| 7SCT1 (BChE) | Process Control | Paper Sessional | 80 20 | 100 | 40 | 03 | 03 | 01 | - | 04 |
| 7S.CT2 (BChE) | Mathematical Methos & Computer Aided Design in Chemical Technology | Paper Sessional | 80 20 | 100 | 40 | 03 | 03 | 01 | - | 04 |
| 7S.CT3 (BCT) | Special Technology V | Paper Sessional | 80 20 | 100 | 40 | 03 | 03 | 01 | - | 04 |
| 7S.CT4 (BCT) | Special Technology VI | Paper Sessional | 80 20 | 100 | 40 | 03 | 03 | 01 | - | 04 |
| 7S.CT5 (BCT) | Special Technology III | Practical Sessional | 50 50 | 100 | 50 | 06 | - | - | 08 | 08 |
| 7S.CT6 (BChE) | Process Equipment Drawing | Practical Sessional | 50 50 | 100 | 50 | 06 | - | - | 04 | 04 |
| (BCT) | Seminar, Industrial Training and Tour Report + | - | - | - | - | - | - | - | - | 03 |
| (BCT) | Project Work/ Dissertation + | - | - | - | - | - | - | - | - | 03 |
| | | TOTAL | | 600 | | | 12 | 04 | 12 | 34 |

BCT : Board of Chemical Technology BchE : Board of Chemical Engineering

L=LECTURE, P=PRACTICAL, T=TUTORIAL + Continuous Assessment Throughout the Year (Both 7th and 8th Semester)

Special Technology subject includes:

1. Food Technology 2. Pulp and Paper Technology 3. Petroleum Refining and Petrochemical Technology
4. Technology of Oils, Fats and Surfactants 5. Plastics and Polymer Technology 6. Surface Coating Technology

**Scheme of Examination for Bachelor of Technology.
(Four Year Degree Course in Chemical Engineering –Semester Pattern)**

EIGHTH SEMESTER B.TECH (CHEMICAL TECHNOLOGY) EXAMINATION

| Sub No (Board) | Subject | Examination Scheme | | | | Teaching Scheme | | | | |
|-------------------|---|------------------------------|--------------|--------------------------|----------------------------|-----------------|----|----|---------------------------|----|
| | | Paper/Practical Sessional | Max Marks | Min Marks for Passing | Duration of Exam in hrs | L | T | P | Total (Hours per Week) | |
| 8SCT1 (BChE) | Chemical Reaction Engineering | Paper Sessional | 80 20 | 100 | 40 | 03 | 03 | 01 | - | 04 |
| 8S.CT2 (BChE) | Project Management & Industrial Economics | Paper Sessional | 80 20 | 100 | 40 | 03 | 03 | 01 | - | 04 |
| 8S.CT3 (BCT) | Special Technology VII | Paper Sessional | 80 20 | 100 | 40 | 03 | 03 | 01 | - | 04 |
| 8S.CT4 (BCT) | Special Technology VIII | Paper Sessional | 80 20 | 100 | 40 | 03 | 03 | 01 | - | 04 |
| 8S.CT5 (BCT) | Special Technology IV | Practical Sessional | 50 50 | 100 | 50 | 06 | - | - | 08 | 08 |
| 8S.CT6 (BCT) | Seminar, Industrial Training and Tour Report + | | | 100 | - | - | - | - | - | 03 |
| 8S.CT7 (BCT) | Project Work/ Dissertation + | - | | 200 | 100 | - | - | - | - | 03 |
| | | TOTAL | | 800 | | | 12 | 04 | 08 | 30 |

BCT : Board of Chemical Technology BchE : Board of Chemical Engineering

L=LECTURE, P=PRACTICAL, T=TUTORIAL + Continuous Assessment Throughout the Year (Both 7th and 8th Semester)

Special Technology subject includes:

1. Food Technology 2. Pulp and Paper Technology 3. Petroleum Refining and Petrochemical Technology
4. Technology of Oils, Fats and Surfactants 5. Plastics and Polymer Technology 6. Surface Coating Technology

ORDINANCE NO. 4 OF 2010*ORDINANCE RELATING TO AWARD OF DEGREE OF BACHELOR OF ENGINEERING (SEMESTER PATTERN) PART TIME IN THE FACULTY OF ENGINEERING & TECHNOLOGY.**

Whereas, it is expedient to provide for an Ordinance relating to the award of Degree of Bachelor of Engineering (Semester Pattern) Part time, in the Faculty of Engineering & Technology, the Management Council is hereby pleased to make the following Ordinance. :

1. This Ordinance may be called “Ordinance governing examination leading to the Degree of Bachelor of Engineering (Semester Pattern) Part time, in the Faculty of Engineering & Technology, Ordinance, 2009”, in the branches enlisted in Annexure – I.
2. This Ordinance shall come in to force with effect from the date of its approval by the Management Council.
3. That subject to the compliance with the provisions of this Ordinance and any other Ordinance(s) in force, from time to time, an applicant for admission to the Course (i.e. Bachelor of Engineering) shall:
 - (a) have passed Diploma examination in the relevant branch of engineering conducted by the Board of Technical Education, Maharashtra or by any other Institution which has been granted academic autonomy by the Govt. of Maharashtra or by any Board recognized as equivalent to the Diploma of the Board of Technical examination, Maharashtra State with not less than 50% marks in aggregate. (45 percent aggregate marks for Backward class candidate from the State of Maharashtra.)
 - (b) have an experience of working in the relevant profession for a minimum period of one year after passing the qualifying examination. However, a candidate passing the Four Years Diploma Course in Engineering/ Technology with industrial training in Sandwich pattern shall be exempted from the requirement of working experience.

Provided further that for want of sufficient number of applicants with professional experience of one year after passing the qualifying examination, if any seats remain vacant, fresh diploma holders otherwise eligible may be admitted and vacancies can be filled in by abiding the relevant rules.

* Accepted by the Management Council on dt. 22nd March, 2010, vide item No. 10, under the draft Ordinance No. 3 of 2009

- (c) have to comply with the provisions prescribed by the AICTE/Govt. of Maharashtra, if any, from time to time.
4. The degree of Bachelor of Engineering (Part Time) in respective branch shall be awarded to an examinee, who in accordance with the provisions of this Ordinance, qualifies himself/herself.
 5. There shall be Four years semester pattern examinations, held by the University leading to the degree of Bachelor of Engineering (Part Time) in respective branch of Engineering, in the Faculty of Engineering & Technology. All the examinations shall be on the semester pattern basis. There shall be one examination at the end of each semester conducted by this University, whereby, in each academic year, there shall be two "Semester Examinations". Thus, from First year B.E. and onwards up to Fourth (Final) year B.E., (Part-Time) there shall be Eight Semesters i.e. I, II, III, VI, VII, and VIII, each followed by a University examination.
 6. The period of the academic session shall be such, as may be notified by the University.
 7. That subject to examinee's compliance with the provisions of this Ordinance & the Ordinance pertaining to examinations in general in force from time to time, the applicant for admission and appearance to a higher examination, at the end of the course of study of a particular semester shall be eligible, if:
 - (i) he/she satisfies the conditions prescribed in the ATKT (Allowed to keep Term) rules, as enlisted in Annexure-II, in force or revised & made applicable, from time to time,
 - (ii) He/she has complied with the provisions of paragraphs 5,7,8,10, and 31 of Ordinance No. 6, relating to the Examinations in general,
 - (iii) he/she has prosecuted a regular course of study in a College affiliated to this University,
 - (iv) he/she in the opinion of the concerned College Principal has shown satisfactory progress in his/her studies.
 8. That an examinee shall be entitled for exemption in the subject(s) provided he/she who has passed in any subject (Theory or Practical) or subjects shall, at his/her opinion, be exempted from appearing in that subject(s), at the subsequent examination. The Theory and the Practical with their respective 'College Assessment' being separate heads of passing (though of the same subject), an examinee passing under any one of these but failing in another, shall at his option, be entitled to get "Exemption" in that part of the subject (either Theory or Practical), in which he/she has secured the pass marks, as mentioned in the respective scheme of examination, provided in the appendices.
 9. The fee for the Theory & Practical examinations shall be as prescribed by the Management Council, from time to time. Whenever, any change is made in the fee prescribed for any particular examination, the same shall be notified through a Notification, for information of the examinees concerned.

10. The scheme of examinations for different semester shall be as prescribed by the University for various branches of Engineering, (Part-Time) as provided in the respective branch appendix, changed & adopted from time to time.
 - (i) The subjects, Theories & Practicals and the College Assessments in which an examinee is to be examined, the maximum marks for these heads and the minimum marks which an examinee must obtain in order to pass in the respective subject head and the examination are in the appendix of the respective branch, as per Annexure – I.
 - (ii) The College Assessment marks for the practical shall be carried out in two stages (First) at the end of the First Term/ Mid semester, as the case may be, which shall be out of 40% of the total & shall be intimated to the student and the (Second) at the end of the semester/ Academic term, as the case may be for remaining 60%.
 - (iii) The College Assessment marks for theory shall be based on examinee's performance in Sessional Exams. & Assignments, if any.
11. The Scope of the subject shall be as indicated in the Syllabus.
12. The medium of instruction & examination shall be English.
13. The provisions of Ordinance No. 3 of 2007 relating to "Award of Grace Marks for passing an examination, securing higher division/ class and for securing Distinction in Subject(s)" as amended up to date shall apply to the examinations under this Ordinance.
14. An examinee who does not pass or who fails to present himself/herself for the examination shall be eligible for "Re-admission" to the same examination on payment of a fresh fee and such other fees, as may be prescribed from time to time.
15. An un-successful examinee, at any of the above examinations shall have an option to carry his/her "College Assessment Marks" for theory and/or practical examination to his/her successive attempt at the examination. The examinee, however, can forgo his/her College Assessment marks in Subject(s), in which case he/she shall be examined for a total of marks comprising the Theory/Practical examination and College Assessment together, at his/her successive attempts at the examination. Such an option may be availed by the examinee by indicating the same in his/her '**Application for the Examination**' and the option once exercised, shall be final & binding on the examinee concerned.
16. As soon as possible, after the examinations, the Board of Examinations shall publish a list of successful examinees. The result of all examinations shall be classified and the branch wise merit list shall be notified, as per Ordinance No. 6.

17. Notwithstanding anything to the contrary in this Ordinance, no one shall be admitted to an examination under this Ordinance, if he/she has already passed the same examination or an equivalent examination thereto of any statutory University.
18. (i) The examinees who have passed in all the subjects prescribed for all the examinations in the Course & particular branch of Engineering shall be eligible for award of Degree of Bachelor of Engineering, in the Faculty of Engineering & Technology.

(ii) The classification of Division of Examinees for the award of Degree of Bachelor of Engineering (Part-Time) shall be based on aggregate of marks obtained in last four semester i.e. V, VI, VII, and VIII Semesters.

(iii) The degree in prescribed form shall be signed by the Vice-Chancellor.
19. Upon promulgation of this Ordinance, Direction Nos. 39,40,41,42 and 43 of 2001 shall stand repealed.

STATEMENT OF OBJECT & REASONS

The above courses prior to the issuance of aforesaid directions, had been operational with yearly scheme of teaching & examination in all the years of the courses. However, with the clear directive from the AICTE and Govt. of Maharashtra, all the courses under the Faculty of Engineering & Technology have been converted from yearly pattern to semester pattern of teaching scheme & examinations.

As such, after its discussion & thereafter resolution to this effect by the Faculty of Engineering & Technology vide its meeting dated 7.6.2001 and subsequently its approval by the Academic Council in its meeting held on 10th Nov., 2001, vide item No. 3 & 187(1) and the Management Council in its meeting held on 29th January, 2002, vide item No. 158, the afore mentioned Directions were thereafter referred to the Draft Ordinance Committee, for the preparation of Ordinance. Accordingly, the committee has prepared this Draft Ordinance for the consideration of the concerned authorities, hence this Ordinance.

While implementing the provisions of this Ordinance, no financial implications are involved at the Government as well as university level as of now or in future and the same is in consonance with the orders of the State Government and guidelines of the All India Council for Technical Education.

ANNEXURE - I**LIST OF BRANCHES IN WHICH B.E. (SEMESTER PATTERN) PART TIME DEGREE IN THE FACULTY OF ENGINEERING & TECH. IS AWARDED & THEIR RESPECTIVE APPENDIX CODES FOR SCHEME**

| SR. NO. | ENGINEERING BRANCH TITLE | BRANCH CODE | APPENDIX CODE FOR EXAM. SCHEME |
|----------------|----------------------------------|--------------------|---------------------------------------|
| 01 | ELECTRONIC | PT-EX | PT-EX-I |
| 02 | ELECTRICAL (ELECTRONICS & POWER) | PT-EP | PT-EP-I |
| 03 | MECHANICAL | PT-ML | PT-ML-I |
| 04 | CIVIL | PT-CV | PT-CV-I |
| 05 | COMPUTER TECHNOLOGY | PT-CT | PT-CT-I |

ANNEXURE - II**A.T.K.T. RULES FOR B.E. PART TIME (SEMESTER PATTERN) COURSE IN THE FACULTY OF ENGINEERING & TECHNOLOGY**

| Admission to Semester/year | Candidate should have passed in all the subjects of following examination | Candidate should have appeared for the examination of year/semester | Candidate should have passed in all the subjects except in four or less number of passing heads of the following examinations taken together |
|-----------------------------------|--|--|---|
| I SEM | As per para 3 of the Ordinance | - | - |
| II SEM | - | I SEM | - |
| III SEM | - | II SEM | I & II SEM |
| IV SEM | - | III SEM | - |
| V SEM | I & II SEM | IV SEM | III & IV SEM |
| VI SEM | - | V SEM | - |
| VII SEM | III & IV SEM | VI SEM | V & VI SEM |
| VIII SEM | - | VII SEM | - |

BACHELOR OF ENGINEERING (PART TIME) EIGHT SEMESTER COURSE
Scheme of Teaching and Examination
Branch: Electronics Engineering

Semester : First

| Sr. No | Subject Code | Subject Name | Board | L | T | P | Total Hr. per week | Maxi. Marks Paper / Practical | | | Mini. Marks for passing | Paper Dur. In Hrs. |
|--------|----------------|---|-------------|----|---|---|--------------------|-------------------------------|------------|-----------|-------------------------|--------------------|
| | | | | | | | | Paper | Coll. Ass. | Practical | | |
| 1. | 1PTU-1 3U-1 | Mathematics – III | ASH | 3 | 1 | - | 4 | Paper | 80 | 100 | 40 | 3 |
| 2. | 1PTU-2 3U-2 | Electronic Devices and Circuits (Th. + P) | Electronics | 4 | 1 | 2 | 7 | Paper | 80 | 100 | 40 | 3 |
| | | | | | | | | Coll. Ass. | 20 | | 25 | 2 |
| | | | | | | | | Pract. | 25 | 50 | 25 | |
| | | | | | | | | Coll. Ass. | 25 | | | |
| 3. | 1PTU-3 3U-3 | Electronic Measurements (Th. + P) | Electronics | 4 | 1 | 2 | 7 | Paper | 80 | 100 | 40 | 3 |
| | | | | | | | | Coll. Ass. | 20 | | 25 | 2 |
| | | | | | | | | Pract. | 25 | 50 | 25 | |
| | | | | | | | | Coll. Ass. | 25 | | | |
| 4. | 1PTU-4 3U-4 | Network Theory | Electrical | 4 | 1 | - | 5 | Paper | 80 | 100 | 40 | 3 |
| | | | | | | | | Coll. Ass. | 20 | | | |
| | | | Total Load | 15 | 4 | 4 | 23 | Total | | 500 | | |

BACHELOR OF ENGINEERING (PART TIME) EIGHT SEMESTER COURSE

Scheme of Teaching and Examination**Branch: Electronics Engineering****Semester : Second**

| Sr. No. | Subject Code | Subject Name | Board | L | T | P | Total Hr. per week | Maxi. Marks Paper / Practical | | | Mini. Marks for passing | Paper Dur. In Hrs. |
|---------|----------------|------------------------------------|-------------|----|---|---|--------------------|-------------------------------|------------|-----------|-------------------------|--------------------|
| | | | | | | | | Paper | Coll. Ass. | Practical | | |
| 1. | 2PTU-1 4U-1 | Mathematics – IV | ASH | 3 | 1 | - | 4 | Paper | 80 | 100 | 40 | 3 |
| 2. | 2PTU-2 4U-2 | Digital Circuits (Th + P) | Electronics | 4 | 1 | 2 | 7 | Paper | 80 | 100 | 40 | 3 |
| | | | | | | | | Coll. Ass. | 20 | | 25 | 2 |
| | | | | | | | | Pract. | 25 | 50 | 25 | |
| | | | | | | | | Coll. Ass. | 25 | | | |
| 4. | 2PTU-4 4U-4 | Electronic fields | Electronics | 4 | 1 | - | 5 | Paper | 80 | 100 | 40 | 3 |
| | | | | | | | | Coll. Ass. | 20 | | | |
| 5. | 2PTU-5 4U-5 | Basic Electrical Machines (Th + P) | Electrical | 4 | 1 | 2 | 7 | Paper | 80 | 100 | 40 | 3 |
| | | | | | | | | Coll. Ass. | 20 | | 25 | 2 |
| | | | | | | | | Pract. | 25 | 50 | 25 | |
| | | | | | | | | Coll. Ass. | 25 | | | |
| | | | Total Load | 15 | 4 | 4 | 23 | Total | | 500 | | |

BACHELOR OF ENGINEERING (PART TIME) EIGHT SEMESTER COURSE

Scheme of Teaching and Examination**Branch: Electronics Engineering****Semester : Third**

| Sr. No. | Subject Code | Subject Name | Board | L | T | P | Total Hr. per week | Maxi. Marks Paper / Practical | | | Mini. Marks for passing | Paper Dur. In Hrs. |
|---------|----------------|--|-------------|----|---|---|--------------------|---|----------------------|------------|-------------------------|--------------------|
| | | | | | | | | Paper | Coll. Ass-Pract. | Coll. Ass. | | |
| 5. | 3PTU-1 3U-5 | C and Data Structure (Th + P) | Electronics | 4 | 1 | 2 | 7 | Paper Coll. Ass-Pract. Coll. Ass. | 80 20 25 | 100 50 | 40 25 | 3 2 |
| 3. | 3PTU-2 4U-3 | Electronics Engineering Materials and Components | Electronics | 4 | 1 | - | 5 | Paper Coll. Ass. | 80 20 | 100 | 40 | 3 |
| 3. | 3PTU-3 5U-3 | Signals and Systems | Electronics | 4 | 1 | - | 5 | Paper Coll. Ass. | 80 20 | 100 | 40 | 3 |
| 2. | 3PTU-4 5U-2 | Linear Electronic Circuits (Th + P) | Electronics | 4 | 1 | 2 | 7 | Paper Coll. Ass. Pract. Coll. Ass. | 80 20 25 25 | 100 50 | 40 25 | 3 2 |
| | | | Total Load | 16 | 4 | 4 | 24 | Total | | 500 | | |

BACHELOR OF ENGINEERING (PART TIME) EIGHT SEMESTER COURSE
Scheme of Teaching and Examination
Branch: Electronics Engineering

Semester : Fourth

| Sr. No. | Subject Code | Subject Name | Board | L | T | P | Total Hr. per week | Maxi. Marks Paper / Practical | | | Mini. Marks for passing | Paper Dur. In Hrs. |
|---------|----------------|---|-------------|----|---|---|--------------------|-------------------------------|------------|-----------|-------------------------|--------------------|
| | | | | | | | | Paper | Coll. Ass. | Practical | | |
| 1. | 4PTU-1 5U-1 | Engineering Economics and Industrial Management | ASH | 3 | 1 | - | 4 | Paper | 80 | 100 | 40 | 3 |
| 5. | 4PTU-2 5U-5 | Microprocessors Interfacing (Th + P) | Electronics | 4 | 1 | 2 | 7 | Paper | 80 | 100 | 40 | 3 |
| | | | | | | | | Coll. Ass. | 20 | | 25 | 2 |
| | | | | | | | | Pract. | 25 | 50 | 25 | |
| | | | | | | | | Coll. Ass | 25 | | | |
| 4. | 4PTU-3 5U-4 | Power Electronics (Th + P) | Electronics | 4 | 1 | 2 | 7 | Paper | 80 | 100 | 40 | 3 |
| | | | | | | | | Coll. Ass. | 20 | | 25 | 2 |
| | | | | | | | | Pract. | 25 | 50 | 25 | |
| | | | | | | | | Coll. Ass | 25 | | | |
| 6. | 4PTU-4 6U-6 | Electronic Workshop Practice (P) | Electronics | - | - | 2 | 2 | Pract. | 25 | 50 | 25 | 2 |
| | | | | | | | | Coll. Ass. | 25 | | | |
| | | | Total Load | 11 | 3 | 6 | 20 | Total | | 450 | | |

BACHELOR OF ENGINEERING (PART TIME) EIGHT SEMESTER COURSE

Scheme of Teaching and Examination

Branch: Electronics Engineering

Semester : Fifth

| Sr. No. | Subject Code | Subject Name | Board | L | T | P | Total Hr. per week | Maxi. Marks Paper / Practical | | | Mini. Marks for passing | Paper Dur. In Hrs. |
|---------|----------------|-------------------------------------|-------------|----|---|---|--------------------|-------------------------------|------------|-----------|-------------------------|--------------------|
| | | | | | | | | Paper | Coll. Ass. | Practical | | |
| 1. | 5PTU-1 6U-1 | Fields and Radiating systems | Electronics | 4 | 1 | - | 5 | Paper | 80 | 100 | 40 | 3 |
| | | | | | | | | Coll. Ass. | 20 | | | |
| 2. | 5PTU-2 6U-2 | Control System Engineering (Th + P) | Electrical | 4 | 1 | 2 | 7 | Paper | 80 | 100 | 40 | 3 |
| | | | | | | | | Coll. Ass. | 20 | | | |
| | | | | | | | | Pract. | 25 | 50 | 25 | 2 |
| | | | | | | | | Coll. Ass | 25 | | | |
| 4. | 5PTU-3 6U-4 | Communication Electronics (Th + P) | Electronics | 4 | 1 | 2 | 7 | Paper | 80 | 100 | 40 | 3 |
| | | | | | | | | Coll. Ass. | 20 | | | |
| | | | | | | | | Pract. | 25 | 50 | 25 | 2 |
| | | | | | | | | Coll. Ass | 25 | | | |
| 3. | 5PTU-4 6U-3 | Electronics Instrumentation | Electronics | 4 | 1 | - | 5 | Paper | 80 | 100 | 40 | 3 |
| | | | | | | | | Coll. Ass. | 20 | | | |
| | | | Total Load | 16 | 4 | 4 | 24 | Total | | 500 | | |

BACHELOR OF ENGINEERING (PART TIME) EIGHT SEMESTER COURSE
Scheme of Teaching and Examination
Branch: Electronics Engineering

Semester : Sixth

| Sr. No. | Subject Code | Subject Name | Board | L | T | P | Total Hr. per week | Maxi. Marks Paper / Practical | | | Mini. Marks for passing | Paper Dur. In Hrs. |
|---------|----------------|--------------------------------|------------------------|----|---|---|--------------------|-------------------------------|------------|-----------|-------------------------|--------------------|
| | | | | | | | | Paper | Coll. Ass. | Practical | | |
| 1. | 6PTU-1 6U-5 | Computer Organization | Computer Science Engg. | 4 | 1 | - | 5 | Paper | 80 | 100 | 40 | 3 |
| | | | | | | | | Coll. Ass. | 20 | | | |
| 2. | 6PTU-2 7U-2 | UHF and Microwave (Th + P) | Electronics | 4 | 1 | 2 | 7 | Paper | 80 | 100 | 40 | 3 |
| | | | | | | | | Coll. Ass. | 20 | 50 | 25 | 2 |
| | | | | | | | | Pract. Coll. Ass | 25 | | | |
| 3. | 6PTU-3 8U-1 | Digital System Design (Th + P) | Electronics | 4 | 1 | 2 | 7 | Paper | 80 | 100 | 40 | 3 |
| | | | | | | | | Coll. Ass. | 20 | 50 | 25 | 2 |
| | | | | | | | | Pract. Coll. Ass | 25 | | | |
| 4. | 6PTU-4 8U-4 | Optical Communication | Electronics | 3 | 1 | - | 4 | Paper | 80 | 100 | 40 | 3 |
| | | | | | | | | Coll. Ass. | 20 | | | |
| | | | Total Load | 15 | 4 | 4 | 23 | Total | | 500 | | |

BACHELOR OF ENGINEERING (PART TIME) EIGHT SEMESTER COURSE
Scheme of Teaching and Examination
Branch: Electronics Engineering

Semester : Seventh

| Sr. No. | Subject Code | Subject Name | Board | L | T | P | Total Hr. per week | Maxi. Marks Paper / Practical | | | Mini. Marks for passing | Paper Dur. In Hrs. |
|---------|----------------|------------------------------------|-------------|----|---|---|--------------------|-------------------------------|------------|-----------|-------------------------|--------------------|
| | | | | | | | | Paper | Coll. Ass. | Practical | | |
| 1. | 7PTU-1 7U-4 | Digital Communication | Electronics | 4 | 1 | - | 5 | Paper | 80 | 100 | 40 | 3 |
| 2. | 7PTU-2 7U-3 | Digital Signal Processing (Th + P) | Electronics | 4 | 1 | 2 | 7 | Paper | 80 | 100 | 40 | 3 |
| | | | | | | | | Coll. Ass. | 20 | 50 | 25 | 2 |
| 3. | 7PTU-3 8U-3 | Computer Communication Network | Electronics | 4 | 1 | - | 5 | Paper | 80 | 100 | 40 | 3 |
| 4. | 7PTU-4 7U-5 | Elective - I | Electronics | 3 | 1 | - | 4 | Paper | 80 | 100 | 40 | 3 |
| 5. | 7PTU-5 7U-6 | i) Seminar ii) Project work | Electronics | - | - | 3 | 3 | Seminar | 25 | 50 | - | - |
| | | | Total Load | 15 | 4 | 5 | 24 | Total | | 500 | | |

LIST OF ELECTIVE: (Any One of the above)

SUBJECTS
i) Switching Theory
ii) Fuzzy Logic & Neural Networks
iii) CMOS VLSI Design

BOARD
Electronics
Electronics
Electronics

Same as 7DT4

BACHELOR OF ENGINEERING (PART TIME) EIGHT SEMESTER COURSE
Scheme of Teaching and Examination
Branch: Electronics Engineering

Semester : Eight

| Sr. No. | Subject Code | Subject Name | Board | L | T | P | Total Hr. per week | Maxi. Marks Paper / Practical | | | Mini. Marks for passing | Paper Dur. In Hrs. |
|---------|----------------|---|-------------|----|---|----|--------------------|-------------------------------|------------------|-----------|-------------------------|--------------------|
| | | | | | | | | Paper | Coll. Ass-Pract. | Coll. Ass | | |
| 1. | 8PTU-1 7U-1 | Electronic System & Design (Th + P) | Electronics | 4 | 1 | 2 | 7 | Paper | 80 | 100 | 40 | 3 |
| | | | | | | | | Coll. Ass-Pract. | 20 | 50 | 25 | 2 |
| | | | | | | | | Coll. Ass | 25 | | | |
| 2. | 8PTU-2 8U-3 | Advanced Microprocessors & Micro Controllers (Th + P) | Electronics | 4 | 1 | 2 | 7 | Paper | 80 | 100 | 40 | 3 |
| | | | | | | | | Coll. Ass. | 20 | 50 | 25 | 2 |
| | | | | | | | | Coll. Ass | 25 | | | |
| 3. | 8PTU-3 8U-5 | Elective - II | Electronics | 3 | 1 | - | 4 | Paper | 80 | 100 | 40 | 3 |
| | | | | | | | | Coll. Ass. | 20 | | | |
| 4. | 8PTU-4 8U-6 | Project | Electronics | - | - | 6 | 6 | Pract. | 75 | 150 | 75 | - |
| | | | | | | | | Coll. Ass. | 75 | | | |
| | | | Total Load | 11 | 3 | 10 | 24 | Total | | 550 | | |

LIST OF ELECTIVE: (Any One of the above)

SUBJECTS

i) Satellite Communication

ii)

Mobile Communication

iii) Digital Image Processing

iv) Embedded Systems

RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY
SCHEME OF TEACHING OF PART TIME B.E. ELECTRICAL (ELECTRONICS & POWER)

I SEMESTER PART TIME B.E.

| Part Time B.E. Sub. Code | Regular B.E. Sub. Code | Name of Subject | Board | Teaching Scheme (Clock Hour / Week) | | | | Assessment of Theory Marks | | | | Assessment of Practical Marks | | | | Duration of Question Paper |
|--------------------------------------|------------------------|-------------------------------------|-------|-------------------------------------|---|-----|-------|----------------------------|------|--------------------------------|-----------|-------------------------------|------|-------|-----------|----------------------------|
| | | | | L | T | P/D | Total | Paper | C.A. | Total | Min. Pass | Pract. | C.A. | Total | Min. Pass | |
| 1SPTEE01 | 3SEE02 | Steam of Subject | ME | 3 | 1 | 0 | 4 | 80 | 20 | 100 | 40 | - | - | - | - | 3 Hrs. |
| 1SPTEE02 | 3SEE03 | Electrical Measur & Measuring Inst. | EE | 4 | 1 | 2 | 7 | 80 | 20 | 100 | 40 | 25 | 25 | 50 | 25 | 3 Hrs. |
| 1SPTEE03 | 3SEE04 | Network Analysis | EE | 4 | 1 | 2 | 7 | 80 | 20 | 100 | 40 | 25 | 25 | 50 | 25 | 3 Hrs. |
| Total | | | | 11 | 3 | 4 | 18 | | | 300 | | | | 100 | | |
| Credits Points = 11 + 1.5 + 2 = 14.5 | | | | | | | | | | TOTAL MARKS :- 300 + 100 = 400 | | | | | | |

SCHEME OF TEACHING OF PART TIME B.E. ELECTRICAL (ELECTRONICS & POWER)

II SEMESTER PART TIME B.E.

| Part Time B.E. Sub. Code | Regular B.E. Sub. Code | Name of Subject | Board | Teaching Scheme (Clock Hour / Week) | | | | Assessment of Theory Marks | | | | Assessment of Practical Marks | | | | Duration of Question Paper |
|----------------------------------|------------------------|-------------------------------|-------|-------------------------------------|---|-----|-------|----------------------------|------|--------------------------------|-----------|-------------------------------|------|-------|-----------|----------------------------|
| | | | | L | T | P/D | Total | Paper | C.A. | Total | Min. Pass | Pract. | C.A. | Total | Min. Pass | |
| 2SPTEE01 | 3SEE01 | Applied Mathematics - III | ASH | 3 | 1 | 0 | 4 | 80 | 20 | 100 | 40 | - | - | - | - | 3 Hrs. |
| 2SPTEE02 | 3SEE05 | Electronic Devices & Circuits | EN | 3 | 1 | 2 | 6 | 80 | 20 | 100 | 40 | 25 | 25 | 50 | 25 | 3 Hrs. |
| 2SPTEE03 | 4SEE04 | Electrical Machines - I | EE | 4 | 1 | 2 | 7 | 80 | 20 | 100 | 40 | 25 | 25 | 50 | 25 | 3 Hrs. |
| 2SPTEE04 | 4SEE05 | Computer Programming | EE | 4 | 1 | 2 | 7 | 80 | 20 | 100 | 40 | 25 | 25 | 50 | 25 | 3 Hrs. |
| Total | | | | 14 | 4 | 6 | 24 | | | 400 | | | | 150 | | |
| Credits Points = 14 + 2 + 3 = 19 | | | | | | | | | | TOTAL MARKS :- 400 + 150 = 450 | | | | | | |

SCHEME OF TEACHING OF PART TIME B.E. ELECTRICAL (ELECTRONICS & POWER)

III SEMESTER PART TIME B.E.

| Part Time B.E. Sub. Code | Regular B.E. Sub. Code | Name of Subject | Board | Teaching Scheme (Clock Hour / Week) | | | | Assessment of Theory Marks | | | | Assessment of Practical Marks | | | | Duration of Question Paper |
|----------------------------------|------------------------|------------------------------|-------|-------------------------------------|---|-----|-------|--------------------------------|------|-------|-----------|-------------------------------|------|-------|-----------|----------------------------|
| | | | | L | T | P/D | Total | Paper | C.A. | Total | Min. Pass | Pract. | C.A. | Total | Min. Pass | |
| 3SPTEE01 | 4SEE01 | Electrical Engg. Mathematics | ASH | 4 | 1 | 0 | 5 | 80 | 20 | 100 | 40 | - | - | - | - | 3 Hrs. |
| 3SPTEE02 | 4SEE03 | Digital Circuits | EN | 3 | 1 | 2 | 6 | 80 | 20 | 100 | 40 | 25 | 25 | 50 | 25 | 3 Hrs. |
| 3SPTEE03 | 5SEE02 | Instrumentation | EE | 3 | 1 | 0 | 4 | 80 | 20 | 100 | 40 | - | - | - | - | 3 Hrs. |
| 3SPTEE04 | 5SEE05 | Electrical Machine - II | EE | 4 | 1 | 2 | 7 | 80 | 20 | 100 | 40 | 25 | 25 | 50 | 25 | 3 Hrs. |
| Total | | | | 14 | 4 | 4 | 22 | | | 400 | | | | 100 | | |
| Credits Points = 14 + 2 + 2 = 18 | | | | | | | | TOTAL MARKS :- 400 + 100 = 500 | | | | | | | | |

SCHEME OF TEACHING OF PART TIME B.E. ELECTRICAL (ELECTRONICS & POWER)

IV SEMESTER PART TIME B.E.

| Part Time B.E. Sub. Code | Regular B.E. Sub. Code | Name of Subject | Board | Teaching Scheme (Clock Hour / Week) | | | | Assessment of Theory Marks | | | | Assessment of Practical Marks | | | | Duration of Question Paper |
|----------------------------------|------------------------|-------------------------------|-------|-------------------------------------|---|-----|-------|--------------------------------|------|-------|-----------|-------------------------------|------|-------|-----------|----------------------------|
| | | | | L | T | P/D | Total | Paper | C.A. | Total | Min. Pass | Pract. | C.A. | Total | Min. Pass | |
| 4SPTEE01 | 5SEE01 | Electrical Power System - I | EE | 3 | 1 | 0 | 4 | 80 | 20 | 100 | 40 | - | - | - | - | 3 Hrs. |
| 4SPTEE02 | 4SEE02 | Elements of Electromagnetics | EE | 4 | 1 | 0 | 5 | 80 | 20 | 100 | 40 | - | - | - | - | 3 Hrs. |
| 4SPTEE03 | 5SEE03 | Electrical Machine Design | EE | 4 | 1 | 0 | 5 | 80 | 20 | 100 | 40 | - | - | - | - | 3 Hrs. |
| 4SPTEE04 | 5SEE04 | Microprocessors & interfacing | EN | 3 | 1 | 2 | 6 | 80 | 20 | 100 | 40 | 25 | 25 | 50 | 25 | 3 Hrs. |
| 4SPTEE05 | 5SEE05 | Electrical Engg. Workshop | EE | 0 | 0 | 2 | 2 | - | - | - | - | 25 | 25 | 50 | 25 | |
| Total | | | | 14 | 4 | 4 | 22 | | | 400 | | | | 100 | | |
| Credits Points = 14 + 2 + 2 = 18 | | | | | | | | TOTAL MARKS :- 400 + 100 = 500 | | | | | | | | |

SCHEME OF TEACHING OF PART TIME B.E. ELECTRICAL (ELECTRONICS & POWER)

III SEMESTER PART TIME B.E.

| Part Time B.E. Sub. Code | Regular B.E. Sub. Code | Name of Subject | Board | Teaching Scheme (Clock Hour / Week) | | | | Assessment of Theory Marks | | | | Assessment of Practical Marks | | | | Duration of Question Paper |
|----------------------------------|------------------------|-----------------------------------|-------|-------------------------------------|---|-----|-------|--------------------------------|------|-------|-----------|-------------------------------|------|-------|-----------|----------------------------|
| | | | | L | T | P/D | Total | Paper | C.A. | Total | Min. Pass | Prac. t. | C.A. | Total | Min. Pass | |
| 5SPTEE01 | 6SEE01 | Power Station Practice | EE | 3 | 1 | 0 | 4 | 80 | 20 | 100 | 40 | - | - | - | - | 3 Hrs. |
| 5SPTEE02 | 6SEE03 | Electrical Drives & Their Control | EE | 4 | 1 | 0 | 5 | 80 | 20 | 100 | 40 | - | - | - | - | 3 Hrs. |
| 5SPTEE03 | 6SEE04 | Linear Electronics Circuits | EN | 3 | 1 | 2 | 6 | 80 | 20 | 100 | 40 | 25 | 25 | 50 | 25 | 3 Hrs. |
| 5SPTEE04 | 6SEE05 | Control System - I | EE | 4 | 1 | 2 | 7 | 80 | 20 | 100 | 40 | 25 | 25 | 50 | 25 | 3 Hrs. |
| Total | | | | 14 | 4 | 4 | 22 | | | 400 | | | | 100 | | |
| Credits Points = 14 + 2 + 2 = 18 | | | | | | | | TOTAL MARKS :- 400 + 100 = 500 | | | | | | | | |

SCHEME OF TEACHING OF PART TIME B.E. ELECTRICAL (ELECTRONICS & POWER)

VI SEMESTER PART TIME B.E.

| Part Time B.E. Sub. Code | Regular B.E. Sub. Code | Name of Subject | Board | Teaching Scheme (Clock Hour / Week) | | | | Assessment of Theory Marks | | | | Assessment of Practical Marks | | | | Duration of Question Paper |
|----------------------------------|------------------------|--------------------------|-------|-------------------------------------|---|-----|-------|--------------------------------|------|-------|-----------|-------------------------------|------|-------|-----------|----------------------------|
| | | | | L | T | P/D | Total | Paper | C.A. | Total | Min. Pass | Prac. t. | C.A. | Total | Min. Pass | |
| 6SPTEE01 | 7SEE01 | Control System - II | EE | 4 | 1 | 0 | 5 | 80 | 20 | 100 | 40 | - | - | - | - | 3 Hrs. |
| 6SPTEE02 | 7SEE02 | Electrical Power - II | EE | 4 | 1 | 0 | 5 | 80 | 20 | 100 | 40 | - | - | - | - | 3 Hrs. |
| 6SPTEE03 | 7SEE04 | High Voltage Engineering | EE | 3 | 1 | 2 | 6 | 80 | 20 | 100 | 40 | 25 | 25 | 50 | 25 | 3 Hrs. |
| 6SPTEE04 | 7SEE05 | Power Electronics | EE | 3 | 1 | 2 | 6 | 80 | 20 | 100 | 40 | 25 | 25 | 50 | 25 | 3 Hrs. |
| Total | | | | 14 | 4 | 4 | 22 | | | 400 | | | | 100 | | |
| Credits Points = 14 + 2 + 2 = 18 | | | | | | | | TOTAL MARKS :- 400 + 100 = 500 | | | | | | | | |

SCHEME OF TEACHING OF PART TIME B.E. ELECTRICAL (ELECTRONICS & POWER)

VII SEMESTER PART TIME B.E.

| Part Time B.E. Sub. Code | Regular B.E. Sub. Code | Name of Subject | Board | Teaching Scheme (Clock Hour / Week) | | | | Assessment of Theory Marks | | | | Assessment of Practical Marks | | | | Duration of Question Paper |
|--------------------------------------|------------------------|--------------------------------|-------|-------------------------------------|---|-----|-------|--------------------------------|------|-------|-----------|-------------------------------|------|-------|-----------|----------------------------|
| | | | | L | T | P/D | Total | Paper | C.A. | Total | Min. Pass | Pract. | C.A. | Total | Min. Pass | |
| 7SPTEE01 | 6SEE02 | Industrial Economics & Mgt. | ME | 4 | 1 | 0 | 5 | 80 | 20 | 100 | 40 | - | - | - | - | 3 Hrs. |
| 7SPTEE02 | 7SEE03 | Elective - I | EE | 4 | 1 | 0 | 5 | 80 | 20 | 100 | 40 | - | - | - | - | 3 Hrs. |
| 7SPTEE03 | 6SEE03 | Switchgear & Protection | EE | 4 | 1 | 2 | 7 | 80 | 20 | 100 | 40 | 25 | 25 | 50 | 25 | 3 Hrs. |
| 7SPTEE04 | 6SEE06 | Comp. Aided Elect. Engg. Draw. | EE | 1 | 0 | 2 | 3 | - | - | - | - | 25 | 25 | 50 | 25 | |
| 7SPTEE04 | 7SEE06 | Project Seminar | | 0 | 0 | 3 | 3 | - | - | - | - | - | 50 | 50 | 25 | |
| Total | | | | 13 | 3 | 7 | 23 | | | 300 | | | | 150 | | |
| Credits Points = 13 + 1.5 + 3.5 = 18 | | | | | | | | TOTAL MARKS :- 300 + 150 = 450 | | | | | | | | |

SCHEME OF TEACHING OF PART TIME B.E. ELECTRICAL (ELECTRONICS & POWER)

VIII SEMESTER PART TIME B.E.

| Part Time B.E. Sub. Code | Regular B.E. Sub. Code | Name of Subject | Board | Teaching Scheme (Clock Hour / Week) | | | | Assessment of Theory Marks | | | | Assessment of Practical Marks | | | | Duration of Question Paper |
|--------------------------------------|------------------------|---------------------------------|-------|-------------------------------------|---|-----|-------|--------------------------------|------|-------|-----------|-------------------------------|------|-------|-----------|----------------------------|
| | | | | L | T | P/D | Total | Paper | C.A. | Total | Min. Pass | Pract. | C.A. | Total | Min. Pass | |
| 8SPTEE01 | 8SEE01 | Power Semi-Cond. Based Drives | EE | 4 | 1 | 0 | 5 | 80 | 20 | 100 | 40 | - | - | - | - | 3 Hrs. |
| 8SPTEE02 | 8SEE02 | Elective - II | EE | 4 | 1 | 0 | 5 | 80 | 20 | 100 | 40 | - | - | - | - | 3 Hrs. |
| 8SPTEE03 | 8SEE04 | Comp. Appl. In Electrical Engg. | EE | 4 | 1 | 2 | 7 | 80 | 20 | 100 | 40 | 25 | 25 | 50 | 25 | 3 Hrs. |
| 8SPTEE04 | 8SEE05 | Project | EE | 0 | 0 | 6 | 6 | - | - | - | - | 75 | 75 | 150 | 75 | |
| Total | | | | 12 | 3 | 8 | 23 | | | 300 | | | | 200 | | |
| Credits Points = 12 + 1.5 + 4 = 17.5 | | | | | | | | TOTAL MARKS :- 300 + 200 = 500 | | | | | | | | |

Note :- Syllabus, Marking Scheme, List of Elective Subjects for regular B.E. and Part Time B.E. will be same.

RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY, NAGPUR
Scheme of Examination for Degree of Bachelor of Engineering (Part Time) Mechanical Engg.
Semester Pattern

I SEMESTER B.E. (PART TIME) MECHANICAL ENGINEERING

| Part Time Sub. Code | Sub. Code | Subject | Marks | | | | | Paper Duration Hrs. | Lecturer Hrs. | Tutorials Hrs. | Practical /Drg. Hrs. |
|---------------------|-----------|---------------------------|-------------------------------------|----------|---------|----------|---------|---------------------|---------------|----------------|----------------------|
| | | | Theory | | | | | | | | |
| | | | University Exam. College Assessment | Maximum | Passing | Minimum | Passing | | | | |
| 1 ME P 1 | 3 ME 2 | Theory of machines – i | Univer. College | 80 20 | 40 | - | - | 3 | 3 | 1 | - |
| 1 ME P 2 | 3 ME 3 | Fluid power – i | Univer. College | 80 20 | 40 | - | - | 3 | 3 | 1 | - |
| 1 ME P 3 | 3 ME 4 | Manufacturing process - i | Univer. College | 80 20 | 40 | 25 25 | 25 | 3 | 3 | 1 | 2 |
| 1 ME P 4 | 3 ME 7 | Industrial visit | College | - | - | A to D | C | - | - | - | 3 |
| TOTAL | | | | 300 | | 50 | | | 9 | 3 | 5 |

II SEMESTER B.E. (PART TIME) MECHANICAL ENGINEERING

| Part Time Sub. Code | Sub. Code | Subject | Marks | | | | | Paper Duration Hrs. | Lecturer Hrs. | Tutorials Hrs. | Practical /Drg. Hrs. |
|---------------------|-----------|----------------------------|-------------------------------------|----------|---------|----------|---------|---------------------|---------------|----------------|----------------------|
| | | | Theory | | | | | | | | |
| | | | University Exam. College Assessment | Maximum | Passing | Minimum | Passing | | | | |
| 2 ME P 1 | 3 ME 1 | Mathematics - III | Univer. College | 80 20 | 40 | - | - | 3 | 3 | 1 | - |
| 2 ME P 2 | 4 ME 2 | Machine Design - I | Univer. College | 80 20 | 40 | - | - | 3 | 3 | 1 | - |
| 2 ME P 3 | 4 ME 3 | Engg. Thermodynamics | Univer. College | 80 20 | 40 | - | - | 3 | 3 | 1 | - |
| 2 ME P 4 | 3 ME 5 | Engg. Metallurgy | Univer. College | 80 20 | 40 | 25 25 | 25 | 3 | 3 | 1 | 2 |
| 2 ME P 5 | 4 ME 6 | Manufacturing Process - ii | Univer. College | 80 20 | 40 | 25 25 | 25 | 3 | 3 | 1 | 2 |
| 2 ME P 6 | 4 ME 7 | Mini Project | College | - | - | A to D | C | - | - | - | 3 |
| TOTAL | | | | 500 | | 100 | | | 15 | 5 | 7 |

III SEMESTER B.E. (PART TIME) MECHANICAL ENGINEERING

| Part Time Sub. Code | Sub. Code | Subject | Marks | | | | | Paper Duration Hrs. | Lecturer Hrs. | Tutorials Hrs. | Practical /Drg. Hrs. |
|---------------------|-----------|---------------------------|-------------------------------------|----------|---------|----------|---------|---------------------|---------------|----------------|----------------------|
| | | | Theory | | | Minimum | Passing | | | | |
| | | | University Exam. College Assessment | Maximum | Passing | | | | | | |
| 3 ME P 1 | 4 ME 1 | Mathematics - IV | Univer. College | 80 20 | 40 | - | - | 3 | 3 | 1 | - |
| 3 ME P 2 | 5 ME 2 | Machine Design - II | Univer. College | 80 20 | 40 | - | - | 3 | 3 | 1 | - |
| 3 ME P 3 | 4 ME 4 | Theory of Machine - II | Univer. College | 80 20 | 40 | 25 25 | 25 | 3 | 3 | 1 | 2 |
| 3 ME P 4 | 4 ME 5 | Fluid Power - II | Univer. College | 80 20 | 40 | 25 25 | 25 | 3 | 3 | 1 | 2 |
| 3 ME P 5 | 3 ME 6 | Computer Applications - I | Univer. College | 80 20 | 40 | 25 25 | 25 | 3 | 3 | 1 | 2 |
| TOTAL | | | | 500 | | 150 | | | 15 | 5 | 6 |

IV SEMESTER B.E. (PART TIME) MECHANICAL ENGINEERING

| Part Time Sub. Code | Sub. Code | Subject | Marks | | | | | Paper Duration Hrs. | Lecturer Hrs. | Tutorials Hrs. | Practical /Drg. Hrs. |
|---------------------|-----------|--------------------------------|-------------------------------------|----------|---------|----------|---------|---------------------|---------------|----------------|----------------------|
| | | | Theory | | | Minimum | Passing | | | | |
| | | | University Exam. College Assessment | Maximum | Passing | | | | | | |
| 4 ME P 1 | 5 ME 1 | Ind. Eco. & Entrepre. Develop. | Univer. College | 80 20 | 40 | - | - | 3 | 3 | 1 | - |
| 4 ME P 2 | 5 ME 3 | Manufacturing Process - III | Univer. College | 80 20 | 40 | - | - | 3 | 3 | 1 | - |
| 4 ME P 3 | 5 ME 4 | Heat Transfer | Univer. College | 80 20 | 40 | 25 25 | 25 | 3 | 3 | 1 | 2 |
| 4 ME P 4 | 5 ME 5 | Mechanical Measurement | Univer. College | 80 20 | 40 | 25 25 | 25 | 3 | 3 | 1 | 2 |
| 4 ME P 5 | 5 ME 6 | Production Technology - I | Univer. College | 80 20 | 40 | 25 25 | 25 | 3 | 3 | 1 | 2 |
| 4 ME P 6 | 6 ME 7 | Industrial Case Study | College | - | - | A to D | C | - | - | - | 3 |
| TOTAL | | | | 500 | | 150 | | | 15 | 5 | 9 |

V SEMESTER B.E. (PART TIME) MECHANICAL ENGINEERING

| Part Time Sub. Code | Sub. Code | Subject | Marks | | | | | Paper Duration Hrs. | Lecturer Hrs. | Tutorials Hrs. | Practical /Drg. Hrs. |
|---------------------|-----------|----------------------------|-------------------------------------|----------|---------|----------|---------|---------------------|---------------|----------------|----------------------|
| | | | Theory | | | Minimum | Passing | | | | |
| | | | University Exam. College Assessment | Maximum | Passing | | | | | | |
| 5 ME P 1 | 6 ME 1 | Energy conversion - I | Univer. College | 80 20 | 40 | - | - | 3 | 3 | 1 | - |
| 5 ME P 2 | 6 ME 3 | Operation Research | Univer. College | 80 20 | 40 | - | - | 3 | 3 | 1 | - |
| 5 ME P 3 | 6 ME 4 | Industrial Electronics | Univer. College | 80 20 | 40 | 25 25 | 25 | 3 | 3 | 1 | 2 |
| 5 ME P 4 | 6 ME 5 | Computer Applications - II | Univer. College | 80 20 | 40 | 25 25 | 25 | 3 | 3 | 1 | 2 |
| 5 ME P 5 | 6 ME 6 | Machine Drawing | Univer. College | 80 20 | 40 | 25 25 | 25 | 3 | 3 | 1 | 2 |
| 5 ME P 6 | 5 ME 7 | Seminar | College | - | - | A to D | C | - | - | - | 3 |
| TOTAL | | | | 500 | | 150 | | | 15 | 5 | 9 |

VI SEMESTER B.E. (PART TIME) MECHANICAL ENGINEERING

| Part Time Sub. Code | Sub. Code | Subject | Marks | | | | | Paper Duration Hrs. | Lecturer Hrs. | Tutorials Hrs. | Practical /Drg. Hrs. |
|---------------------|-----------|----------------------------|-------------------------------------|----------|---------|----------|---------|---------------------|---------------|----------------|----------------------|
| | | | Theory | | | Minimum | Passing | | | | |
| | | | University Exam. College Assessment | Maximum | Passing | | | | | | |
| 6 ME P 1 | 7 ME 1 | Production Technology - II | Univer. College | 80 20 | 40 | - | - | 3 | 3 | 1 | - |
| 6 ME P 2 | 6 ME 2 | Automatic Control | Univer. College | 80 20 | 40 | - | - | 3 | 3 | 1 | - |
| 6 ME P 3 | 7 ME 4 | Energy Conversion - II | Univer. College | 80 20 | 40 | 25 25 | 25 | 3 | 3 | 1 | 2 |
| 6 ME P 4 | 8 ME 3 | Automation in Production | Univer. College | 80 20 | 40 | 25 25 | 25 | 3 | 3 | 1 | 2 |
| 6 ME P 5 | 8 ME 5 | Computer Aided Design | Univer. College | 80 20 | 40 | 25 25 | 25 | 3 | 3 | 1 | 2 |
| TOTAL | | | | 500 | | 150 | | | 15 | 5 | 6 |

VII SEMESTER B.E. (PART TIME) MECHANICAL ENGINEERING

| Part Time Sub. Code | Sub. Code | Subject | Marks | | | | | Paper Duration Hrs. | Lecturer Hrs. | Tutorials Hrs. | Practical/Drg. Hrs. |
|---------------------|-----------|----------------------|-------------------------------------|----------|---------|----------|---------|---------------------|---------------|----------------|---------------------|
| | | | Theory | | | Minimum | Passing | | | | |
| | | | University Exam. College Assessment | Maximum | Passing | | | | | | |
| 7 ME P 1 | 7 ME 2 | Elective - I | Univer. College | 80 20 | 40 | - | - | 3 | 3 | 1 | - |
| 7 ME P 2 | 7 ME 3 | Elective - II | Univer. College | 80 20 | 40 | 25 25 | 25 | 3 | 3 | 1 | 2 |
| 7 ME P 3 | 7 ME 5 | Machine Design - III | Univer. College | 80 20 | 40 | 25 25 | 25 | 3 | 3 | 1 | 2 |
| 7 ME P 4 | 7 ME 6 | Project Seminar | College | - | - | 50 | 25 | - | - | - | 3 |
| TOTAL | | | | 300 | | 150 | | | 9 | 3 | 7 |

VIII SEMESTER B.E. (PART TIME) MECHANICAL ENGINEERING

| Part Time Sub. Code | Sub. Code | Subject | Marks | | | | | Paper Duration Hrs. | Lecturer Hrs. | Tutorials Hrs. | Practical/Drg. Hrs. |
|---------------------|-----------|-------------------------|-------------------------------------|----------|---------|----------|---------|---------------------|---------------|----------------|---------------------|
| | | | Theory | | | Minimum | Passing | | | | |
| | | | University Exam. College Assessment | Maximum | Passing | | | | | | |
| 8 ME P 1 | 8 ME 1 | Industrial Management | Univer. College | 80 20 | 40 | - | - | 3 | 3 | 1 | - |
| 8 ME P 2 | 8 ME 2 | Elective - III | Univer. College | 80 20 | 40 | - | - | 3 | 3 | 1 | - |
| 8 ME P 3 | 8 ME 4 | Energy Conversion - III | Univer. College | 80 20 | 40 | 25 25 | 25 | 3 | 3 | 1 | 2 |
| 8 ME P 4 | 8 ME 6 | Project | Univer. College | - | | 75 75 | 75 | - | - | - | 6 |
| TOTAL | | | | 300 | | 200 | | | 9 | 3 | 8 |

RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY
SCHEME OF TEACHING OF PART TIME B.E. (CIVIL ENGINEERING)

1 SEMESTER PART TIME B.E.

| Part Time B.E. Sub. Code | Regular B.E. Sub. Code | Name of Subject | Teaching Scheme (Clock Hour / Week) | | | | Assessment of Theory Marks | | | | Assessment of Practical Marks | | | | Duration of Question Paper |
|-----------------------------------|---------------------------------|------------------------|--|---|-----|-------|--------------------------------|------|-------|--------------|----------------------------------|------|-------|--------------|-------------------------------------|
| | | | L | T | P/D | Total | Pape r | C.A. | Total | Min. Pass | Prac t. | C.A. | Total | Min. Pass | |
| 1CEP 01 | 3CE02 | Strength of Materials | 3 | 1 | 2 | 6 | 80 | 20 | 100 | 40 | 25 | 25 | 50 | 25 | 3 Hrs. |
| 1CEP 02 | 3CE03 | Fluid Mechanics - I | 3 | 1 | 2 | 6 | 80 | 20 | 100 | 40 | 25 | 25 | 50 | 25 | 3 Hrs. |
| 1CEP 03 | 3CE04 | Geotechnical Engg. - I | 3 | 1 | 2 | 6 | 80 | 20 | 100 | 40 | 25 | 25 | 50 | 25 | 3 Hrs. |
| 1CEP 04 | 3CE06 | Computer Programming | 3 | 1 | - | 4 | 40 | 10 | 50 | 20 | - | - | - | - | 3 Hrs. |
| | | Total | 12 | 4 | 6 | 22 | 280 | 70 | 350 | - | 75 | 75 | 150 | - | |
| Total Credits = 12 + (4+5)12 = 17 | | | | | | | TOTAL MARKS :- 350 + 150 = 500 | | | | | | | | |

II SEMESTER PART TIME B.E.

| Part Time B.E. Sub. Code | Regular B.E. Sub. Code | Name of Subject | Teaching Scheme (Clock Hour / Week) | | | | Assessment of Theory Marks | | | | Assessment of Practical Marks | | | | Duratio n of Question Paper |
|-------------------------------------|---------------------------------|--------------------------------------|--|---|-----|-------|--------------------------------|------|-------|--------------|----------------------------------|------|-------|--------------|--------------------------------------|
| | | | L | T | P/D | Total | Pape r | C.A. | Total | Min. Pass | Prac t. | C.A. | Total | Min. Pass | |
| 2CEP 01 | 4CE01 | Structural Analysis - 1 | 3 | 1 | - | 4 | 80 | 20 | 100 | 40 | - | - | - | - | 3 Hrs. |
| 2CEP 02 | 4CE02 | Building Construction & Materials | 3 | 1 | - | 4 | 80 | 20 | 100 | 40 | - | - | - | - | 3 Hrs. |
| 2CEP 03 | 4CE03 | Environmental Engineering - I | 3 | 1 | 2 | 6 | 80 | 20 | 100 | 40 | 25 | 25 | 50 | 25 | 3 Hrs. |
| 2CEP 04 | 4CE04 | Surveying - I | 3 | 1 | 4 | 8 | 80 | 20 | 100 | 40 | 25 | 25 | 50 | 25 | 3 Hrs. |
| 2CEP 05 | 4CE05 | Hydrology & Water Resources | 3 | 1 | - | 4 | 80 | 20 | 100 | 40 | - | - | - | - | 3 Hrs. |
| | | Total | 15 | 5 | 6 | 26 | 400 | 100 | 500 | - | 50 | 50 | 100 | - | |
| Total Credits = 15 + (5+5)12 = 28.5 | | | | | | | TOTAL MARKS :- 500 + 100 = 600 | | | | | | | | |

RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY
SCHEME OF TEACHING OF PART TIME B.E. (CIVIL ENGINEERING)

1III SEMESTER PART TIME B.E.

| Part Time B.E. Sub. Code | Regular B.E. Sub. Code | Name of Subject | Teaching Scheme (Clock Hour / Week) | | | | Assessment of Theory Marks | | | | Assessment of Practical Marks | | | | Duration of Question Paper |
|---------------------------------------|---------------------------------|-----------------------------------|--|---|-----|-------|----------------------------------|------|-------|--------------|----------------------------------|------|-------|--------------|-------------------------------------|
| | | | L | T | P/D | Total | Pape r | C.A. | Total | Min. Pass | Prac t. | C.A. | Total | Min. Pass | |
| 3CEP 01 | 3CE01 | Mathematics - III | 3 | 1 | - | 4 | 80 | 20 | 100 | 40 | - | - | - | - | 3 Hrs. |
| 3CEP 02 | 3CE05 | Engineering Geology | 3 | 1 | 2 | 6 | 80 | 20 | 100 | 40 | 25 | 25 | 50 | 25 | 3 Hrs. |
| 3CEP 03 | 6CE02 | Environmental Engineering - II | 3 | 1 | - | 4 | 80 | 20 | 100 | 40 | - | - | - | - | 3 Hrs. |
| 3CEP 04 | 6CE06 | Building Design & Drawing | 1 | - | 4 | 5 | 80 | 20 | 100 | 40 | 25 | 25 | 50 | 25 | 4 Hrs. |
| Total | | | 10 | 3 | 6 | 19 | 320 | 80 | 400 | - | 50 | 50 | 100 | - | |
| Total Credits = $10 + (3+6)/2 = 14.5$ | | | | | | | TOTAL MARKS :- $400 + 100 = 500$ | | | | | | | | |

1V SEMESTER PART TIME B.E.

| Part Time B.E. Sub. Code | Regular B.E. Sub. Code | Name of Subject | Teaching Scheme (Clock Hour / Week) | | | | Assessment of Theory Marks | | | | Assessment of Practical Marks | | | | Duratio n of Question Paper |
|---------------------------------------|---------------------------------|--------------------------|--|---|-----|-------|----------------------------------|------|-------|--------------|----------------------------------|------|-------|--------------|--------------------------------------|
| | | | L | T | P/D | Total | Pape r | C.A. | Total | Min. Pass | Prac t. | C.A. | Total | Min. Pass | |
| 4CEP 01 | 6CE04 | Fluid Mechanics - II | 3 | 1 | 2 | 6 | 80 | 20 | 100 | 40 | 25 | 25 | 50 | 25 | 3 Hrs. |
| 4CEP 02 | 6CE01 | Structural Analysis - II | 3 | 1 | 2 | 6 | 80 | 20 | 100 | 40 | 25 | 25 | 50 | 25 | 3 Hrs. |
| 4CEP 03 | 6CE03 | Geotechnical Engg. - II | 3 | 1 | - | 4 | 80 | 20 | 100 | 40 | - | - | - | - | 3 Hrs. |
| 4CEP 04 | 4CE04 | Concrete Technology | 3 | 1 | 2 | 6 | 80 | 20 | 100 | 40 | 25 | 25 | 50 | 25 | 3 Hrs. |
| 4CEP 05 | 4CE07 | Computer Aided Drafting | - | - | 3 | 3 | - | - | - | - | - | G | - | C | -. |
| Total | | | 12 | 4 | 9 | 25 | 320 | 80 | 400 | - | 75 | 75 | 150 | - | |
| Total Credits = $12 + (4+9)/2 = 16.2$ | | | | | | | TOTAL MARKS :- $400 + 150 = 550$ | | | | | | | | |

**Note :- Grade A,B, or C may be assigned, depending upon evaluation by internal Examiner in case of
Computer Aided Drafting.**

RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY
SCHEME OF TEACHING OF PART TIME B.E. (CIVIL ENGINEERING)

V SEMESTER PART TIME B.E.

| Part Time B.E. Sub. Code | Regular B.E. Sub. Code | Name of Subject | Teaching Scheme (Clock Hour / Week) | | | | Assessment of Theory Marks | | | | Assessment of Practical Marks | | | | Duration of Question Paper |
|--|------------------------|------------------------------|-------------------------------------|---|-----|-------|----------------------------------|------|-------|-----------|-------------------------------|------|-------|-----------|----------------------------|
| | | | L | T | P/D | Total | Paper | C.A. | Total | Min. Pass | Prac t. | C.A. | Total | Min. Pass | |
| 5CEP 01 | 5CE01 | Steel Structures | 3 | 1 | 2 | 6 | 80 | 20 | 100 | 40 | 25 | 25 | 50 | 25 | 4 Hrs. |
| 5CEP 02 | 5CE05 | Transportation Engineering-I | 3 | 1 | 2 | 6 | 80 | 20 | 100 | 40 | 25 | 25 | 50 | 25 | 3 Hrs. |
| 5CEP 03 | 5CE02 | Surveying - II | 3 | 1 | 2 | 6 | 80 | 20 | 100 | 40 | 25 | 25 | 50 | 25 | 3 Hrs. |
| 5CEP 04 | 7CE06 | Structural Analysis - III | 4 | 1 | 2 | 7 | 80 | 20 | 100 | 40 | 25 | 25 | 50 | 25 | 4 Hrs. |
| 5CEP 05 | 6CE06 | Technical Writing | - | - | 3 | 3 | - | - | - | - | - | G | - | C | - |
| Total | | | 13 | 4 | 11 | 28 | 320 | 80 | 400 | - | 100 | 100 | 200 | - | |
| Total Credits = $13 + (4+11) / 2 = 28.5$ | | | | | | | TOTAL MARKS :- $400 + 200 = 600$ | | | | | | | | |

VI SEMESTER PART TIME B.E.

| Part Time B.E. Sub. Code | Regular B.E. Sub. Code | Name of Subject | Teaching Scheme (Clock Hour / Week) | | | | Assessment of Theory Marks | | | | Assessment of Practical Marks | | | | Duration of Question Paper |
|--|------------------------|------------------------------|-------------------------------------|---|-----|-------|----------------------------------|------|-------|-----------|-------------------------------|------|-------|-----------|----------------------------|
| | | | L | T | P/D | Total | Paper | C.A. | Total | Min. Pass | Prac t. | C.A. | Total | Min. Pass | |
| 6CEP 01 | 6CE02 | RCC Structures | 3 | 1 | 2 | 6 | 80 | 20 | 100 | 40 | 25 | 25 | 50 | 25 | 4 Hrs. |
| 6CEP 02 | 6CE06 | Project Management | 3 | 1 | - | 4 | 80 | 20 | 100 | 40 | - | - | - | - | 3 Hrs. |
| 6CEP 03 | 6CE06 | Computer App. In Civil Engg. | 3 | 1 | 4 | 8 | 80 | 20 | 100 | 40 | 25 | 25 | 50 | 25 | 3 Hrs. |
| 6CEP 04 | 6CE01 | Estimating & Costing | 3 | 1 | 4 | 8 | 80 | 20 | 100 | 40 | 50 | 50 | 100 | 50 | 4 Hrs. |
| 6CEP 05 | 6CE07 | Site Visits | - | - | 3 | - | - | - | - | - | - | G | - | C | - |
| Total | | | 12 | 4 | 13 | 26 | 320 | 80 | 400 | - | - | 100 | 200 | - | |
| Total Credits = $12 + (4+13) / 2 = 28.5$ | | | | | | | TOTAL MARKS :- $400 + 200 = 600$ | | | | | | | | |

Note :- 1) Site Visits shall contain minimum Five Site Visits supported by reports to internal Examiner for evaluation purpose.

Grade A,B or C may be assigned depending upon the reports.

Note :- 2) Professional Training of Three to Four Weeks duration between Six and Seven Semester in Summer.

The working students of Part Time B.E. can consider their existing job for this purpose if approved by College and can be utilized for case study and seminar in Seventh Semester.

RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY
SCHEME OF TEACHING OF PART TIME B.E. (CIVIL ENGINEERING)

VII SEMESTER PART TIME B.E.

| Part Time B.E. Sub. Code | Regular B.E. Sub. Code | Name of Subject | Teaching Scheme (Clock Hour / Week) | | | | Assessment of Theory Marks | | | | Assessment of Practical Marks | | | | Duration of Question Paper |
|---|------------------------|---|-------------------------------------|---|-----|-------|----------------------------------|------|-------|-----------|-------------------------------|------|-------|-----------|----------------------------|
| | | | L | T | P/D | Total | Paper | C.A. | Total | Min. Pass | Prac t. | C.A. | Total | Min. Pass | |
| 7CEP 01 | 7CE02 | Adv. Concrete Structures | 3 | 1 | 4 | 8 | 80 | 20 | 100 | 40 | 50 | 50 | 100 | 50 | 4 Hrs. |
| 7CEP 02 | 7CE03 | Irrigation Engineering | 3 | 1 | - | 4 | 80 | 20 | 100 | 40 | - | - | - | - | 3 Hrs. |
| 7CEP 03 | 7CE04 | Maintenance & Rehabilitation of Civil Engg. Structure | 3 | 1 | - | 4 | 80 | 20 | 100 | 40 | - | - | - | - | 3 Hrs. |
| 7CEP 04 | 7CE06 | Industrial Case Study | - | - | 3 | 3 | - | - | - | - | 50 | 50 | 100 | 50 | -. |
| 7CEP 05 | 7CE07 | Project & Seminar | - | - | 3 | 3 | - | - | - | - | - | 50 | 50 | 25 | - |
| Total | | | 9 | 3 | 10 | 22 | 240 | 60 | 300 | - | 100 | 150 | 250 | - | |
| Total Credits = $9 + (3+10) / 2 = 15.5$ | | | | | | | TOTAL MARKS :- $300 + 250 = 550$ | | | | | | | | |

VIII SEMESTER PART TIME B.E.

| Part Time B.E. Sub. Code | Regular B.E. Sub. Code | Name of Subject | Teaching Scheme (Clock Hour / Week) | | | | Assessment of Theory Marks | | | | Assessment of Practical Marks | | | | Duration of Question Paper |
|---------------------------------------|------------------------|---------------------------|-------------------------------------|---|-----|-------|----------------------------------|------|-------|-----------|-------------------------------|------|-------|-----------|----------------------------|
| | | | L | T | P/D | Total | Paper | C.A. | Total | Min. Pass | Prac t. | C.A. | Total | Min. Pass | |
| 8CEP 01 | 6CE02 | Transportation Engg. - II | 3 | 1 | - | 4 | 80 | 20 | 100 | 40 | - | - | - | - | 3 Hrs. |
| 8CEP 03 | 7CE06 | Elective - I | 3 | 1 | - | 4 | 80 | 20 | 100 | 40 | - | - | - | - | 3 Hrs. |
| 8CEP 03 | 8CE03 | Elective - II | 4 | 1 | - | 5 | 80 | 20 | 100 | 40 | - | - | - | - | 3 Hrs. |
| 8CEP 04 | 8CE04 | Elective - III | 3 | 1 | 2 | 6 | 80 | 20 | 100 | 40 | 25 | 25 | 50 | 25 | 3 Hrs. |
| 8CEP 06 | 8CE06 | Project | - | - | 6 | 6 | - | - | - | - | 75 | 75 | 150 | 75 | -. |
| Total | | | 13 | 4 | 8 | 25 | 320 | 80 | 400 | - | 100 | 100 | 200 | - | |
| Total Credits = $13 + (4+8) / 2 = 18$ | | | | | | | TOTAL MARKS :- $400 + 200 = 600$ | | | | | | | | |

Grand Total Credits = $17+20.5+14.5+18.5+20.5+15.5+19 = 145$

Note :- Syllabus, Marking Scheme, List of Elective Subjects for regular B.E. and Part Time B.E. will be same.

RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY
SCHEME OF TEACHING OF PART TIME B.E. (COMPUTER TECHNOLOGY)

1 SEMESTER PART TIME B.E.

| Part Time B.E. Sub. Code | Regular B.E. Sub. Code | Name of Subject | Teaching Scheme (Clock Hour / Week) | | | | Assessment of Theory Marks | | | | Assessment of Practical Marks | | | | Duration of Question Paper |
|-------------------------------------|------------------------|-------------------------------|-------------------------------------|---|-----|-------|----------------------------------|------|-------|-----------|-------------------------------|------|-------|-----------|----------------------------|
| | | | L | T | P/D | Total | Paper | C.A. | Total | Min. Pass | Prac. t. | C.A. | Total | Min. Pass | |
| 1CTPT 01 | 33CT01 | APPLIED MATHS - III | 4 | 1 | - | 5 | 80 | 20 | 100 | 40 | - | - | - | - | 3 Hrs. |
| 1CTPT 02 | 33CT02 | NETWORK ANALYSIS | 3 | 1 | - | 4 | 80 | 20 | 100 | 40 | - | - | - | - | 3 Hrs. |
| 1CTPT 03 | 33CT03 | INTRODUCTION TO PROGRAMMING | 4 | 1 | 2 | 7 | 80 | 20 | 100 | 40 | 25 | 25 | 50 | 25 | 3 Hrs. |
| 1CTPT 04 | 33CT04 | ELECTRONIC DEVICES & CIRCUITS | 4 | 1 | 2 | 7 | 80 | 20 | 100 | 40 | 25 | 25 | 50 | 25 | 3 Hrs. |
| Total | | | 15 | 4 | 4 | 23 | - | - | 400 | - | - | - | 100 | - | |
| Total Credits = $15 + (4+4)/2 = 19$ | | | | | | | TOTAL MARKS :- $400 + 100 = 500$ | | | | | | | | |

SCHEME OF TEACHING OF PART TIME B.E. (COMPUTER TECHNOLOGY)

II SEMESTER PART TIME B.E.

| Part Time B.E. Sub. Code | Regular B.E. Sub. Code | Name of Subject | Teaching Scheme (Clock Hour / Week) | | | | Assessment of Theory Marks | | | | Assessment of Practical Marks | | | | Duration of Question Paper |
|---------------------------------------|------------------------|-------------------------------|-------------------------------------|---|-----|-------|----------------------------------|------|-------|-----------|-------------------------------|------|-------|-----------|----------------------------|
| | | | L | T | P/D | Total | Paper | C.A. | Total | Min. Pass | Prac. t. | C.A. | Total | Min. Pass | |
| 2CTPT 01 | 44CE01 | DESCRETE MATHS & GRAPH THEORY | 4 | 1 | - | 5 | 80 | 20 | 100 | 40 | - | - | - | - | 3 Hrs. |
| 2CTPT 02 | 33CE05 | DIGITAL ELECTRONICS | 4 | 1 | 2 | 7 | 80 | 20 | 100 | 40 | 25 | 25 | 50 | 25 | 3 Hrs. |
| 2CTPT 03 | 33CE06 | COMPUTER W/S - i | - | - | 2 | 2 | - | - | - | - | - | 50 | 50 | 25 | 3 Hrs. |
| 2CTPT 04 | 44CE02 | DATA STRUCTURE | 4 | 1 | 2 | 7 | 80 | 20 | 100 | 40 | 25 | 25 | 50 | 25 | 3 Hrs. |
| Total | | | 12 | 3 | 6 | 21 | - | - | 300 | - | - | - | 150 | - | |
| Total Credits = $12 + (3+6)/2 = 16.5$ | | | | | | | TOTAL MARKS :- $300 + 150 = 450$ | | | | | | | | |

RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY
SCHEME OF TEACHING OF PART TIME B.E. (COMPUTER TECHNOLOGY)

III SEMESTER PART TIME B.E.

| Part Time B.E. Sub. Code | Regular B.E. Sub. Code | Name of Subject | Teaching Scheme (Clock Hour / Week) | | | | Assessment of Theory Marks | | | | Assessment of Practical Marks | | | | Duration of Question Paper |
|----------------------------------|------------------------|-------------------------|-------------------------------------|---|-----|-------|--------------------------------|------|-------|-----------|-------------------------------|------|-------|-----------|----------------------------|
| | | | L | T | P/D | Total | Paper | C.A. | Total | Min. Pass | Pract. | C.A. | Total | Min. Pass | |
| 3CTPT 01 | 44CT05 | ELECT M/C MEASUREMENTS | 3 | 1 | 2 | 6 | 80 | 20 | 100 | 40 | 25 | 25 | 50 | 25 | 3 Hrs. |
| 3CTPT 02 | 44CT04 | COMP ARCHITECTURE & ORS | 4 | 1 | - | 5 | 80 | 20 | 100 | 40 | - | - | - | - | 3 Hrs. |
| 3CTPT 03 | 44CT03 | FUNDAMENTALS OF UP | 4 | 1 | 2 | 7 | 80 | 20 | 100 | 40 | 25 | 25 | 50 | 25 | 3 Hrs. |
| 3CTPT 04 | 55CT02 | COMMUNICATION SYSTEMS | 3 | 1 | 2 | 6 | 80 | 20 | 100 | 40 | 25 | 25 | 50 | 25 | 3 Hrs. |
| Total | | | 14 | 4 | 6 | 24 | - | | 400 | - | | | 150 | - | |
| Total Credits = 14+ (4+6)/2 = 19 | | | | | | | TOTAL MARKS :- 400 + 150 = 550 | | | | | | | | |

SCHEME OF TEACHING OF PART TIME B.E. (COMPUTER TECHNOLOGY)

IV SEMESTER PART TIME B.E.

| Part Time B.E. Sub. Code | Regular B.E. Sub. Code | Name of Subject | Teaching Scheme (Clock Hour / Week) | | | | Assessment of Theory Marks | | | | Assessment of Practical Marks | | | | Duration of Question Paper |
|------------------------------------|------------------------|-------------------------------|-------------------------------------|---|-----|-------|--------------------------------|------|-------|-----------|-------------------------------|------|-------|-----------|----------------------------|
| | | | L | T | P/D | Total | Paper | C.A. | Total | Min. Pass | Pract. | C.A. | Total | Min. Pass | |
| 4CTPT 01 | 55CE01 | OBJECT ORIENTED METHODOLOGIES | 3 | 1 | 2 | 6 | 80 | 20 | 100 | 40 | 25 | 25 | 50 | 25 | 3 Hrs. |
| 4CTPT 02 | 55CE04 | SYSTEM PROGRAMMING | 3 | 1 | - | 4 | 80 | 20 | 100 | 40 | - | - | - | - | 3 Hrs. |
| 4CTPT 03 | 55CE06 | CONTROL SYSTEMS | 3 | 1 | - | 4 | 80 | 20 | 100 | 40 | - | - | - | - | 3 Hrs. |
| 4CTPT 04 | 66CE01 | IND MGMT/ECONOMICS | 3 | 1 | - | 4 | 80 | 20 | 100 | 40 | - | - | - | - | 3 Hrs. |
| 4CTPT 05 | 44CE06 | COMPUTER W/S - II | - | - | 2 | 2 | | | | | | 50 | 50 | 25 | |
| Total | | | 12 | 4 | 4 | 20 | | | 400 | - | | | 100 | - | |
| Total Credits = 12 + (4+4)/ 2 = 16 | | | | | | | TOTAL MARKS :- 400 + 100 = 500 | | | | | | | | |

RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY
SCHEME OF TEACHING OF PART TIME B.E. (COMPUTER TECHNOLOGY)
V SEMESTER PART TIME B.E.

| Part Time B.E. Sub. Code | Regular B.E. Sub. Code | Name of Subject | Teaching Scheme (Clock Hour / Week) | | | | Assessment of Theory Marks | | | | Assessment of Practical Marks | | | | Duration of Question Paper |
|----------------------------------|---------------------------------|------------------------------|--|---|-----|-------|--------------------------------|------|-------|--------------|----------------------------------|------|-------|--------------|-------------------------------------|
| | | | L | T | P/D | Total | Pape r | C.A. | Total | Min. Pass | Prac t. | C.A. | Total | Min. Pass | |
| 5CTPT 01 | 55CT03 | ADVANCED UP | 4 | 1 | 2 | 7 | 80 | 20 | 100 | 40 | 25 | 25 | 50 | 25 | 3 Hrs. |
| 5CTPT 02 | 55CT05 | THEORY OF COMPUTATION | 3 | 1 | - | 4 | 80 | 20 | 100 | 40 | - | - | - | - | 3 Hrs. |
| 5CTPT 03 | 66CT02 | SOFTWARE ENGG. | 4 | 1 | 2 | 7 | 80 | 20 | 100 | 40 | 25 | 25 | 50 | 25 | 3 Hrs. |
| 5CTPT 04 | 66CT03 | DESIGN & ANALVSIS OF ALGO | 4 | 1 | - | 5 | 80 | 20 | 400 | 40 | - | - | - | - | 3 Hrs. |
| Total | | | 15 | 4 | 4 | 23 | - | | 400 | - | | | 100 | - | |
| Total Credits = 15+ (4+4)/2 = 19 | | | | | | | TOTAL MARKS :- 400 + 100 = 500 | | | | | | | | |

SCHEME OF TEACHING OF PART TIME B.E. (COMPUTER TECHNOLOGY)
VI SEMESTER PART TIME B.E.

| Part Time B.E. Sub. Code | Regular B.E. Sub. Code | Name of Subject | Teaching Scheme (Clock Hour / Week) | | | | Assessment of Theory Marks | | | | Assessment of Practical Marks | | | | Duratio n of Question Paper |
|--------------------------------------|---------------------------------|--|--|---|-----|-------|--------------------------------|------|-------|--------------|----------------------------------|------|-------|--------------|--------------------------------------|
| | | | L | T | P/D | Total | Pape r | C.A. | Total | Min. Pass | Prac t. | C.A. | Total | Min. Pass | |
| 6CTPT 04 | 66CE04 | DATA PROCESSING & FIRE SYSTEM | 4 | 1 | 2 | 7 | 80 | 20 | 100 | 40 | 25 | 25 | 50 | 25 | 3 Hrs. |
| 6CTPT 05 | 66CE05 | DESIGN PRINCIPLES OF PROGRAMMING LANGUAGES | 4 | 1 | - | 5 | 80 | 20 | 100 | 40 | - | - | - | - | 3 Hrs. |
| 6CTPT 04 | 77CE04 | OPERATING SYSTEMS | 4 | 1 | - | 5 | 80 | 20 | 100 | 40 | - | - | - | - | 3 Hrs. |
| 6CTPT 03 | 77CE03 | COMP COMM & NETWROKING | 4 | 1 | 2 | 7 | 80 | 20 | 100 | 40 | 25 | 25 | 50 | 25 | 3 Hrs. |
| 6CTPT 06 | 66CE06 | MINI PROJECT | - | - | 3 | 3 | | | | | 25 | 25 | 50 | 25 | - |
| Total | | | 16 | 4 | 7 | 27 | | | 400 | - | | | 150 | - | |
| Total Credits = 16 + (4+7)/ 2 = 21.5 | | | | | | | TOTAL MARKS :- 400 + 150 = 550 | | | | | | | | |

RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY
SCHEME OF TEACHING OF PART TIME B.E. (COMPUTER TECHNOLOGY)

VII SEMESTER PART TIME B.E.

| Part Time B.E. Sub. Code | Regular B.E. Sub. Code | Name of Subject | Teaching Scheme (Clock Hour / Week) | | | | Assessment of Theory Marks | | | | Assessment of Practical Marks | | | | Duration of Question Paper |
|---------------------------------------|---------------------------------|-------------------------|--|---|-----|-------|----------------------------------|------|-------|--------------|----------------------------------|------|-------|--------------|-------------------------------------|
| | | | L | T | P/D | Total | Pape r | C.A. | Total | Min. Pass | Prac t. | C.A. | Total | Min. Pass | |
| 7CTPT 01 | 77CT03 | DATABASE MGMT SYSTEM | 4 | 1 | 2 | 7 | 80 | 20 | 100 | 40 | 25 | 25 | 50 | 25 | 3 Hrs. |
| 7CTPT 02 | 77CT04 | Elective - I | 4 | 1 | - | 5 | 80 | 20 | 100 | 40 | - | - | - | - | 3 Hrs. |
| 7CTPT 03 | 77CT05 | Elective - II | 4 | 1 | - | 5 | 80 | 20 | 100 | 40 | - | - | - | - | 3 Hrs. |
| 7CTPT 04 | 88CT01 | COMPUTER GRAPHICS | 4 | 1 | 2 | 7 | 80 | 20 | 400 | 40 | 25 | 25 | 50 | 25 | 3 Hrs. |
| 7CTPT 05 | 77CT06 | Project Seminar | - | - | 3 | 3 | - | - | - | - | 25 | 25 | 50 | 25 | |
| Total | | | 16 | 4 | 7 | 27 | - | - | 400 | - | - | - | 150 | - | |
| Total Credits = $16 + (4+7)/2 = 21.5$ | | | | | | | TOTAL MARKS :- $400 + 150 = 550$ | | | | | | | | |

Elective – I :- 1) Distributed computing & Internet Working 2) Artificial Intelligence 3) Digital Signal Processing

Elective – II :- 1) Mul Timedla & WEB Designing 2) Multilingual Information Processing 3) CAD/CAM

SCHEME OF TEACHING OF PART TIME B.E. (COMPUTER TECHNOLOGY)

VIII SEMESTER PART TIME B.E.

| Part Time B.E. Sub. Code | Regular B.E. Sub. Code | Name of Subject | Teaching Scheme (Clock Hour / Week) | | | | Assessment of Theory Marks | | | | Assessment of Practical Marks | | | | Duratio n of Question Paper |
|---------------------------------------|---------------------------------|--------------------------|--|---|-----|-------|----------------------------------|------|-------|--------------|----------------------------------|------|-------|--------------|--------------------------------------|
| | | | L | T | P/D | Total | Pape r | C.A. | Total | Min. Pass | Prac t. | C.A. | Total | Min. Pass | |
| 8CTPT 01 | 88CE02 | COMPUTER CONSTRUCTION | 4 | 1 | 2 | 7 | 80 | 20 | 100 | 40 | 25 | 25 | 50 | 25 | 3 Hrs. |
| 8CTPT 02 | 88CE03 | Elective - III | 4 | 1 | - | 5 | 80 | 20 | 100 | 40 | - | - | - | - | 3 Hrs. |
| 8CTPT 03 | 88CE04 | Elective - IV | 4 | 1 | - | 5 | 80 | 20 | 100 | 40 | - | - | - | - | 3 Hrs. |
| 8CTPT 04 | 88CE05 | Project | - | - | 6 | 6 | - | - | - | - | 75 | 75 | 150 | 75 | |
| Total | | | 12 | 3 | 8 | 23 | - | - | 300 | - | - | - | 200 | - | |
| Total Credits = $12 + (3+8)/2 = 17.5$ | | | | | | | TOTAL MARKS :- $300 + 200 = 500$ | | | | | | | | |

Elective –III :-1) Nural N/W & Fuggy Logic 2) Image Processing

Elective – IV – 1) E-Commerce 2) Data Mining & Ware Housing 3) Recent Trends in Computations & Information

ORDINANCE NO. 5 OF 2010*ORDINANCE GOVERNING EXAMINATION LEADING TO THE DEGREE OF MASTER OF TECHNOLOGY (FULL TIME) IN THE FACULTY OF ENGINEERING & TECHNOLOGY.**

Whereas, it is expedient to provide for an Ordinance relating to the award of Degree of Master of Technology (Full time), in the Faculty of Engineering & Technology, the Management Council is hereby pleased to make the following Ordinance. :

1. This Ordinance may be called “Ordinance governing Examinations leading to the Degree of Master of Technology, in the Faculty of Engineering & Technology, Ordinance, 2010 ”.
2. This Ordinance shall come in to force with effect from the date of its approval by the Management Council.
3. The M. Tech. (Full Time) courses governed by this Ordinance, in this University, in the Faculty of Engg. & Tech. are enlisted in Annexure – I, alongwith the Board of Studies to which it is basically attached above annexure-I may be amended from time to time, with the addition of new courses.
4. The duration of the course shall be two academic years consisting of four semesters for which the teaching sessions shall be held during regular college hours and the university examination shall be conducted at the end of each semester namely, the first, second, third and fourth semester. The respective course scheme code is mentioned in Annexure-I.
5. The examinations shall be held as far as possible, in October-November and March-April every year at such places and on such dates, as may be decided by the university.
6. Subject to the compliance with the provisions of this ordinance, other relevant rules & regulations issued by AICTE and Govt. of Maharashtra and in force and from time to time, the persons shall be eligible for admission to the course and the examinations, with conditions given below :-

a) M. Tech. (First Semester):-

- i) The general eligibility qualification for admission to the respective post graduate courses shall be as mentioned in Annexure – II.

* Accepted by the Management Council on dt. 22nd March, 2010, vide item No. 11, under the draft Ordinance No. 4 of 2009 &

- ii) The college shall get the list of admitted students scrutinized and approved from the university, strictly as per sanctioned quota and in accordance with the governing rules and regulations.
- iii) The student should have prosecuted a regular course of study in the college affiliated to the university for conduct of the course or a university department/center for not less than one semester in the subjects in which he/she offers to appear for examination.

b) **M. Tech. (Second Semester) :-**

A student who has after appearing the M. Tech. (First Semester) examination and fulfilling the ATKT criteria, as mentioned in Annexure – III, prosecuted a regular course of study in the college affiliated to the university for conduct of the course or a university department/center for not less than one semester in the subjects in which he/she offers to appear for examination.

c) **M. Tech. (Third Semester) :-**

A student who has after appearing the M. Tech (Second Semester) examination and fulfilling the ATKT criteria as mentioned in Annexure – III prosecuted a regular course of study in a college affiliated to the university for conduct of the course or a university department/center for not less than one semester in the subjects in which he/she offers to appear for examination:

d) **M. Tech. (Fourth Semester)**

A student who has after appearing the M. Tech. (Third Semester) examination and fulfilling the ATKT criteria as mentioned in Annexure – III prosecuted a regular course of study in the college affiliated to the university for conduct of the course or a university department/ Center for not less than one semester in the subject in which he/she offers to appear for examination.

- 7. The scope of the subject shall be as indicated in the respective syllabus, appended to this Ordinance.
- 8. The fee for each of the examinations shall be such as may be prescribed by the university from time to time.
- 9. The Subjects, Theories, Practicals, College assessment, Project Work, Thesis and Defense, Viva-Voce and Seminar, if any, maximum marks assigned to each of them, and the minimum marks an examinee must obtain in order to pass the examination shall be as indicated in the respective scheme appended to this Ordinance. The college assessment marks shall be based on examinee's performance in sessional examinations and assignments, if any.

10. An un-successful examinee, at any of the above examinations shall have an option to carry his/her "College Assessment Marks" for theory and/or practical examination to his/her successive attempt at the examination. The examinee, however, can forgo his/her College Assessment marks in Subject(s), in which case he/she shall be examined for a total of marks comprising the Theory/Practical examination and College Assessment together, at his/her successive attempts at the examination. Such an option may be availed by the examinee by indicating the same in his/her "**Application for the Examination**" and the option once exercised, shall be final & binding on the examinee concerned.
11.
 - i) The subject of the project work shall be communicated to the candidate by the head of the institution/Department at the beginning of the third semester on approval of the Research and Recognition Committee of the concerned Board of Studies. The college shall get the project titles, supervisors approved by the Research & Recognition committee, as per procedure.
 - ii) An examinee shall carry out his thesis work beginning from third semester up to the end of fourth semester under the supervision of :
 - a) a recognized teacher with minimum Post Graduate qualification in the college or institute.

OR

 - b) a person from industry or research institute possessing minimum graduation degree in the appropriate engineering subject and having not less than 5 years of experience in an industry or research institution in a responsible position.
12. The examinee shall submit his thesis to the university through the Head of the Institution or College not later than 31st July/ 31st January certified by the guide that the work was carried out satisfactorily under his guidance.
13. The Defense Examinations based on the thesis report shall be conducted by the Board of Examiners consisting of an External Examiner appointed by the University and the Internal examiner. The External examiner shall not be associated with the examination of more than two examinees simultaneously.
14. One copy of the thesis shall be sent to the external examiner by the College as early as possible, but not less than ten days before the Defense Examination.
15. As examinee at the fourth semester examination, who fails to submit his thesis within the prescribed date or fails to present himself for the defense may, subject to other provisions of this Ordinance shall be readmitted to the examination at any subsequent date provided :-

- a) He/She pays the fee prescribed from time to time.
 - b) His/Her application is received by the Controller of Examinations not later than one month before the date of commencement of examination.
 - c) He/She submits his thesis on the same subject two weeks prior to the examination date.
16. The examinees who have passed in all the subjects prescribed for the first to fourth semester examinations obtaining 75% or more marks in the aggregate shall be placed in first division with distinction, those obtaining 60% and above but less than 75% marks in first division and all other successful examinees in the second division.
 17. The examinees of examinees passing the course as a whole in the minimum required period and obtaining the prescribed number of places in first division shall be arranged in Order of Merit as provided in Ordinance No. 6.
 18. The provisions of Ordinance No. 3 of 2007 relating to “Award of Grace Marks for passing an examination, securing higher division/ class and for securing Distinction in Subject(s)” as amended up to date shall apply to the examinations under this Ordinance.
 19. The Examinee who does not pass or who fails to present himself for the examination shall be eligible for re-admission to the same examination on payment of a fresh fee and such other fees as may be prescribed.
 20. Notwithstanding anything to the contrary in this Ordinance, no one shall be admitted to an examination under this Ordinance, if he/she has already passed the same examination or an equivalent examination, thereto of any statutory University.
 21. The Examinees successful at the final examination, on payment of the prescribed fee shall be entitled for the award of the degree of M. Tech. in the respective specialization & branch of Engineering in the prescribed form, signed by the Vice-Chancellor.
 22. Upon promulgation of this Ordinance, Direction No. 14 of 2003 shall stand repealed.

STATEMENT OF OBJECT & REASONS

The above courses prior to the issuance of aforesaid direction, had been operational with yearly scheme of teaching & examination in all the years of the courses. However, with the clear directive from the AICTE and Govt. of Maharashtra, all the courses under the Faculty of Engineering & Technology have been converted from yearly pattern to semester pattern of teaching scheme & examinations.

As such, after its discussion & thereafter resolution to this effect by the Faculty of Engineering & Technology vide its meeting dated 18.10.2004 and subsequently its approval by the Academic Council in its meeting held on 16th March, 2002, vide item No. 4 and the Management Council in its meeting held on 6th July, 2002, vide item No. 111, the afore mentioned Direction were thereafter referred to the Draft Ordinance Committee, for the preparation of Ordinance. Accordingly, the Committee has prepared this Draft ordinance for the consideration of the concerned authorities, hence this Ordinance.

While implementing the provisions of this Ordinance, no financial implications are involved at the Government as well as university level as of now or in future and the same is in consonance with the orders of the State Government and guidelines of the All India Council for Technical Education.

ANNEXURE - I
LIST OF M. TEC. (FULL TIME) COURSES IN THE UNIVERSITY

| SR. NO. | M. TECH. SPECIALIZATION | BOARD OF STUDIES | SCHEME CODE |
|----------------|--------------------------------|-------------------------|--------------------|
| 01 | CHEMICAL ENGG. | CHEMICAL ENGG. | CHEM-E |
| 02 | CHEMICAL TECH. | CHEMICAL TECH. | CHEM-T |

ANNEXURE - II
BASIC ELIGIBILITY QUALIFICATION FOR M. TECH. ADMISSION.

| SR. NO. | M. TECH. SPECIALIZATION | ELIGIBILITY QUALIFICATION B.E./B.TECH OF THIS UNIVERSITY OR ANY OTHER STATUTORY UNIVERSITY RECOGNIZED EQUIVALENT THERETO OR AMIE IN |
|----------------|--------------------------------|--|
| 01 | CHEMICAL ENGG. | CHEMICAL ENGG. |
| 02 | CHEMICAL TECH. | CHEMICAL ENGG./CHEMICAL TECH. |

ANNEXURE - III
ATKT RULES FOR ADMISSION TO HIGHER EXAMINATION IN M.TECH.

| Admission to Semester | Candidate should have passed in all heads of following examinations | Candidate should have passed in all the subjects except in four or less number of passing heads of the following examinations taken together |
|------------------------------|--|---|
| I | As per Annexure - II | --- |
| II | --- | I Semester |
| III | I Semester | II Semester |
| IV | II Semester | III Semester |

APPENDIX II
RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY
FACULTY OF ENGINEERING & TECHNOLOGY
SCHEME OF EXAMINATION FOR THE COURSE
MASTER OF TECHNOLOGY (CHEMICAL ENGINEERING)

| Subject Code | Subject | Maximum Marks | Minimum Marks for Passing | Duration of Examination in Hours | Teaching hours per week |
|------------------------|---|---------------|---------------------------|----------------------------------|---------------------------|
| FIRST SEMESTER | | | | | |
| CT 1.01 | Modern Chemical Instrumentation | 100 | 50 | 3 | 4 |
| CE 1.02 | Science and Technology of Materials | 100 | 50 | 3 | 4 |
| CE 1.03 | Momentum and Heat Transfer | 100 | 50 | 3 | 4 |
| CE 1.04 | Advanced Chemical Reaction Engineering | 100 | 50 | 3 | 4 |
| CE 1.05 | Plant Design | 100 | 50 | 3 | 4 |
| SECOND SEMESTER | | | | | |
| CT 2.01 | Biotechnology | 100 | 50 | 3 | 4 |
| CE 2.02 | Environmental Engineering | 100 | 50 | 3 | 4 |
| CE 2.03 | Mass Transfer | 100 | 50 | 3 | 4 |
| CE 2.04 | Optimization and Mathematical Modeling | 100 | 50 | 3 | 4 |
| CE 2.05 | Process Dynamics and Control | 100 | 50 | 3 | 4 |
| THIRD SEMESTER | | | | | |
| CE 3.01 | Elective | 100 | 50 | 3 | 4 |
| CE 3.02 | Seminar | 100 | -- | - | - |
| CE 3.03 | Minor Project Sessional Practical | 50 50 | 50 | | (CE3.02 +CE3.03 2*) |
| FOURTH SEMESTER | | | | | |
| CE 4.01 | Major Project Viva-Voce | 400 | 200 | | 2* |

* 2 hours per candidate

Elective :

1. Entrepreneurship & Communications skills
2. Neural Networks & Fuzzy Systems
3. Research methodology
4. Advanced Mathematics

APPENDIX II (1)
RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY
FACULTY OF ENGINEERING & TECHNOLOGY
SCHEME OF EXAMINATION FOR THE COURSE
MASTER OF TECHNOLOGY (CHEM. TECH.)
(OIL TECHNOLOGY)

| Subject Code | Subject | Max. Marks | Mini. Marks | Duration of Exam. Hours | Teaching hours/ week |
|------------------------|---|-------------------|--------------------|--------------------------------|-----------------------------|
| First Semester | | | | | |
| CT 1.01 | Modern Chemical Instrumentation | 100 | 50 | 3 | 4 |
| CE 1.02 | Science and Technology of Materials | 100 | 50 | 3 | 4 |
| CT 1.03-1 | Special Technology 1 Chemistry and Biochemistry of lipids and fatty materials | 100 | 50 | 3 | 4 |
| CT 1.04-1 | Special Technology II Analytical Techniques and Quality Control | 100 | 50 | 3 | 4 |
| CT 1.05-1 | Special Technology III Technology of oil bearing materials and processing of oils | 100 | 50 | 3 | 4 |
| Second Semester | | | | | |
| CT 2.01 | Biotechnology | 100 | 50 | 3 | 4 |
| CE 2.02 | Environmental Engineering | 100 | 50 | 3 | 4 |
| CT 2.03-1 | Special Technology IV Technology of Soaps, detergents and Surfactants | 100 | 50 | 3 | 4 |
| CT 2.04-1 | Special Technology V Technology of Cosmetics and allied products | 100 | 50 | 3 | 4 |
| CT 2.05-1 | Special Technology VI Technology of Miscellaneous Oil and Fat Products, including Surface Coatings | 100 | 50 | 3 | 4 |
| CT 2.06 | Oil Technology : Practical Sessional Practical | 50 50 | 50 | 6 | 6 |
| Third Semester | | | | | |
| CT 3.01 | Seminar | 100 | | | 2* |
| CT 3.02 | Training Report/Minor Project/Home Assignment Sessional Practical | 50 50 | 50 | | |
| Fourth semester | | | | | |
| CT 4.01 | Project Viva-Voce | 400 | 200 | | 2* |

*50 marks Sessional + 50 marks Final Examination *2 hrs per candidate

APPENDIX II (2)
RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY
 FACULTY OF ENGINEERING & TECHNOLOGY
SCHEME OF EXAMINATION FOR THE COURSE
MASTER OF TECHNOLOGY (CHEM. TECH.)
PAINT TECHNOLOGY

| Subject Code | Subject | Max. Marks | Mini. Marks | Duration of Exam. Hours | Teaching hours/ week |
|---------------------|---|-------------------|--------------------|--------------------------------|-----------------------------|
| | First Semester | | | | |
| CT 1.01 | Modern Chemical Instrumentation | 100 | 50 | 3 | 4 |
| CE 1.02 | Science and Technology of Materials | 100 | 50 | 3 | 4 |
| CT 1.03-2 | Special Technology 1 Chemistry of film forming materials and polymerization techniques | 100 | 50 | 3 | 4 |
| CT 1.04-2 | Special Technology II Technology of pigments extenders and additives | 100 | 50 | 3 | 4 |
| CT 1.05-2 | Special Technology III Principles of formulations of surface coatings | 100 | 50 | 3 | 4 |
| | Second Semester | | | | |
| CT 2.01 | Biotechnology | 100 | 50 | 3 | 4 |
| CE 2.02 | Environmental Engineering | 100 | 50 | 3 | 4 |
| CT 2.03-2 | Special Technology IV Manufacturing methods, machinery and planning | 100 | 50 | 3 | 4 |
| CT 2.04-2 | Special Technology V Processing applications and Technology of inks | 100 | 50 | 3 | 4 |
| CT 2.05-2 | Special Technology VI Application, evaluation of surface coatings and industrial waste treatment | 100 | 50 | 3 | 4 |
| CT 2.06 | Practical : Paint Technology Sessional Practical | 50 50 | 50 | 6 | 6 |
| | Third Semester | | | | |
| CT 3.01 | Seminar | 100 | | | |
| CT 3.02 | Training Report/Minor Project/Home Assignment Sessional Practical | 50 50 | 50 | | 2* |
| | Fourth Semester | | | | |
| CT 4.01 | Project and Viva-Voce | 400 | 200 | | 2* |

*50 marks Sessional + 50 marks Final Examination *2 hrs per candidate

APPENDIX II (3)
RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY
 FACULTY OF ENGINEERING & TECHNOLOGY
SCHEME OF EXAMINATION FOR THE COURSE
MASTER OF TECHNOLOGY (CHEM. TECH.)
PETROCHEMICAL TECHNOLOGY

| Subject Code | Subject | Max. Marks | Mini. Marks | Duration of Exam. Hours | Teaching hours/ week |
|------------------------|--|-------------------|--------------------|--------------------------------|-----------------------------|
| First Semester | | | | | |
| CT 1.01 | Modern Chemical Instrumentation | 100 | 50 | 3 | 4 |
| CE 1.02 | Science and Technology of Materials | 100 | 50 | 3 | 4 |
| CT 1.03-3 | Special Technology 1 Science & Technology of Polymerization | 100 | 50 | 3 | 4 |
| CT 1.04-3 | Special Technology II Natural gas technology | 100 | 50 | 3 | 4 |
| CT 1.05-3 | Special Technology III Lubricant waxes and Petroleum Special Product | 100 | 50 | 3 | 4 |
| Second Semester | | | | | |
| CT 2.01 | Biotechnology | 100 | 50 | 3 | 4 |
| CE 2.02 | Environmental Engineering | 100 | 50 | 3 | 4 |
| CT 2.03-3 | Special Technology IV Project Engineering of Petroleum and Petrochemical Plants | 100 | 50 | 3 | 4 |
| CT 2.04-3 | Special Technology V Petroleum Refinery Processing | 100 | 50 | 3 | 4 |
| CT 2.05-3 | Special Technology VI Petrochemical Process Engineering | 100 | 50 | 3 | 4 |
| CT 2.06 | Practical : Petrochemical Technology Sessional Practical | 50 50 | 50 | 6 | 6 |
| Third Semester | | | | | |
| CT 3.01 | Seminar | 100 | | | 2* |
| CT 3.02 | Training Report/Minor Project/Home Assignment Sessional Practical | 50 50 | 50 | | |
| Fourth Semester | | | | | |
| CT 4.01 | Project and Viva-Voce | 400 | 200 | | 2* |

*50 marks Sessional + 50 marks Final Examination *2 hrs per candidate

APPENDIX II (4)
RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY
FACULTY OF ENGINEERING & TECHNOLOGY
SCHEME OF EXAMINATION FOR THE COURSE
MASTER OF TECHNOLOGY (CHEM. TECH.)
FOOD TECHNOLOGY

| Subject Code | Subject | Max. Marks | Mini. Marks | Duration of Exam. Hours | Teaching hours/ week |
|---------------------|---|-------------------|--------------------|--------------------------------|-----------------------------|
| | First Semester | | | | |
| CT 1.01 | Modern Chemical Instrumentation | 100 | 50 | 3 | 4 |
| CE 1.02 | Science and Technology of Materials | 100 | 50 | 3 | 4 |
| CT 1.03-4 | Special Technology 1 Biochemistry and Analysis of Food Components | 100 | 50 | 3 | 4 |
| CT 1.04-4 | Special Technology II Molecular Biology | 100 | 50 | 3 | 4 |
| CT 1.05-4 | Special Technology III Bioprocess Engineering | 100 | 50 | 3 | 4 |
| | Second Semester | | | | |
| CT 2.01 | Industrial Fermentations | 100 | 50 | 3 | 4 |
| CE 2.02 | Environmental Engineering | 100 | 50 | 3 | 4 |
| CT 2.03-4 | Special Technology IV Modern Trends in Food Science and Technology | 100 | 50 | 3 | 4 |
| CT 2.04-4 | Special Technology V Food Biotechnology | 100 | 50 | 3 | 4 |
| CT 2.05-4 | Special Technology VI Biotechnology Applications | 100 | 50 | 3 | 4 |
| CT 2.06 | Practical : Food Technology Sessional Practical | 50 50 | 50 | 6 | 6 |
| | Third Semester | | | | |
| CT 3.01 | Seminar | 100 | | | |
| CT 3.02 | Training Report/Minor Project/Home Assignment Sessional Practical | 50 50 | 50 | | 2* |
| | Fourth Semester | | | | |
| CT 4.01 | Project and Viva-Voce | 400 | 200 | | 2* |

*50 marks Sessional + 50 marks Final Examination *2 hrs per candidate

APPENDIX II (5)
RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY
FACULTY OF ENGINEERING & TECHNOLOGY
SCHEME OF EXAMINATION FOR THE COURSE
MASTER OF TECHNOLOGY (CHEM. TECH.)
PULP AND PAPER TECHNOLOGY

| Subject Code | Subject | Max. Marks | Mini. Marks | Duration of Exam. Hours | Teaching hours/ week |
|--------------|--|------------|-------------|-------------------------|----------------------|
| | First Semester | | | | |
| CT 1.01 | Modern Chemical Instrumentation | 100 | 50 | 3 | 4 |
| CE 1.02 | Science and Technology of Materials | 100 | 50 | 3 | 4 |
| CT 1.03-5 | Special Technology 1 Momentum Transfer & its applications in Pulp & Paper Technology | 100 | 50 | 3 | 4 |
| CT 1.04-5 | Special Technology II Advanced Pulping, Bleaching and Chemical Recovery | 100 | 50 | 3 | 4 |
| CT 1.05-5 | Special Technology III Pulp Mill Equipments | 100 | 50 | 3 | 4 |
| | Second Semester | | | | |
| CT 2.01 | Biotechnology | 100 | 50 | 3 | 4 |
| CE 2.02 | Environmental Engineering | 100 | 50 | 3 | 4 |
| CT 2.03-5 | Special Technology IV Applications of Heat and Mass Transfer in Pulp & Paper Technology | 100 | 50 | 3 | 4 |
| CT 2.04-5 | Special Technology V Advanced Paper and Board Manufacturing | 100 | 50 | 3 | 4 |
| CT 2.05-5 | Special Technology VI Paper Mill equipments | 100 | 50 | 3 | 4 |
| CT 2.06 | Practical : Pulp and Paper Technology Sessional Practical | 50 50 | 50 | 6 | 6 |
| | Third Semester | | | | |
| CT 3.01 | Seminar | 100 | | | |
| CT 3.02 | Training Report/Minor Project/Home Assignment Sessional Practical | 50 50 | 50 | | 2* |
| | Fourth Semester | | | | |
| CT 4.01 | Project and Viva-Voce | 400 | 200 | | 2* |

*50 marks Sessional + 50 marks Final Examination *2 hrs per candidate

APPENDIX II (6)
RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY
FACULTY OF ENGINEERING & TECHNOLOGY
SCHEME OF EXAMINATION FOR THE COURSE
MASTER OF TECHNOLOGY (CHEM. TECH.)

BIO TECHNOLOGY

| Subject Code | Subject | Max. Marks | Mini. Marks | Duration of Exam. Hours | Teaching hours/ week |
|---------------------|--|-------------------|--------------------|--------------------------------|-----------------------------|
| | First Semester | | | | |
| CT 1.01 | Modern Chemical Instrumentation | 100 | 50 | 3 | 4 |
| CE 1.02 | Science and Technology of Materials | 100 | 50 | 3 | 4 |
| CT 1.03-6 | Special Technology 1 Introduction to Biocatalysts | 100 | 50 | 3 | 4 |
| CT 1.04-6 | Special Technology II Molecular Biology | 100 | 50 | 3 | 4 |
| CT 1.05-6 | Special Technology III Bioprocess Engineering | 100 | 50 | 3 | 4 |
| | Second Semester | | | | |
| CT 2.01 | Industrial Fermentations | 100 | 50 | 3 | 4 |
| CE 2.02 | Environmental Engineering | 100 | 50 | 3 | 4 |
| CT 2.03-6 | Special Technology IV Bioprocess Technology | 100 | 50 | 3 | 4 |
| CT 2.04-6 | Special Technology V Food Biotechnology | 100 | 50 | 3 | 4 |
| CT 2.05-6 | Special Technology VI Biotechnology Applications | 100 | 50 | 3 | 4 |
| CT 2.06 | Practical : Biotechnology Sessional Practical | 50 50 | 50 | 6 | 6 |
| | Third Semester | | | | |
| CT 3.01 | Seminar | 100 | | | |
| CT 3.02 | Training Report/Minor Project/Home Assignment Sessional Practical | 50 50 | 50 | | 2* |
| | Fourth Semester | | | | |
| CT 4.01 | Project and Viva-Voce | 400 | 200 | | 2* |

*2 hrs per candidate

ORDINANCE NO. 6 OF 2010*AN ORDINANCE TO AMEND ORDINANCE NO. 27 OF 2008****ORDINANCE TO PROVIDE FOR THE PROVISIONAL ADMISSION OF THE STUDENTS SUBJECT TO THE RESULT OF REASSESSMENT**

Whereas, it is expedient to amend Ordinance No.27 of 2008 i.e. Ordinance to provide for the Provisional admission to the students subject to the result of reassessment, for the purposes hereinafter appearing the Management Council is hereby pleased to make the following Ordinance :-

1. This Ordinance may be called "Ordinance to provide for the Provisional admission to the students subject to the result of reassessment, (Amendment) Ordinance, 2010.
2. This Ordinance shall come into force with effect from the date of its approval by the Management Council.
3. After para 7 of the main ordinance No. 27 of 2008, Ordinance to provide for the Provisional admission to the students subject to the result of reassessment, the following paras shall be inserted, namely :-

"8. For Semester Pattern Courses

In view of the fact that in majority of the cases one academic year comprising of two semesters is considered to be the basis for determining eligibility for admission to higher class and A.T.K.T. rules are prescribed by taking into account two semesters taken together. The provisional admission to the higher class (next semester like 3rd, 5th, 7th and 9th) will be based upon the very same principle of two semesters taken together as under :

- (a) The candidate who has failed in one or two preceding semesters in such number of heads and has applied for challenge to valuation/reassessment in prescribed maximum four papers two in each semester would be eligible for provisional admission in next higher semester (either 3rd, 5th, 7th or 9th). In the event of clearing those subjects in reassessment, he would become eligible for that admission on the basis of ATKT Rules/Norms prescribed in the governing Ordinance.

* Accepted by the Management Council on dt. 22nd March, 2010, vide item No. 12, under the draft Ordinance No. 5 of 2009

e.g. : with reference to admission for 5th semester in any of the Engineering courses the existing eligibility is passing in all the heads of 3rd and 4th semesters except maximum four heads taken together.

- (i) If the candidate has failed in maximum eight heads in 3rd and 4th semester, four in each semester and has applied for reassessment/challenge to valuation in maximum four heads (two in each semester), then only he would become eligible for provisional admission.

9. Therefore the eligibility of provisional admission to the next higher semester (3rd, 5th, 7th or 9th) will be determined as per the following formula.

| Failure | | Reassessment | | Eligibility |
|-----------------|-------------------|---------------------|-------------------|--------------------|
| One Sem. | Other Sem. | One Sem. | Other Sem. | |
| 4 | 4 | 2 | 2 | Yes |
| 3 | 4 | 2 | 2 | Yes |
| 2 | 4 | 2 | 2 | Yes |
| 1 | 4 | 1 | 2 | Yes |
| 0 | 5 | 0 | 1 | Yes |
| 0 | 6 | 0 | 2 | Yes |

10. For provisional admission the eligibility in semester pattern courses will be thus maximum total number of heads of failure prescribed in the governing Ordinance for the purposes of benefit of A.T.K.T. plus maximum two heads of failure in each semester provided the candidate has applied for reassessment/revaluation in two heads in each semester.

11. If the candidate clears in requisite number of subjects/heads in which he had applied for reassessment and thereby acquires the eligibility prescribed in the governing Ordinance/Direction at least to the extent of getting benefit of A.T.K.T. rules, then alone his provisional admission would be regularized.

12. If the candidate fails to clear in requisite number of subjects/heads in which he had applied for reassessment and thereby fails to acquire necessary eligibility prescribed in the governing Ordinance at least to the extent of getting benefit of A.T.K.T. Rules the provisional admission of the candidate shall stand automatically cancelled.

4. In para 10 of the main ordinance No. 27 of 2008, Ordinance to provide for the Provisional admission to the students subject to the result of reassessment, shall be substituted by following :-

“10. The facility of provisional admission will be restricted to one preceding qualifying examination (yearly pattern course) and two preceding qualifying semester examination (semester pattern course). In the event the candidate has additional backlog of earlier year or semesters then such a candidate would not be eligible for provisional admission in any event.”

5. Upon promulgation of this Ordinance, the Direction No. 9 of 2008 shall stand repealed.

STATEMENT OF OBJECT & REASONS

A difficult was faced by the University with reference to the semester pattern courses in view of the fact that the provisions of Ordinance No. 27 of 2008 were essentially dealing with the yearly pattern courses, and therefore a committee comprising of the Deans of all the Faculties was constituted which as per decision dated 2.5.2008 had resolved to authorize the Vice-Chancellor to incorporate all necessary provisions in the Direction so as to deal with the said contingency by issuing a fresh Direction in exercise of powers u/s 14(8) of the M.U. Act, 1994. Hence, the amendment & then Ordinance.

While implementing the provisions of this Ordinance, no financial implications are involved at the Government as well as university level as of now or in future and the same is in consonance with the orders of the State Government.

ORDINANCE NO. 7 OF 2010*ORDINANCE TO PROVIDE FOR EXAMINATION LEADING TO TWO YEARS POST GRADUATE DIPLOMA IN ENVIRONMENTAL BIO-TECHNOLOGY IN THE FACULTY OF SCIENCE**

Whereas it is expedient to provide for an Ordinance for the Examination leading to the Two years Post Graduate Diploma in Environmental Bio-Technology in the Faculty of Science, the Management Council is hereby pleased to make the following ordinance. :

1. This ordinance may be called “Examination leading to Two years Post Graduate Diploma in Environmental Bio-Technology (Biotechnology for industrial Waste Management and its Reuse)” in the Faculty of Science, Ordinance, 2010.”

2. This ordinance shall come in to force with effect from the date of its approval by the Management Council.

3. **Nature of Course:**

This Two year P.G. Diploma course shall be a full time regular course.

4. **Eligibility Criteria:**

The students seeking admission to this course should have obtained B.Sc. Degree from any UGC recognized and other Deemed University with one of its subject as Microbiology, Biochemistry or Biotechnology at degree level with first class. (relax able to reserved category student by 5% as per the norms of Central and State Government on reservation policy.)

5. **Application of other Ordinances of University:**

The students admitted to this Diploma course shall be governed by the general Ordinances of the University which are applicable to all the regular or ex-students. These Ordinances includes complete as well as relevant provision of Ordinance No. 1, 2, 6, 3 of 2007, 9, 10, 19, 109, 30 of 2006 (amended Ordinance No. 4 of 2006), Direction 9 of 2008, Direction No. 5 of 2004 wherever applicable accordingly.

* Accepted by the Management Council on dt. 22nd March, 2010, vide item No. 13, under the draft Ordinance No. 7 of 2009

6. **Fee Structure for the course:**

As per the rules and guidelines of UGC for such programmes or the fees decided at university level or any other competent authority.

7. **Syllabus:**

The syllabus for this course as prescribed by the Board of Studies in terms of annual pattern.

8. **Medium of Instruction/Examination;**

The medium of instruction and writing of examination shall be in English only.

9. **Conduction of Examination:**

The examination leading to the course of Two years Post-Graduate Diploma in Environmental Bio-Technology (Biotechnology for Industrial Waste Management and its Reuse) shall be held once in a year only (i.e. Summer) at such place and on such dates as may be decided by the university.

10. **Scheme of Examination:**

The scheme of examination shall be as per Appendix-A (Annual Pattern). However, the scheme of examination reflects the basic structure of theory, practical and dissertation. The details/title of the theory paper can be suitably modified in future considering the need of the subject without disturbing the main structure.

11. **Dissertation/Project:**

The project shall be assessed by the external examiner and project guide as internal examiner. However, final marks shall be awarded by external examiner. The project examination shall be held along with practical examination.

12. **Other Rules:**

- (i) Successful examinee obtaining 60% or more marks in the aggregate at both of the examination shall be placed in the First division and those obtaining less than 60% in the second division and those obtaining less than 45% marks of aggregate but not less 35% of marks shall be placed in third division.
- (ii) An examinee who is unsuccessful at the examination will be eligible for admission to the next written and practical examination on payment of fresh fees prescribed for the examination together with an ex-student fee as applicable and on compliance of the conditions of the Ordinance enforced from time to time.

- (iii) For being eligible for exemption in a paper or practical or project work, the candidates must have obtained not less than 35% of marks.
- (iv) Provisions of Ordinance No. 3 of 2007 relating to the award of grace marks for passing an examination, securing higher division/class and for securing distinction in subject(s) and Ordinance No. 10 relating to the exemption and compartments shall apply to the examination under this Ordinance.
- (v) As soon as possible after the examination, but not later than 30th June, next following in case of examination held in April the Management Council shall publish the list of successful examinees. The names of the first three examinees passing the examination with more than 60% marks in the minimum prescribed being arranged in order of merit.
- (vi) An examinee who is successful at an examination and obtains not less than 75% of the total marks prescribed in a subject shall be declared to passed the examination with Distinction in that subject.
- (vii) Notwithstanding anything to the contrary in this ordinance no person shall be admitted to this examination, if he/she has already passed this examination or an equivalent examination of any other statutory university.

13. **Award of Diploma:**

A successful examinee shall be awarded Diploma in prescribed form signed by the Vice-Chancellor of the University.

14. Upon promulgation of this Ordinance, Direction No.14 of 2008 and shall stand repealed.

STATEMENT OF OBJECT & REASONS

The University Grants Commission, New Delhi has approved and recommended its financial assistance to various colleges of excellence to promote this programme under the UGC scheme of Innovative Programme-Teaching and Research in Interdisciplinary and Emerging areas under time bound programme and the same is mandatory to implement by all the universities under the jurisdiction of U.G.C. by granting necessary affiliation to run this course at the respective colleges OR in broader terms if any colleges under the jurisdiction of the university desires to run the course by seeking any financial assistance from any apical body or at self sustainable level by following standard procedure of seeking new regular course to be started. However, the matter needs to be governed by a Ordinance prescribed for the said purpose. Hence this Ordinance.

While implementing the provisions of this Ordinance, no financial implications are involved at the Government as well as university level as of now or in future and the same is in consonance with the orders of the State Government and guidelines of the University Grants Commission.

Appendix - A (Annual Pattern)

| Examination | Maximum Marks | Minimum Pass Marks Per Paper | Aggregate Marks |
|--|----------------------|-------------------------------------|------------------------|
| First Year | | | |
| Paper – I Biotechnological Assessment of Environmental Pollution | 75 | 27 | |
| Paper – II Novel Methodologies for biotransformation and Biodegradation Process | 75 | 27 | 250 |
| Practical – I | 100 | 35 | |
| Second Year | | | |
| Paper – I Treatment Methodologies and Management of Solid & Liquid Industrial Waste | 75 | 27 | |
| Paper – II Resource Recovery from Solid and Liquid Industrial Wastes | 75 | 27 | 250 |
| Practical – II | 50 | 17 | |
| Dissertation | 50 | 17 | |
| Total Marks | | | 500 |

ORDINANCE NO. 8 OF 2010*ORDINANCE TO PROVIDE FOR EXAMINATION LEADING TO THE ONE YEAR POST GRADUATE DIPLOMA COURSE IN BIOCHEMICAL GENOMICS IN THE FACULTY OF SCIENCE**

Whereas it is expedient to provide for an Ordinance for the Examination leading to the **One** year Post Graduate Diploma in **Biochemical Genomics**, in the Faculty of Science, the Management Council is hereby pleased to make the following ordinance. :

1. This ordinance may be called "Examination leading to One year Post Graduate Diploma in Biochemical Genomics" in the Faculty of Science, Ordinance, 2010."
2. This ordinance shall come in to force with effect from the date of its approval by the Management Council.
3. There shall be One annual examination leading to the said Diploma Course.
4. The duration of the Diploma Course under this shall be One academic year with the P.G. Diploma Examination at the end of the year.
5. The examination specified in paragraph 3 as above shall be held once a year at such places and on such dates as may be fixed by the university.
6. Subject to compliance with the provisions of this ordinance and of other ordinances in force from time to time, an applicant for admission to :-

(A) One year Post-graduate Diploma in Biochemical Genomics examination shall have:

- (i) Passed B.Sc. with Biotechnology/Biochemistry/Microbiology with Chemistry as one of the subjects,
- OR
- (ii) M.Sc. in Biotechnology/Biochemistry/Microbiology.
- OR
- (iii) M.Pharm., MBBS or B.Pharm.

(B) The candidate should obtain above mentioned qualification from any UGC recognized university and other deemed universities of approved by any affix body with minimum 50% marks. (Relaxation to reserve category student by 5% as per the norms of Central and State Government on reservation policy.)

* Accepted by the Management Council on dt. 22nd March, 2010, vide item No. 14, under the draft Ordinance No. 8 of 2009

7. An applicant should have pursued a regular course as stated in (i-v) of paragraph 6.
8. Without prejudice to the other provisions of ordinance NO. 6 relating to examinations in general, the provisions of paragraphs 5, 7, 8, 10, 26 and 31 of the said ordinance shall apply to every candidate.
9. The fees for the examination shall be as prescribed by the Management Council from time to time and whenever any change is made in the fees prescribed shall be notified through a notification for information of the examinees concerned.

10. (A) An examinee for the One year P.G. Diploma Course in Biochemical Genomics shall be examined in the following subjects, namely:

| | | | MARKS |
|--------------------------------|--|---|-------------------|
| Paper I- | Genomics | - | 75 |
| Paper II- | Receptor-Drug Interaction | - | 75 |
| Paper III- | Computational Biology, Bioinformatics & Biostatistics | | 75 |
| Paper IV- | Pharmacogenomics | - | 75 |
| Practical + viva voce + record | | - | 150 |
| Project | | - | <u>50</u> |
| <u>Total:</u> | | - | <u>500</u> |

- (B) All Papers, Practicals and Project will be compulsory.
- (C) The project shall be assessed by the external examiner appointed for conducting the practical examination.
11. The scope of the topics in various papers shall be indicated in the syllabus. The medium of instructions and examination shall be in English.
12. In order to pass, the examinee must obtain minimum passing marks 27 for Papers I-IV, 52 in Practicals and 18 in Project.
13. (i) An examinee who is unsuccessful at the examination will be eligible for admission to the next written and practical examination on payment of fresh fees prescribed for the examination together with an ex-student fee of Rs. 20/- and on compliance of the conditions of the ordinance enforced from time to time.

- (ii) For being eligible for exemption in a paper or practical the candidate must have obtained not less than 50% marks in that paper or practical.
 - (iii) Successful examinee obtaining 60% or more marks in the aggregate at the examination shall be placed in the 1st division and those obtaining less than 60% but not less than 50% marks in the 2nd division, examinees securing more than 75% marks shall be awarded distinction.
14. Provisions of Ordinance No. 3 of 2007 relating to the award of grace marks for passing an examination, securing higher division/class and for securing distinction in subject(s).
 15. Notwithstanding anything to the contrary in this Ordinance, no person shall be admitted to this examination if he/she has already passed the same examination or any equivalent examination of any other statutory university, which has been recognized as equivalent to the examination.
 16. A successful examinee shall receive Diploma in the prescribed form signed by the Vice-Chancellor.
 17. Upon promulgation of this Ordinance, Direction No.15 of 2008 and shall stand repealed.

STATEMENT OF OBJECT & REASONS

The University Grants Commission, New Delhi has sanctioned the course under its Innovative Programmes for award of the Diploma in the Faculty of Science and Board of Biochemistry under the Faculty of Science at its meeting held on 11th June, 2008 and has decided to introduce 1 year Diploma course in biochemical Genomics keeping in view the advancements made in the fields of medicine, human genomics, drug designing and pharmaceutical and the utility of the course in pharmaceutical industries, studies of human diseases, drug designing and biomedical research and accepted and approved the syllabus framed for the course in the meeting held on 15th June, 2007. However, the matter needs to be governed by a Ordinance prescribed for the said purpose. Hence this Ordinance.

While implementing the provisions of this Ordinance, no financial implications are involved at the Government as well as university level as of now or in future and the same is in consonance with the orders of the State Government and guidelines of the University Grants Commission.

APPENDIX
ONE YEAR P.G. DIPLOMA COURSE IN BIOCHEMICAL GENOMICS

| Sr. No. | Paper | Title of Paper | Teaching scheme | | | Examination Scheme | | | | | | | |
|---------|-------|--|-----------------|---------|--------------------|--------------------|----|------------|-----|-----------------|----|-------|----|
| | | | T (hrs) | P (hrs) | Total Periods week | Duration of paper | | Max. Marks | | Min. pass Marks | | Total | |
| | | | | | | T | P | T | P | T | P | T | P |
| 1 | I | Genomics | 3 | - | 3 | 3 | - | 75 | - | 27 | - | 75 | - |
| 2 | II | Receptor- Drug Interaction | 3 | - | 3 | 3 | - | 75 | - | 27 | - | 75 | - |
| 3 | III | Computation Biology, Bioinformatic & Biostatistics | 3 | - | 3 | 3 | - | 75 | - | 27 | - | 75 | - |
| 4 | IV | Pharmacogenomics | 3 | - | 3 | 3 | - | 75 | - | 27 | - | 75 | - |
| 5 | | Practical | | 12 | 12 | | 12 | | 150 | | 52 | | |
| 6 | | Project | | | | | | | 50 | | 18 | | 50 |

Note : T = Theory, P = Practical, Candidate has to pass in T and P separately.

ORDINANCE NO. 9 OF 2010*ORDINANCE TO PROVIDE FOR EXAMINATION LEADING TO THE ONE YEAR POST P.G.
DIPLOMA IN NANOTECHNOLOGY
SCIENCE
IN THE FACULTY OF**

Whereas it is expedient to provide for an Ordinance for the Examination leading to the one year Post P.G. Diploma in Nanotechnology in the Faculty of Science, the Management Council is hereby pleased to make the following ordinance. :

1. This ordinance may be called "Examination leading to One year Post P.G. Diploma in Nanotechnology" in the Faculty of Science, Ordinance, 2010."
2. This ordinance shall come in to force with effect from the date of its approval by the Management Council.

3. **Nature of the Course:**

This one year Post P.G. Diploma in Nanotechnology course shall be a full time regular course.

4. **Eligibility Criteria:**

The student seeking admission to this course should have obtained Master of Science Degree in Physics/ Chemistry/ Electronics/ Materials Science/ Biotechnology or any equivalent subjects from any UGC recognized university and other Deem University or Bachelor of Engineering Degree in Chemical/ Electronics/ Electrical/ Biotechnology or any related subjects from a recognized university with **minimum 50%** marks. (Relaxation to reserved category student by 5% as per the norms of Central and State Government on reservation policy)

5. **Application of other Ordinance of University:**

The students admitted to this Diploma course shall be governed by the general Ordinances of the University which are applicable to all the regular or ex-students. These Ordinances includes complete as well as relevant provision of Ordinance No. 1, 2, 6, 3 of 2007, 9, 10, 19, 109, 30 of 2006 (amended Ordinance No. 4 of 2006), Direction 9 of 2008, Direction No. 5 of 2004 wherever applicable accordingly.

* Accepted by the Management Council on dt. 22nd March, 2010, vide item No. 15, under the draft Ordinance No. 9 of 2009

6. **Fee structure for the course:**

As per the rules and guidelines of the UGC for such programmes or the fees decided at university level or any other competent authority.

7. **Syllabus:**

The syllabus for this course as prescribed by the Board of Studies in terms of annual pattern.

8. **Medium of Instruction / Examination:**

The medium of instructions and **written** of examination shall be in English only.

9. **Conduct of Examination:**

The examination leading to the course of One year Post P.G. Diploma in Nanotechnology shall be held once in a year only (i.e. summer) at such place and on such dates as may be decided by the University.

10. **Scheme of Examination:**

The Scheme of Examination shall be as per Appendix-A (Annual pattern). However, the scheme of Examination reflects the basic structure of theory and dissertation. The details/title of the theory paper can be suitably modified in future considering the need of the subject without disturbing the main structure.

11. **Dissertation / Project :**

The dissertation shall be assessed by the external examiner and project guide as internal examiner. However, final marks shall be awarded by external examiner. The dissertation examination shall be held separately.

12. The examination for Diploma shall consists of two theory papers of 100 marks each and a dissertation report with Viva-Voce of 200 marks. The examinations of the theory papers and dissertation will be conducted by Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur.

The three papers (2 Theory + 1 Dissertation) shall be as follows.

| | | |
|-----|------------------------------------|------------|
| (a) | Fundamentals of Nanotechnology | (120 Hrs.) |
| (b) | Applications of Nanotechnology | (120 Hrs.) |
| (c) | Dissertation report with Viva-Voce | (660 Hrs.) |

13. The scope of the papers and the dissertation work for the examination shall be as indicated in the syllabus.

14. In order to pass the examination, an examinee shall obtain not less than 35% marks in each of the papers including dissertation report as shown in Appendix – A.
15. An applicant for admission to the Post P.G. Diploma in Nanotechnology shall be required to conduct a field – study in nanotechnology research and submit a Dissertation report thereon under the supervisor recognized for the purpose and get the clearance certificate thereof for the work from the Head of the Institution/ Coordinator of the course and submit it to the University before appearing at the Examination.
16. Successful examinee obtaining 60% or more marks in the aggregate at both of the examination shall be placed in the First division and those obtaining less than 60% in the second division and those obtaining less than 45% marks of aggregate but not less than 35% of marks shall be placed in Third division.
17. An examinee who is unsuccessful at the examination will be eligible for admission to the next written examination on payment of fresh fees prescribed for the examination together with an ex-student fee as applicable and on compliance of the conditions of the ordinance enforced from time to time.
18. For being eligible for exemption in a paper, dissertation work, the candidate must have obtained not less than 35% of marks.
19. Provisions of Ordinance No. 3 of 2007 relating to the award of grace marks for passing an examination, securing higher division/class and for securing distinction in subject(s) and Ordinance No. 10 relating to the exemption and compartments shall apply to the examination under this Ordinance.
20. As soon as possible after the examination, but not later than 30th June, next following in case of examination held in April, the Management Council shall publish the list of successful examinees. The names of First Three examinees passing the examination with more than 60% marks in the minimum prescribed being arranged in order of merit.
21. Upon promulgation of this Ordinance, Direction No.16 of 2008 and shall stand repealed.

STATEMENT OF OBJECT & REASONS

The University Grants Commission, New Delhi has approved and recommended its financial assistance to various colleges of excellence to promote this programme under the UGC scheme of Innovative Programme- Teaching and Research in Interdisciplinary and Emerging areas under time bound programme and the same is mandatory to implement by all the universities under the jurisdiction of UGC by granting necessary affiliation to run this course at respective colleges or in broader terms if any colleges under the jurisdiction of the university desires to run the course by seeking any financial assistance from any apical body or at self sustainable level by following standard procedure of seeking new regular course to be started. Hence this Ordinance.

While implementing the provisions of this Ordinance, no financial implications are involved at the Government as well as university level as of now or in future and the same is in consonance with the orders of the State Government and guidelines of the University Grants Commission.

APPENDIX – A

Post P.G. Diploma (One year) in Nanotechnology

| Sr. No. | Papers | Maximum marks | Minimum marks | Aggregate pass marks |
|---------|---|---------------|---------------|----------------------|
| 1. | Paper-I (Fundamentals of Nanotechnology) | 100 | 35 | 140 |
| 2. | Paper-II (Applications of Nanotechnology) | 100 | 35 | |
| 3. | Paper-III (Dissertation report with Viva-Voce) Report ----- 150 Viva-Voce ----- 50 | 200 | 70 | |

***ORDINANCE NO. 10 OF 2010**

**AN ORDINANCE TO AMEND THE ORDINANCE NO. 143,
EXAMINATION LEADING TO THE DEGREE OF fokku Lukrd (BACHELOR OF SCIENCE) IN THE
FACULTY OF SCIENCE**

WHEREAS it is expedient to amend Ordinance No. 143, Examination leading to the degree of fokku Lukrd (Bachelor of Science), for the purposes hereinafter appearing; the Management Council is hereby pleased to make the following Ordinance;

1. This Ordinance may be called ‘ Examination leading to the degree of fokku Lukrd (Bachelor of Science) (Amendment) Ordinance, 2010.’
2. This Ordinance shall come in to force with effect from the date of its approval by the Management Council.
3. In sub para (iii) of para 7 of the main Ordinance No. 143, examination leading to the degree of fokku Lukrd (Bachelor of Science) after serial No. (46) the following groups of subject be added:
 - “(47) Geology, Chemistry, and Geography
 - (48) Geology, Mathematics, and Computer Science
 - (49) Mathematics, Physics, and Information Technology”

STATEMENT OF OBJECT AND REASONS

It was imperative to broaden the scope of the eligibility so as to facilitate the desirous and deserving applicant students to avail the opportunity in terms of their admission to the course the Academic Council on 13th Oct., 2008 vide item No. 170 & 180 considered & approved this amendment Ordinance.

While implementing the provisions of this Ordinance, no financial implications are involved at the Government as well as university level as of now or in future and is in consonance with the orders of the State Government and guidelines of the University Grants Commission.

Hence the amendment.

* Accepted by the Management Council on dt. 22nd March, 2010, vide item No. 16, under the draft Ordinance No. 10 of 2009

ORDINANCE NO. 11 OF 2010*ORDINANCE TO PROVIDE FOR EXAMINATION LEADING TO P.G. DIPLOMA IN SERICULTURE BIOTECHNOLOGY IN THE FACULTY OF SCIENCE**

Whereas it is expedient to provide for an Ordinance for the Examination leading to P.G. Diploma in Sericulture Biotechnology in the Faculty of Science, the Management Council is hereby pleased to make the following ordinance. :

1. This ordinance may be called "Examination leading to Post Graduate Diploma in Sericulture Biotechnology" in the Faculty of Science, Ordinance, 2010."
2. This ordinance shall come in to force with effect from the date of its approval by the Management Council.
3. The examination leading to the P.G. Diploma in Sericulture Biotechnology will be conducted by Rashtrasant Tukadoji Maharaj Nagpur University and shall be held annually at Centre for Sericulture and Biological Pest Management, Ambavihar on such dates as may be fixed by the Academic Council.
4. Subject to student's compliance with the provisions of this ordinance and of other ordinances in force from time to time, an applicant for admission to the examination shall have:-
 - i) Passed and obtained the B.Sc. Degree of Rashtrasant Tukadoji Maharaj Nagpur University or of any other statutory University equivalent thereto and have offered Zoology, Botany, Biochemistry, Microbiology, Biotechnology, Life Science, Environmental Science, Agriculture, Sericulture and Veterinary as one of the subjects at degree level.
 - ii) Prosecuted a regular course of study for the examination shall be of one academic year in the Centre for Sericulture and Biological Pest Management, Ambavihar.
5. Without prejudice to other provisions of Ordinance No. 6 relating to the Examinations in general, the provisions of 5,8,10,26, and 31 of the said Ordinance shall apply to every candidate.
6. The fee of the Examination shall be as prescribed by the University from time to time.

* Accepted by the Management Council on dt. 22nd March, 2010, vide item No. 17, under the draft Ordinance No. 11 of 2009

7. The Examination shall consist of Theory, Practical, and Project work.
8. The theory examination shall consist of the following two papers, each of three hours duration carrying 100 marks each viz.,

| | |
|----------|--|
| Paper-I | Biology of Silkworm, their host Plants and Silk Technology |
| Paper-II | Molecular Biology and Biotechnology |
9. Scope of the papers shall be as indicated in the syllabus and the medium of the instructions and the examination shall be in English only.
10. There shall be Practical Examination of 150 marks and Project work of 50 marks. The Practical and Project work will be examined by the External and Internal examiners appointed by the Rashtrasant Tukadoji Maharaj Nagpur University.
11. In order to pass the examination, an examinee must obtain not less than 35% marks separately in the theory, practical and Project work.
12. Successful examinee at the P.G. Diploma in Sericulture Biotechnology Examination who obtains not less than 60% of marks in aggregate shall be placed in First Division. Those who obtain less than 60% of marks in aggregate but not less than 45% shall be placed in Second Division and those obtain less than 45% marks of aggregate but not less than 35% of marks shall be placed in Third Division.
13.
 - i) An examinee who is unsuccessful at the examination shall be eligible for admission to the next written and practical examination on payment of current and other fees prescribed by the University from time to time.
 - ii) For being eligible for exemption in a paper or a practical or the project work, the candidate must have obtained not less than 35% marks in that paper or practical or project work.
 - iii) Provisions of Ordinance No. 3 of 2007 relating to the award of grace marks for passing an examination, securing higher division/class and for securing distinction in subject(s) and Ordinance No. 10 relating to the exemption and compartments shall apply to the examination under this Ordinance.
14. As soon as possible after the examination, but not later than 30th June, next following in case of examination held in April the Management Council shall publish the list of successful examinees. The names of the first three examinees passing the examination with more than 60% marks in the minimum prescribed period being arranged in order of merit.

15. Notwithstanding anything to the contrary in the ordinance, no person shall be admitted to this examination, if he/she has already passed this examination or an equivalent examination of any other statutory university.
16. Successful examinee shall be awarded Diploma in the prescribed form signed by the Vice-Chancellor of the University.

STATEMENT OF OBJECT AND REASONS

In order to incorporate a Post Graduate Diploma course in the speciality of Sericulture Biotechnology, which has a great bearing on the fulfillment of regional requirements, and affording greater employability, the Academic Council in its meeting held on 24th Sept., 2008 vide item No. 178 considered & approved the resolution. However, the matter needs to be governed by a Ordinance prescribed for the said purpose. Hence this Ordinance.

While implementing the provisions of this Ordinance, no financial implications are involved at the Government as well as university level as of now or in future and the same is in consonance with the orders of the State Government and guidelines of the University Grants Commission.

SCHEDULE OF PRACTICALS AND DISTRIBUTION OF MARKS

The Practical comprises of two parts:

| Part-I | (Marks) |
|--|----------------|
| Project work (Internal assessment) | 50 |
| Part-II | |
| Practical (12 hours duration) | 150 |
| Section A | |
| a) Dissection | (10) |
| b) Identify and comment on the spots (1-10) | (30) |
| c) Characteristics of mulberry, stomatal frequency of mulberry leaves/temporary preparation of mouth parts | (10) |
| d) Demonstration of reeling and production of silk yarn | (10) |
| Section B | |
| e) Biochemical Estimation of DNA/RNA/Protein | (15) |
| f) Electrophoresis separation of DNA/Protein | (30) |
| g) Counting and viability testing of cultural cells/microbes | (15) |
| h) Class Record | (20) |
| i) Viva-Voce | (10) |

ORDINANCE NO. 12 OF 2010*AN ORDINANCE TO AMEND THE ORDINANCE NO. 49****EXAMINATION LEADING TO THE DEGREE OF MASTER OF SCIENCE (AMENDMENT)
ORDINANCE, IN THE FACULTY OF SCIENCE**

WHEREAS it is expedient to amend the Ordinance No. 49, Examination leading to the degree of Master of Science in the Faculty of Science, for the purposes hereinafter appearing; the Management Council is hereby pleased to make the following Ordinance;

1. This Ordinance may be called ‘ Examination leading to the degree of Master of Science (Amendment) Ordinance, 2010.’
2. This Ordinance shall come in to force with effect from the date of its approval by the Management Council.
3. In para 3 (A) of the main Ordinance 49, the following sub para (o) after the sub para 3(A) (n) may be added.

“3.(A) (o) –

For admission to M.Sc. I Biochemistry course the candidate must have passed the B.Sc. examination with Biochemistry & Chemistry as the subjects,”

STATEMENT OF OBJECT AND REASONS

It was imperative to broaden the scope of the eligibility so as to facilitate the desirous and deserving applicant students to avail the opportunity in terms of their admission to the course the Academic Council 13th October, 2008 vide item No. 183 considered & approved this amendment Ordinance. Hence the amendment.

While implementing the provisions of this Ordinance, no financial implications are involved at the Government as well as university level as of now or in future and is in consonance with the orders of the State Government and guidelines of the University Grants Commission.

* Accepted by the Management Council on dt. 22nd March, 2010, vide item No. 18, under the draft Ordinance No. 12 of 2009

ORDINANCE NO. 13 OF 2010*AN ORDINANCE TO AMEND THE ORDINANCE NO. 20 OF 2003
EXAMINATION LEADING TO THE DEGREE OF MASTER OF HUMAN RIGHTS AND DUTIES
EDUCATION (MHRDE) IN THE FACULTY OF LAW**

Whereas it is expedient to amend Ordinance No. 20 of 2003, Examination leading to the degree of Master of Human Rights and Duties Education in the Faculty of Law, for the purposes hereinafter appearing; the Management Council is hereby pleased to make the following ordinance;

1. This ordinance may be called 'Examination leading to the degree of **Master of Arts in Human Rights Education (MHRDE)**, in the faculty of Law, (amendment) ordinance, 2009.
2. This ordinance shall come in to force with effect from the date of its approval by the management council.
3. In the main ordinance No. 20 of 2003, Examination leading to the degree of Master of Human Rights and Duties Education, the title of the course should be substituted with the following title-

“Master of Arts in Human Rights Education”**STATEMENT OF OBJECT & REASONS**

The Management Council in its meeting held on 4th April, 2009, vide item No. 70, has considered and approved the change in nomenclature of the course and referred it to the draft Ordinance Committee of Law Faculty to prepare the draft Ordinance. Accordingly the committee has prepared this draft ordinance for the consideration of concerned authority. Hence this amended Ordinance.

While implementing the provisions of this Ordinance, no financial implications are involved at the Government as well as University level as of now or in future and the same is in consonance with the guidelines of the University Grants Commission.

* Accepted by the Management Council on dt. 22nd March, 2010, vide item No. 19, under the draft Ordinance No. 13 of 2009

ORDINANCE NO. 14 OF 2010*AN ORDINANCE TO AMEND THE ORDINANCE NO. 19 OF 2003
EXAMINATION LEADING TO THE POST GRADUATE DIPLOMA IN HUMAN RIGHTS AND DUTIES
EDUCATION (PDHRDE) IN THE FACULTY OF LAW**

Whereas it is expedient to amend Ordinance No. 19 of 2003, Examination leading to the Post Graduate Diploma in Human Rights and Duties Education in the Faculty of Law, for the purposes hereinafter appearing; the Management Council is hereby pleased to make the following ordinance;

1. This ordinance may be called 'Examination leading to the Post Graduate Diploma in Human Rights and Duties Education (PDHRDE), in the Faculty of Law, (amendment) ordinance, 2010.
2. This ordinance shall come in to force with effect from the date of its approval by the management council.
3. In para 3 of the Main Ordinance No. 19 of 2003 i.e. Examination leading to the Post Graduate Diploma in Human Rights and Duties Education will be treated as 3(A) and one more clause will have to be added which will be 3(B) and which will read as:

"3(B) The course leading to the Examination shall be treated as an 'ADD-ON COURSE'. The candidates who are already pursuing any other course in Rashtrasant Tukadoji Maharaj Nagpur University, will be permitted to take this course along with their original course as an additional course."

4. Para 10 of Ordinance No. 20 of 2003 is completely deleted for the reason that it is contrary to the scheme of Add-on Course.

STATEMENT OF OBJECT & REASONS

The Post Graduate Diploma in Human Rights and Duties Education was introduced as regular course from the session 2003-2004 and its examination is also conducted. In view of the importance of the subject and the demand made by the student community it has been decided that this course shall be treated as an "Add on course" for graduates of any faculty, therefore the Ordinance is required to be amended and clause 3(B) accordingly has been added. The graduates who are already pursuing any course in Rashtrasant Tukadoji Maharaj Nagpur University will be permitted to take this course along with their original course as an additional course. Hence, the amendment Ordinance.

While implementing the provisions of this Ordinance, no financial implications are involved at the Government as well as university level as of now or in future and the same is in consonance with the guidelines of the University Grants Commission.

* Accepted by the Management Council on dt. 22nd March, 2010, vide item No. 20, under the draft Ordinance No. 14 of 2009

ORDINANCE NO. 15 OF 2010*AN ORDINANCE TO AMEND THE ORDINANCE NO. 32 OF 2008****ORDINANCE PRESCRIBING ELIGIBILITY CRITERIA AND PROCEDURE FOR REGISTRATION OF CANDIDATES, SELECTION OF GUIDES AND RESEARCH TOPICS, THESIS SUBMISSION AND ITS EVALUATION FOR THE DEGREE OF DOCTOR OF PHILOSOPHY IN THE FACULTY OF ARTS & SOCIAL SCIENCES.**

Whereas it is expedient to amend Ordinance no. 32 of 2008, Ordinance prescribing eligibility criteria and procedure for Registration of Candidates, Selection of Guides and Research Topics, Thesis submission and its evaluation for the Degree of Doctor of Philosophy in the Faculty of Arts & Social Sciences, for the purposes hereinafter appearing; the Management Council is hereby pleased to make the following Ordinance;

1. This ordinance may be called “Ordinance prescribing eligibility criteria and procedure for Registration of Candidates, Selection of Guides and Research Topics, Thesis submission and its evaluation for the Degree of Doctor of Philosophy in the Faculty of Social Sciences, (amendment) Ordinance, 2010.”
2. this ordinance shall come in to force with effect from the date of its approval by the management council.
3. In para 3 of the main Ordinance No. 32 of 2008, after provided eighthly following be added:-
 - “3. provided ninthly that the approved teachers in the subject of home economics under the social sciences faculty with m.sc. home science as qualification to their credit shall be eligible to register in the subject of home economics under the faculty of social sciences”.

STATEMENT OF OBJECT & REASONS

It was imperative to broaden the scope of the eligibility in order to facilitate the approved teachers in the Faculty of Social Sciences with post graduate qualification (M.Sc. Home Science) from the Faculty of Home Science to their credit, so that they could procure the doctoral degree in the Faculty of Social Sciences for augmentation of their academic career. Hence this amendment Ordinance.

While implementing the provisions of this Ordinance, no financial implications are involved at the Government as well as university level as of now or in future and the same is in consonance with the orders of the State Government and guidelines of the University Grants Commission.

* Accepted by the Management Council on dt. 22nd March, 2010, vide item No. 21, under the draft Ordinance No. 15 of 2009

ORDINANCE NO. 16 OF 2010*ORDINANCE TO PROVIDE FOR THE AWARD OF DEGREE OF DOCTOR OF LETTERS (D.Litt.)/DOCTOR OF SCIENCE (D.Sc.)**

Whereas it is expedient to provide for an Ordinance regarding the award of degree of Doctor of Letters (D.Litt.)/Doctor of Science (D.Sc.), the Management Council is hereby pleased to make the following Ordinance. :

1. This Ordinance may be called "Ordinance to provide for the award of degree of Doctor of Letters (D.Litt.)/Doctor of Science (D.Sc.), Ordinance. 2010".
2. This Ordinance shall come into force with effect from the date of its approval by the Management Council.
3. Subject to his/her compliance with the requirements of this Ordinance any person who:-
 - (a) has been admitted to the Ph.D. Degree of Rashtrasant Tukadoji Maharaj Nagpur University or a Degree recognized as equivalent thereto in the faculty mentioned in Column 3 of the Table, hereunder or Allied faculty;
 - OR
 - (b) has not less than 8 years previously having passed the Master's Degree in the Faculty mentioned in Column 3 of the Table hereunder, may submit his application for award of the corresponding Degree mentioned in the Table namely :-

| Name of the Degree | Marathi Equivalent | Corresponding Faculty |
|---|---------------------------|------------------------------|
| 1. Doctor of letters (D.Litt.) | okM%e; i@Mr | Arts |
| 2. Doctor of letters (D.Litt.) (S.Sc.) | l ekt fokku i@Mr | Social Science |
| 3. Doctor of letters (D.Litt.) (Com.) | okf.kT; i@Mr | Commerce |
| 4. Doctor of letters (D.Litt.) (Edn.) | f' k{k.k i@Mr | Education |
| 5. Doctor of Science (D.Sc.) | fokku i@Mr | Science |
| 6. Doctor of Science (D.Sc.) (Engg./Tech.) | vfhk; kf=dh o rka=dh i@Mr | Engg. & Tech. |
| 7. Doctor of Science (D.Sc.) (Medicine) | vk; fokku i@Mr | Medicine |
| 8. Doctor of Science (D.Sc.) (Home Science) | xgfoKku i@Mr | Home Science |

* Accepted by the Management Council on dt. 22nd March, 2010, vide item No. 23, under the draft Ordinance No. 17 of 2009

Provided that a person who holds Ph.D. Degree or the Master's Degree from a University other than Nagpur shall have resided within the jurisdiction of the University for not less than 3 years immediately preceding the date on which he submits his treatise(s) for the Degree of Doctor of Letters or Science, as the case may be.

However a person possessing a domicile of the region in the jurisdiction of Rashtrasant Tukadoji Maharaj Nagpur University and who has gone out of the jurisdiction of Rashtrasant Tukadoji Maharaj Nagpur University for the purpose of profession or service shall not be required to fulfill the condition of residence for atleast 3 years within the jurisdiction of the University before submitting his treatise for the Degree of Doctor of Letter or Doctor of Science, as the case may be.

4. Every candidate for the Degree shall submit Treatise(s), which should be his/her original contribution to the advancement of learning. The Treatise(s) may either be printed or typewritten or in clear legible handwriting.
5. Every candidate for the Degree shall submit a written application to the Controller of Examination on the prescribed form. His application shall be accompanied by such fee as will be prescribed by the university from time to time.
6. The candidate shall submit to the Controller of Examination four copies of the Treatise(s) stating its title and clearly indicate the portions of each of which he claims to be original. In case the Treatise(s) includes any part of his thesis which may have been submitted earlier for the award of the Ph.D. Degree or any other Research Degree, he shall clearly so indicate. In case the Treatise(s) is an advancement in learning over the previous work submitted by him, he shall specifically indicate accordingly. He shall also indicate the Research & Recognition Committee of the University to which the Treatise(s) pertains and shall submit a signed declaration that the Treatise(s) submitted is not substantially the same as the one which he has already submitted to this University or any other University for the award of the D.Litt./D.Sc. or any other Degree.
7.
 - (i) On fulfillment of the conditions laid down in clauses 2 to 5, the Treatise(s) shall be placed before the Research & Recognition Committee of the Board of Studies concerned.
 - (ii) The Research & Recognition Committee may co-opt an expert in the subject to which the Treatise pertains; if need be.
 - (iii) The Committee shall report to the BUTR if in its judgment the Treatise is of sufficient merit to justify its reference to the examiners;

- (iv) On receipt of recommendations from the BUTR the Research & Recognition Committee shall submit a panel of not less than six examiners in alphabetical manner along with the full address for correspondence.

Provided that the panel shall be recommended in such fashion so as to include at least two Examiners within the state, at least two Examiners outside the state and at least two Examiners outside India as far as possible.

Provided further that if the Examiners, outside India, are not available, the panel shall be recommended so as to have minimum two Examiners within state and four examiners outside the State of Maharashtra.

- (v) The panel recommended by the Research & Recognition Committee will be placed before the committee, appointed under section 32(5) of the Act and the said committee shall recommend the name of the Examiners in order of preference category-wise for being finally approved and appointed by the Board of Examinations.

Provided that it shall be ensured that the three Examiners are from the categories namely:-

- (i) One within the State of Maharashtra;
- (ii) One from outside the State of Maharashtra, and
- (iii) One from outside the India as far as possible.

Provided further that in the event in the examiners outside India are not included in the panel, two Examiners shall be appointed from outside the State of Maharashtra.

8. (i) Officer of the D.Litt./D.Sc. Section shall inform the Examiners by Registered post about their appointment(s) alongwith copy of summery of Treatise and request for sending the consent in the prescribed format, in any case within a period of 30 days from the date of receipt of the communication.
- (ii) In the event the consent in writing from the Examiners is not received within the prescribed period of 30 days the officer shall send a reminder letter for the letter of consent granting the grace period of 15 days.

- (iii) In the event despite the reminder letter the consent is not received from concerned Examiners the officer after obtaining the orders from the Vice-Chancellor shall issue the letter to the next Examiner of the concerned category and shall simultaneously inform the earlier examiner that his nomination be treated as cancelled.
- 9.
- (i) After receipt of the consent from the examiners, the Treatise of the candidate shall be forwarded by the officer of the D.Litt./D.Sc. section to the concerned Examiners within a period of 15 days from the date of receipt of the consent letters along with the copy of this Ordinance as well as the necessary forms for forwarding his evaluation report.
 - (ii) The concerned examiners shall evaluate the Treatise and forward their detailed evaluation report to the university within a period of three months from the date of receipt of the Treatise.
 - (iii) In the event the evaluation report is not so received within the prescribed period the officer of D.Litt./D.Sc. section shall send a reminder letter to the Examiner requesting him to forward his/her report within the grace period of one month.
 - (iv) If the Examiners fail to forward the evaluation report within the grace period of one month the final letter shall be issued to the Examiners requesting him/her to forward the evaluation report in any case within 15 days form the date of receipt of the second reminder letter.
 - (v) If the Examiners fail to forward their evaluation report before the expiry of the ultimately extended period, the officer of the D.Litt./D.Sc. section shall after obtaining the permission from the Vice-Chancellor send a letter to the next Examiner in the panel of that category for sending his/her consent and shall follow the above procedure. The officer shall also simultaneously communicate to the earlier Examiner that his/her nomination as Examiner be treated as cancelled.
 - (vi) The evaluation reports received from all the three Examiners shall be opened simultaneously in presence of the Controller of Examinations and the Pro Vice-Chancellor and shall be processed further as per as the provisions of following paras.

10. (a) The candidate shall be declared eligible for appearing in open viva-voce test if all three Examiners or at least two Examiners recommend the acceptance of the Treatise.
 - (b) If by majority the Treatise is not approved by the examiners then the candidate shall be held to be not eligible for award of D.Litt./D.Sc. degree.
 - (c) If majority of the Examiners recommend revision of the Treatise then the candidate shall submit revised Treatise (five copies) within 12 months from the date of the communication by the officer, D.Litt./D.Sc. section and the revised Treatise then shall be sent to all three original examiners and be subjected to the process of evaluation and conduct of viva-voce shall be as follows:
 - (i) The officer of the university, in consultation with the examiners, shall fix the date of open viva-voce and shall communicate the date to the examinee, and examiners belonging to the State Maharashtra and outside State Maharashtra.
 - (ii) In the event all the examiners express their difficulty to attend the viva-voce on the date so fixed the revised date shall be fixed by the officer within next 30 days.
 - (iii) If one of the examiners is not in a position to attend the viva, he shall be required to forward the quarries in writing to the officer of D.Litt./D.Sc. section, who shall hand over them to the other examiner and the viva shall be conducted by one / two examiners in that event by taking into consideration the Queries.
 - (iv) The examiners attending open viva-voce shall submit their report immediately on the completion of the same.
-
11. (i) The officer of the D.Litt./D/Sc. Section shall place the original reports as well as viva-voce report for acceptance before the Board of Examinations within 15 days from the date of receipt of the viva-voce report.

- (ii) After acceptance of the report by the Board of Examinations **or on** behalf of Board of Examination by the Hon'ble Vice-Chancellor in terms of the provision under section 32(4) of the Act, the officer of the D.Litt./D.Sc. Section shall issue the notification declaring the candidate eligible for award of D.Litt./D.Sc. degree within 15 days from the date of acceptance as above.
12. The D.Litt./D.Sc. degree shall be conferred on the candidate in the ensuing convocation of the university.
13. Upon the issuance of this Ordinance, Direction No. 3 of 2009 shall stand repealed.

STATEMENT OF OBJECT & REASONS

The Secretary to the Hon'ble Chancellor had intimated that the Ordinance governing the Conferment of D.Litt. degree must be free from the ambiguities, if any. For the time being the matter was regulated through issuance of Direction No. 3 of 2009, but as the matter is required to be governed by an appropriate Ordinance prescribed for the said purpose, hence this Ordinance.

While implementing the provisions of this Ordinance, no financial implications are involved at the Government as well as university level as of now or in future and the same is in consonance with the orders of the State Government & University Grants Commission.

ORDINANCE NO. 17 OF 2010*AN ORDINANCE TO AMEND THE ORDINANCE NO. 6 OF 2003
EXAMINATION LEADING TO THE DEGREE OF BACHELOR OF
TEXTILE SCIENCE, (B.T.S.) IN THE FACULTY OF HOME SCIENCE**

Whereas it is expedient to amend Ordinance No. 6 of 2003 Examination leading to the degree of Bachelor of Textile Science, (B.T.S.) in the Faculty of Home Science, for the purposes hereinafter appearing; the management council is hereby pleased to make the following ordinance;

1. This Ordinance may be called 'Examination leading to the degree of Bachelor of Textile Science, (B.T.S.) in the Faculty of Home Science, (amendment) Ordinance, 2010.
2. this ordinance shall come in to force with effect from the date of its approval by the Management Council.
3. in para 5 of the main ordinance no. 6 of 2003, after sub para d), following para shall be added :

“5. e)

Provided that 1st year being common for B.T.S., B.F.D. & B.P.D. the students should be permitted to change their branch in 2nd year provided the seats are vacant in that particular branch. It should not exceed the intake capacity permitted to the respective branch.”

STATEMENT OF OBJECT & REASONS

The Management Council in its meeting held on 4th April, 2009, vide item No. 81, has considered and approved the common resolution recommended by the Board of Studies and draft Ordinance Committee of Home Science Faculty to prepare the draft Ordinance. Hence this amended Ordinance.

While implementing the provisions of this Ordinance, no financial implications are involved at the Government as well as university level as of now or in future and the same is in consonance with the guidelines of the University Grants Commission.

* Accepted by the Management Council on dt. 22nd March, 2010, vide item No. 24, under the draft Ordinance No. 18 of 2009

ORDINANCE NO. 18 OF 2010*AN ORDINANCE TO AMEND THE ORDINANCE NO. 7 OF 2003****EXAMINATION LEADING TO THE DEGREE OF BACHELOR OF PRINTING DESIGN, (B.P.D.) IN THE FACULTY OF HOME SCIENCE**

Whereas it is expedient to amend Ordinance No. 7 of 2003 Examination leading to the degree of Bachelor of Printing Design, (B.P.D.) in the Faculty of Home Science, for the purposes hereinafter appearing; the Management Council is hereby pleased to make the following Ordinance;

1. This ordinance may be called 'Examination leading to the degree of Bachelor of Printing Design, (B.P.D.) in the Faculty of Home Science, (amendment) Ordinance, 2010.
2. This ordinance shall come in to force with effect from the date of its approval by the Management Council.
3. In para 5 of the main ordinance no. 7 of 2003, after sub para c), following para shall be added :
"5. d)
Provided that 1st year being common for B.T.S., B.F.D. & B.P.D. the students should be permitted to change their branch in 2nd year provided the seats are vacant in that particular branch. It should not exceed the intake capacity permitted to the respective branch."

STATEMENT OF OBJECT & REASONS

The Management Council in its meeting held on 4th April, 2009, vide item No. 81, has considered and approved the common resolution recommended by the Board of Studies and draft Ordinance Committee of Home Science Faculty to prepare the draft Ordinance. Hence this amended Ordinance.

While implementing the provisions of this Ordinance, no financial implications are involved at the Government as well as university level as of now or in future and the same is in consonance with the guidelines of the University Grants Commission.

* Accepted by the Management Council on dt. 22nd March, 2010, vide item No. 25, under the draft Ordinance No. 19 of 2009

ORDINANCE NO. 19 OF 2010*AN ORDINANCE TO AMEND THE ORDINANCE NO. 8 OF 2003****EXAMINATION LEADING TO THE DEGREE OF BACHELOR OF FASHION DESIGN, (B.F.D.) IN THE FACULTY OF HOME SCIENCE**

Whereas it is expedient to amend Ordinance No. 8 of 2003 Examination leading to the degree of Bachelor of Fashion Design, (B.F.D.) in the Faculty of Home Science, for the purposes hereinafter appearing; the Management Council is hereby pleased to make the following ordinance;

1. This Ordinance may be called 'Examination leading to the degree of Bachelor of Fashion Design, (B.F.D.) in the Faculty of Home Science, (amendment) Ordinance, 2010.
2. This ordinance shall come in to force with effect from the date of its approval by the Management Council.
3. In para 3 of the main ordinance no. 8 of 2003, after sub para c), following para shall be added :

“5. d)

Provided that 1st year being common for B.T.S., B.F.D. & B.P.D. the students should be permitted to change their branch in 2nd year provided the seats are vacant in that particular branch. It should not exceed the intake capacity permitted to the respective branch.”

STATEMENT OF OBJECT & REASONS

The Management Council in its meeting held on 4th April, 2009, vide item No. 81, has considered and approved the common resolution recommended by the Board of Studies and draft Ordinance Committee of Home Science Faculty to prepare the draft Ordinance. Hence this amended Ordinance.

While implementing the provisions of this Ordinance, no financial implications are involved at the Government as well as university level as of now or in future and the same is in consonance with the guidelines of the University Grants Commission.

* Accepted by the Management Council on dt. 22nd March, 2010, vide item No. 26, under the draft Ordinance No. 20 of 2009

ORDINANCE NO. 20 OF 2010*AN ORDINANCE TO AMEND ORDINANCE NO. 24
COLLEGE CODE**

Whereas, it is expedient to amend Ordinance No.24 i.e. "The College Code", for the purposes hereinafter appearing the Management Council is hereby pleased to make the following Ordinance :-

1. This Ordinance may be called "The College Code, (Amendment) Ordinance, 2010.
2. This Ordinance shall come into force with effect from the date of its approval by the Management Council.
3. In sub para (a) of para 48.(1) of the main Ordinance no. 24, the College Code, be substituted by the following –

"48.(1)

(a) Casual leave of not less than eight days during an academic year; "

STATEMENT OF OBJECT & REASONS

As decided by the Higher and Technical Education Department, Mumbai, vide Government Resolution No. संकीर्ण २००८/(०८-अ/०८)/विशि-अर्थ, dated 11th May, 2009 and the Management Council in its meeting held on 31st Oct., 2009 vide item No. 179 having considered and approved the same, hence this Ordinance.

This Ordinance strictly adheres to present policy and orders of the State Government. While implementing the provisions of this Ordinance, no financial implications are involved at the Government as well as university level as of now or in future.

* Accepted by the Management Council on dt. 22nd March, 2010, vide item No. 27, under the draft Ordinance No. 23 of 2009

ORDINANCE NO. 21 OF 2010*AN ORDINANCE TO AMEND ORDINANCE NO. 122
NAGPUR UNIVERSITY TEACHERS' SERVICE & CONDITIONS OF EMPLOYMENT ORDINANCE,
1972**

Whereas, it is expedient to amend Ordinance No.122 i.e. "Nagpur University Teachers' Service & Conditions of Employment Ordinance, 1972", for the purposes hereinafter appearing the Management Council is hereby pleased to make the following Ordinance :-

1. This Ordinance may be called "Nagpur University Teachers' Service and Conditions of Employment Ordinance, 1972, (Amendment) Ordinance, 2010.
2. This Ordinance shall come into force with effect from the date of its approval by the Management Council.
4. In para (i), (ii), (iv) & (vi) of Appendix C of the main Ordinance no. 122, Nagpur University Teachers' Service and Conditions of Employment Ordinance, 1972, Leave Rules for University Teachers, Casual Leave, be substituted by the following –

"Appendix-C,

- (i) Every full time/part time teacher shall be entitled for 8 days casual leave in a calendar year.
- (ii) Casual leave may be taken in one or more instalments subject to a maximum of 4 days at a time as the teacher may desire.
- (iv) Casual leave may be prefixed or suffixed with Sunday or University Holidays, but the total period of absence including the holidays shall not exceed 8 days.
- (vi) A teacher shall be allowed to avail casual leave in such proportion of 8 days commensurate with the period of duty rendered by him during the calendar year.

STATEMENT OF OBJECT & REASONS

As decided by the Higher and Technical Education Department, Mumbai, vide Government Resolution No. 1011/2008/(08-अ/08)/विशि-अर्थ, dated 11th May, 2009 and the Management Council in its meeting held on 31st Oct., 2009 vide item No. 179 having considered and approved the same, hence this Ordinance.

This Ordinance strictly adheres to present policy and orders of the State Government. While implementing the provisions of this Ordinance, no financial implications are involved at the Government as well as university level as of now or in future.

*** Accepted by the Management Council on dt. 22nd March, 2010, vide item No. 28, under the draft Ordinance No. 24 of 2009**

ORDINANCE NO. 22 OF 2010*ORDINANCE TO PROVIDE FOR EXAMINATION LEADING TO THE DEGREE OF BACHELOR OF EDUCATION IN THE FACULTY OF EDUCATION**

Whereas it is expedient to provide for an ordinance relating to examination leading to the Degree of Bachelor of Education, in the Faculty of Education, the Management Council is hereby pleased to make the following ordinance :-

1. This ordinance may called "Examination leading to the Degree of Bachelor of Education, Ordinance, 2010".
2. This ordinance shall come into force with effect from the date of its approval by the Management Council.
3. The Examination leading to the degree of Bachelor Education (शिक्षण स्नातक) shall be held annually at such places and on such dates as may be fixed by the Academic council
 Provided that the examination shall also be held in October/November of every academic year only for the theory part of the examination, subject to there being a minimum of ten candidates for admission to the examination.
4. Subject to this compliance with the provision of this ordinance in force from time to time, an applicant for admission to the examination shall have-
 - (i) been admitted to the Bachelor Degree of the University or a degree of any other statutory University recognized and equivalent thereto, and
 - (ii) Prosecuted in an affiliated college a regular course of study for a period of not less than one academic year.
5. The fees, for the examination, shall be prescribed by the Management Council from time to time and whenever any change is made in the fees prescribed for any particular examination that should be notified through a notification for information of the examinees concerned.
6. The medium of instruction shall be strictly followed as per the admission in the concerning college.

* Accepted by the Management Council on dt. 22nd March, 2010, vide item No. 29, under the draft Ordinance No. 6 of 2009

7.
 - a) During the practice-teaching programme the last lesson of the relevant subject shall be the Final lesson of the practical examination. Each final lesson carries 50 marks out of which 10 marks kept for the final lesson record book certified by the External examiner.
 - b) All the lessons taken by the students in the allotted school must be certified by the Headmaster / Supervisor of the school.
 - c) The final lesson programme shall be conducted in the month of September/October adjacent to the practice teaching programme therefore the external and the internal examiner shall be appointed in the month of July/August.

8. **Eligibility for Admission :-**

A candidate should have passed the Bachelor's Degree of Rashtrasant Tukadoji Maharaj Nagpur University or of any other University recognized by this University, with at least 45% marks either in Bachelor Degree (U.G.) and/or the Master's degree level (P.G.) and should have offered two school subjects at first degree level as principle or subsidiary or allied or optional subject.

(School subject means the subject included in the syllabus of Secondary/ Higher Secondary level in the Maharashtra State). Relaxation of 5% marks will be given to the candidates belonging to SC and ST and other notified categories as per Government rules.

(i) **Selection Procedure:-**

Admission to the eligible candidates shall be given to the candidates as per the selection procedure laid down by the State Government of Maharashtra from time to time. The candidate from the other University must obtain the eligibility before taking an admission in the B.Ed. course. The degree of any other University other than Rashtrasant Tukadoji Maharaj Nagpur University must be equivalent to the Rashtrasant Tukadoji Maharaj Nagpur University.

(ii) **Eligibility Norms for appearing at B.Ed. Examination :-**

A student shall attend 80 percent of the lectures delivered in each subject of the course of instructions for the examination and also in practical work. A deficiency of attendance at lectures or practicals to the extent of 15% may be condoned by the Principal on being satisfied that the same deficiency in attendance was due to circumstances beyond the control of the student. In no case shall the deficiency above 15% be condoned. The Principal shall submit to the Registrar two weeks before the commencement of the University Examination, a list of student whose deficiency is condoned by him.

(iii) Casual Admission:

If a candidate fails in practical examination and/or have not completed any essential part of the continuous Internal Assessment can take casual admission to B.Ed. Course in order to complete the remaining work.

(iv) Fee Structure:

The student taking casual admission with pay Rs. 10.000/- (Rs. Ten Thousand) to the concerned colleges towards fees for guidance, supervision and practicals.

9. Evaluation :-

A candidate appearing for B.Ed. course will be evaluated for Degree of "Bachelor of Education" (B.Ed.) in the manner given below.

The examination shall consist of three parts namely :-

| | | |
|-----------------|---|--|
| Part-I | Theory | 600 marks total 06 papers |
| | | 4- core subjects |
| | | 1- methodology of teaching special subject (2 methods 50 Marks for each Method) |
| | | 1- Elective subject |
| Part-II | Practical Examination | ___ 100 Marks |
| Part-III | Continuous Internal Assessment (Grading system) | ___ 400 Marks |

Internal assessment will be done by the college. For the assessment the college will give grades and will submit it to the University. The University will include the grades in the final assessment format.

The system of Grading will be as follows:-

| | | |
|-------------|---|------------|
| 75% & above | - | 'O' Grade |
| 65% to 74% | - | 'A' Grade |
| 55% to 64% | - | 'B+' Grade |
| 50% to 54% | - | 'B' Grade |
| 40% to 49% | - | 'C' Grade |
| 30% to 39% | - | 'D' Grade |
| Below 30% | - | 'E' Grade |

10. Medium of Instruction :

- i) The candidate appearing for B.Ed. examination shall have to opt same medium of instruction for answering all the theory papers in which he/she admitted in the curriculum.
- ii) The Examination for Part-I will be taken after two terms attendance at the college of Education and completing all practical work expected in syllabus.
- iii) A candidate for the Examination in Part-I,II,III or all part must apply to the Registrar by the date prescribed by the University each year with the certificate through the Head of the institute in which he/she has received training.
- iv) Those students who have taken admission in B. Ed. Colleges in English medium, they shall give the examination in English medium only but the students who have taken admission in Marathi or Hindi medium Colleges they can give the examination in any one of the medium of English, Marathi or Hindi and the same be mentioned in their examination application form and Mark-sheets.

11. Norms for passing B.Ed. Examination :

- (i) The examinee obtain not less than 50% marks in each of the Six papers and not less than 50% marks of aggregate marks in the part one as a whole.
- (ii) The examinee shall obtain not less than 50% marks in each of the lessons of the practical examination consisting of two lessons in subjects offered for paper V of part-I.
- (iii) The examinee shall obtain not less than 50% marks /Grade "B" in aggregate of part-III (Continuous internal assessment) as a whole.
- (iv) To pass the examination in "First class with Distinction," candidate must appear at once and the same time for all the courses of Part-I, an obtain at least 65% marks in each head of passing with aggregate 70% marks in Part-I, Part-II, and grade 'O' in each part of Part-III.
- (v) To pass the examination in "First Class" candidate must appear at once and the same time for all the seven **six** subjects of Part-I, and obtain at least 55% marks in each head of passing with aggregate 60% marks in Part-I, Part-II, and grade 'A" in each activities or Part-III.

- (vi) To pass the examination in “Second division with B+” candidate must appear at once and the same time for all the courses of Part-I, Part-II and Part-III and obtain at least 50% marks in each head of passing with aggregate 55% marks in Part-I and grade ‘B+’ in each activities of Part-III.
- (vii) All other remaining candidates who have passed examination will be declared as passed in “Second Division’.
- (viii) To pass the whole examination a candidate must pass in all the three parts separately.
- (ix) The candidates who have obtained minimum 50% or more marks in any head of passing but failed the examination shall be eligible to claim exemption in such head/heads. Candidates claiming exemption will not be eligible for first class with Distinction, first class higher second class and merit list.
- (x) Every candidate shall offer any two optional subjects as methods from the following subjects which he/she has offered for his/her graduation examination provided that the subjects are taught at high school and junior college level.

- | | |
|-----------------|---------------|
| 1. Marathi | 9. Hindi |
| 2. English | 10. Sanskrit |
| 3. Mathematics | 11. Chemistry |
| 4. Physics | 12. Biology |
| 5. Home Science | 13. History |
| 6. Geography | 14. Economics |
| 7. Commerce | 15. Music |
| 8. Civics | 16. Pali |
| | 17. Urdu |

- (xi) The groups of the subject shall as indicated in the syllabus.
- (xii) The performance in Part-III i.e. Continuous Internal assessment shall be judged by sessional work during the course of training, Internal assessment of the examinees shall be submitted to the Asstt. Registrar (Exam.) at least one week prior to the date of commencement of the theory examination in tabulated form showing obtained marks under different Heads by the concerning college Principal.
- (xiii) The Principal shall not forward the application form for admission to the examination of a candidate under training who fails or absent himself in the sessional work.

- (xiv) An examinee failing in Part-II of the examination shall be eligible to appear at the annual examination as an ex-students. He shall be examined in practical of two lessons. On being successful he shall be awarded division as per rules on the basis of his fresh marks in the practical examination and the marks obtained by him in Part-I & III.
- (xv) An examinee in a theory paper in Part-I examination shall be permitted to appear in the same paper at a subsequent examination as an ex-student on being successful, he shall be awarded division as per rules.
- (xvi) The examinee failing in Part-I & II shall be eligible to appear at the examination on being successful, he shall be awarded division as per rules, taking into consideration the marks obtained by him and the grades in Part-III when he appeared for the first time.
- (xvii) Provisions of Ordinance No. 3 of 2007 relating to the award of grace marks for passing an examination securing higher division/class and for securing distinction in subject(s) as updated from time to time shall apply to the examinations under this Ordinance.
- (xviii) As soon as possible after the examination but not later than 30 June, next following, in the case of the annual examination, the Management Council shall publish a list of successful examinees arranged in three divisions. The names of examinees passing examination as a whole in the minimum prescribed period and obtaining the prescribed numbers of places in the first, or Second division shall be arranged on Order of Merit as provided in the examination in General Ordinance No. 6.
- (xix) Notwithstanding any to the contrary in this Ordinance no person shall be admitted to this examination, if he has already passed in the examination or an equivalent examination of any other Statutory University.
- (xx) As examinee successful at the examination shall, on payment of prescribed fees, receive a degree in the prescribed form signed by Vice-Chancellor.

12. **Record to be kept by the Students:-**

- (i) Diary of daily attendance, work and participation in activities.
- (ii) Lesson notes of micro-lessons, integrated lesson, classroom lessons & simulated micro – lesson plan along with remarks of observed.
- (iii) Detailed reports of observed lessons.

- (iv) Reports of practical work in connection with theory papers.
- (v) And all the activities of an internal college programmes.

13. **General Objectives of the B.Ed. Course:-
To Enable the Students Teacher:-**

- (i) To act as agents of modernization and Social change.
- (ii) To become competent and committed professionals willing to perform the identified tasks.
- (iii) To use competencies and skills needed for becoming an effective teacher.
- (iv) To be sensitive student teacher about emerging issues such as environment population, gender equality, legal literacy etc.
- (v) To inculcate rational thinking and scientific temper among the students.
- (vi) To promote capabilities for inculcating national values.

14. **B.Ed. in Special Methodology Subject:-**

1. Subject to the compliance with the provision of this ordinance and the other ordinances in force from time to time any teacher candidate offering an additional subject in special methods paper at the examination: provided he/she has passed the Post Graduate examination in that particular subject.
2. A recognized teacher means recognized by the Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur and serving in the College of Education Conducted & Affiliated to the Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur.
3. A teacher candidate means a person serving as a teacher in any recognized Secondary School or Higher Secondary School.

15. **Marking System:**

1. **Theory part:** A teacher candidate shall complete 10 Assignments in that subject. These assignments shall be approved by the Principal/Headmaster of the Institution where the recognized teacher serves.

2. **Practice Teaching:** A teacher candidate shall take 20 lessons out of which 10 will be global and 06 will be Micro based on teaching skills and 04 lesson are computer assisted lessons in a recognized school or a higher secondary school in that subject and shall submit there lessons to the Principal/ Headmaster for his/her approval.
 3. A teacher candidate shall observed 10 lessons in that subject.
 4. **Internal Assessment:** The Internal Assessment of the teacher candidate shall be submitted to the Registrar through the Principal of the college.
16. **Practical Examination:** A teacher candidate shall appear as a private candidate in that additional method through the Principal of the concerned college of Education.

DISTRIBUTION OF MARKS

- | | | | |
|----|---|----|------------|
| 1. | Theory | 50 | Marks |
| 2. | Practical | 50 | Marks |
| 3. | Internal assessment (to be assess by the Principal in the following manner):- | | |
| | (i) 10 Assignments | | -----Grade |
| | (ii) Practice Teaching and Observation | | -----Grade |
| | (iii) A Model or a Book Project | | -----Grade |
| | (iv) Chart or a Map | | -----Grade |

The examination fee in the additional method shall be as applicable to the B.Ed Examination. Provided further, that on his passing the examination in an additional method prescribed, a certificate of having passed the B.Ed. examination in an additional method shall be granted to him/her.

17. Upon promulgation of this Ordinance, Ordinance No. 9 of 2005 shall stand repealed.

STATEMENT OF OBJECT & REASONS

It is necessary to restructure the scheme of B.Ed. examination in the light of the guidelines received from the U.G.C. in the from of Model curriculum.

While implementing the provisions of this Ordinance, no financial implications are involved at the Government as well as university level as of now or in future and the same is in consonance with the orders of the State Government and guidelines of the University Grants Commission.

Hence this Ordinance.

APPENDIX-A
Scheme of Examination for the Degree of (शिक्षण स्नातक)
(Bachelor of Education)

| Part -I Theory Papers | | |
|--|-----|---------------------------------------|
| Papers | No. | Marks |
| Core Papers Paper I : Education in Emerging Indian Society. Paper II : Development of learner and Teaching- Learning Process Paper III : Essentials of Educational Technology and Evaluation Paper IV : Development of Educational System in India & Foundation of school practices | 4 | 100 x 4 =400 |
| <u>Optional Papers</u> Paper V : Methods of Teaching Special Subject (any two of the following 50 marks each) 1. Marathi 10. History 2. Hindi 11. Geography 3. English 12. Economics 4. Sanskrit 13. Commerce 5. Mathematics 14. Music 6. Chemistry 15. Urdu 7. Physics 16. Pali 8. Biology 17. Civics 9. Home Science (School Teaching Subjects) | 1 | 100 x 1=100 |
| Paper-VI: Elective Paper (Any One) 1) Population Education. 2) Environmental Education 3) Alternative Education 4) Educational Administration and Management 5) Career information in career guidance. 6) Value Education | 1 | 100 x 1=100 |
| Part -II Practical Examination on two methods offered for paper – V of 50 marks each | | 100 |
| Total | | 700 |
| Part - III Continuous Internal Assessment (Grading System) | | Grade “O” to “E” as per evaluation |

Duration : One Academic Year.

- a. B.Ed. programme shall be of a duration of at least one academic year with two terms.

Working days:

- a. There shall be at least 180 working days exclusive of period of examination and admission etc.
- b. A working day shall be of a minimum of 6 hours in a six day week during which physical presence in the institution of teachers and student-teachers is necessary to ensure their availability for individual advice, guidance, dialogues and consultation as and when needed.

PRACTICE TEACHING:

- a. Practice teaching will be organized on two or three days per week through a cycle of “Practice Feedback Practice” or as per the need of the college and availability of the practice teaching schools; leading to near mastery of various teaching skills.
Total 40 lessons (30 lessons = 15 of each method + 06 simulated lessons 03 of each method + 04 Computer assisted lesson plan 02 of each method)
- b. Observation by peers and teachers.

WEIGHTAGE:

| | Marks | |
|---|--------------|-----|
| Part I – Theory: (External Examination) | | |
| Core (4) | 400 | |
| Method (2) | 100 | |
| Specialization (1) | 100 | |
| Part II – Practical Examination (Final Lessons) :(100 Marks) | | |
| Part III – Continuous Internal Assessment (Grading system) | | |
| a) Field based experiences (200 Marks) | | |
| Classroom Teaching | | |
| a. 15 Lessons of each method carrying 2 marks for each lessons. | (60 Marks) | |
| b. 5 Microteaching lessons (5 skills) of each method | (20 Marks) | |
| 01 Simulated Micro Lessons of each method | (20 Marks) | |
| Computer assisted lesson plan 01 of each method | (20 Marks) | c. |
| Workshop in content cum methodology (One lesson of each method) | (20 Marks) | |
| d. Observation. | | |
| During practice teaching, the student will have to observe 10 lessons of each method. | 20 | |
| e) Psychology Experiments (5 Experiments) | 20 | |
| f) Terminal Examinations (Two) | 20 | Ten |
| marks to each examination. | | |

b) Assignments : (70 Marks)

- i) Weekly written work based on **in all** 7 theory papers total 5 of each theory paper.

c) Community Work: (50 Marks)

- i) The community work will be based on the following aspects covered by arranging an educational tour (one-day Camp) Community work with special focus on educating dropouts, non-starters and adult illiterates @ 3 to 5 individuals to be educated by each B.Ed. Trainee.
- ii) a. Social Work
b. Hygiene awareness
c. Arranging lectures of eminent persons
d. Adult education.
e. Scientific Attitude

These programmes will be treated to elective (Special) papers.

- iii) S.U.P.W./ Work experience (One activity)

The activity of work-experience / SUPW will be related to school level syllabus prescribed by Secondary School Board. (only one activity). Grade will be allotted after submission of record of the activity.

d) Co-curricular activities (80 Marks)

In co-curricular activities following activities should be performed.

- i) **Literary Activities:** 10
Debate, Celebration of day, symposia, Essay
Competitions, quiz contest, elocution etc.
- ii) **Cultural activities:** 20
Dance, Drama, Stage demonstration, songs,,
Group songs, vocal instrumental etc.
- iii) **Games and Sports:** 10
Sports, field events etc.
- iv) **Academic Activities** (chart and models based on the method
subject): 20(10+10)
Intellectual activities / Seminar
- v) **Punctuality:** 20

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ORDINANCE NO. 23 OF 2010*AN ORDINANCE TO AMEND THE ORDINANCE NO. 11 OF 2006****ORDINANCE GOVERNING EXAMINATIONS LEADING TO THE BACHELOR OF SCIENCE (HOME SCIENCE) IN THE FACULTY OF HOME SCIENCE**

Whereas it is expedient to amend Ordinance No. 11 of 2006, Ordinance governing Examinations leading to the Bachelor of Science (Home Science) in the Faculty of Home Science, for the purposes hereinafter appearing; the Management Council is hereby pleased to make the following Ordinance;

1. This ordinance may be called, "Ordinance governing Examinations leading to the Bachelor of Science (Home Science) in the Faculty of Home Science, (amendment) Ordinance, 2010.
2. This Ordinance shall come in to force with effect from the date of its approval by the Management Council.
3. Para 9, 10, 11, & 19 of the main Ordinance No. 11 of 2006, Examination leading to the Bachelor of Science (Home Science), shall be deleted.
4. In Appendix – A, B, & C of the main ordinance No. 11 of 2006, Examination leading to the Bachelor of Science (Home Science), substituted by enclosed Appendix – A, B, & C.
5. Para 12, 13, 14, 15, 16, 17, 18, 20, 21 of the main Ordinance shall be renumbered.

STATEMENT OF OBJECT & REASONS

Renewing and updating of the Curriculum is the essential ingredient of any vibrant university academic system. The proposed scheme and syllabus are framed as per the UGC Model Curriculum 2001, which has been prepared to take care of the lacuna, defects/shortcomings in the existing Curricula in certain universities. The model curriculum is compatible in tune with recent development in the subject, to introduce innovative concepts, to provide a multi disciplinary profile and to allow a flexible cafeteria like approach including new papers to cater to frontier development in the concerned subject. Hence this amended Ordinance.

While implementing the provisions of this Ordinance, no financial implications are involved at the Government as well as university level as of now or in future and the same is in consonance with the guidelines of the University Grants Commission.

* Accepted by the Management Council on dt. 31st December, 2009, vide item No. 216, under the draft Ordinance No. 25 of 2009

APPENDIX - A**B.Sc. (Home Science) Part – 1**

| Sr. No. | Subject | Theory | Prac+IA | Total Periods/Wk | | | Examination Hours (Theory) | |
|---------|---|--------|---------|------------------|-----------|-----------|----------------------------|----------------|
| | | | | Marks | Theory | Prac. | | Total Workload |
| 1. | Fundamentals of Food Science & Nutrition | 70 | 30 | 100 | 3 | 3 | 6 | 3 |
| 2. | Fundamentals of Human Development | 70 | 30 | 100 | 3 | 3 | 6 | 3 |
| 3. | Fundamentals of Textiles & Clothing | 70 | 30 | 100 | 3 | 3 | 6 | 3 |
| 4. | Fundamentals of Family Resources Management | 70 | 30 | 100 | 3 | 3 | 6 | 3 |
| 5. | Fundamentals of Home Science Extension | 70 | 30 | 100 | 3 | 3 | 6 | 3 |
| 6. | Applied Life Science | 50 | 25 | 75 | 2 | 3 | 5 | 2 |
| 7. | Applied Physics & Basics Computer | 50 | 25 | 75 | 2 | 3 | 5 | 2 |
| 8. | English & Communication Skills | 70 | 30 | 100 | 3 | 1T. | 3 | 3 |
| | | | | 750 | 22 | 21 | 43 | |

APPENDIX - B**B.Sc. (Home Science) Part – II**

| Sr. No. | Subject | Theory | Prac+IA | Total Periods/Wk | | | Examination Hours (Theory) | |
|---------|--|--------|---------|------------------|-----------|-----------|----------------------------|----------------|
| | | | | Marks | Theory | Prac. | | Total Workload |
| 1. | Family & Community Nutrition | 70 | 30 | 100 | 3 | 3 | 6 | 3 |
| 2. | Early Childhood Education & Adolescent Development | 70 | 30 | 100 | 3 | 3 | 6 | 3 |
| 3. | Textile Designing & Printing | 70 | 30 | 100 | 3 | 3 | 6 | 3 |
| 4. | Interior Design and Decoration | 70 | 30 | 100 | 3 | 3 | 6 | 3 |
| 5. | Community Development Management | 70 | 30 | 100 | 3 | 3 | 6 | 3 |
| 6. | Applied Chemistry | 50 | 25 | 75 | 3 | 3 | 6 | 2 |
| 7. | Ecology and Environment | 50 | 25 | 75 | 2 | 3 | 5 | 2 |
| 8. | Applied Physics & Computer Applications | 50 | 25 | 75 | 2 | 3 | 5 | 2 |
| | | | | 725 | 22 | 24 | 46 | |

APPENDIX - C**B.Sc. (Home Science) Part – III**

| Sr. No. | Subject | Theory | Prac+IA | Total Periods/Wk | | | Examination Hours (Theory) | |
|---------|---|--------|---------|------------------|-----------|-----------|----------------------------|----------------|
| | | | | Marks | Theory | Prac. | | Total Workload |
| 1. | Diet Therapy | 70 | 30 | 100 | 3 | 3 | 6 | 3 |
| 2. | Family Dynamics and Developmental Assessment | 70 | 30 | 100 | 3 | 3 | 6 | 3 |
| 3. | Advanced Pattern Making and Fashion Designing | 70 | 30 | 100 | 3 | 3 | 6 | 3 |
| 4. | Advanced Resource Management | 70 | 30 | 100 | 3 | 3 | 6 | 3 |
| 5. | Extension Communication Techniques | 70 | 30 | 100 | 3 | 3 | 6 | 3 |
| 6. | Public Health & Epidemiology | 50 | 25 | 75 | 2 | 2 | 4 | 2 |
| 7. | Nutritional Bio-Chemistry | 50 | 25 | 75 | 3 | 3 | 6 | 2 |
| | | | | 650 | 20 | 20 | 40 | |

Notes :

1. Passing Marks 35% for all Theory papers and 50% marks for practicals and 50% marks for Internal assessment.
2. The marks for practical shall be allotted by Internal and External examiner together and internal assessment Marks to be given by Internal but the articles prepared or reports to be presented before the External examiner and marks to be finalized.
3. For all parcticals the batch will be of 16 students.
4. All the Practical Examinations are of 3 hour's duration each.
