Nagar Yuwak Shikshan Sanstha's
Yeshwantrao Chavan College of Engineering
(An Autonomous Institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)
Hingna Road, Wanadongri, Nagpur - 441 110
NAAC Accredited with 'A' Grade
Ph.: 07104-242919, 242623, 242588
Website : www.ycce.edu E-mail : principal@ycce.edu

Summary

1.2.2 Percentage of Programmes in which Choice Based Credit System (CBCS)/elective course system has been implemented (Data for the latest completed academic year)

Year	2020-21
Number of Programmes UG	08
Number of Programmes PG	06
Number of Programmes (UG+PG)	14
Percentage of Programmes	**100%**

- *Circular of University stating implementation of (CBCS)/elective course*
- *Highlighted SoE of Choice Based Credit System (CBCS)/elective course*

Y.C.C.E. COLLEGE OF ENGINEERING AUTONOMOUS INSTITUTION SEAL NAGPUR

(Dr. U.P. Waghe)
Principal, Y.C.C.E.

Principal
Yeshwantrao Chavan
College of Engineering
Wanadongri Hingna Road,
NAGPUR-441110

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Circular of University stating implementation of CBCS

Nagar Yuwak Shikshan Sanstha's

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Ref. YCCE/20-21/10 Dt: 14/06/2020

Circular for Implementation of Choice Based Credit System (CBCS)/Elective for A.Y. 2020-21

By virtue of the Yeshwatrao Chavan College of Engineering being Autonomous w.e.f. A.Y. 2010-11 to 2015-16 and the autonomy having been first conferred by UGC vide letter No. N0.F. 22-112009(AC) dated 18.11.2009 and further ratification of the same by Rashtrasant Tukdoji Maharaj Nagpur University, Nagpur and its further extension for A.Y. 2016-17 to 2021-22 vide letter No.F. 22-1/2016(AC) dated 09/03/2016 and its ratification by RTMNU Nagpur vide letter No. No. RTMNU/S/238/0/1201 dated 08.04.2016, the institution is functioning in Autonomous manner by designing its own curriculum and examination system thereby providing Choice Based Credit System / Electives to its UG/PG students.

It is herewith circulated for the knowledge of all concerned that the Implementation of Choice Based Credit System (CBCS)/Elective shall be continued for A.Y. 2020-21 with the SoE 2018 including all professional electives / open elective in the scheme.

Dr. U.P. Waghe
Chairman (Acad. Council)

Principal
Yeshwantrao Chavan
College of Engineering
Wanadongri Hingna Road,
NAGPUR-441110

Y.C. COLLEGE OF ENGINEERING * AN AUTONOMOUS INSTITUTION * NAGPUR * SEAL

Dr. A.V. Patil
Dean (Academic Matter)

Dean (Acad)
Yeshwantrao Chavan
College of Engineering
Wanadongri Hingna Road
NAGPUR - 441 110

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)

Direction No. 3 of 2016

NORMS AND PROCEDURE FOR GRANT OF AUTONOMY TO UNIVERSITY DEPARTMENTS OR INSTITUTIONS, AFFILIATED COLLEGES AND RECOGNISED INSTITUTIONS, DIRECTION,2016

(Issued under Section 14(8) of the Maharashtra Universities Act, 1994)

Whereas, the Maharashtra Universities Act, 1994 has come into force with effect from 22nd July,1994. (hereinafter referred to as the Act);

AND

Whereas, Sub-Section (1) of Section 89 of the aforesaid Act provides that a University Department or Institution, Affiliated college or Recognised Institution may apply to the university for grant of autonomous status. The Management Council on the recommendation of the Academic Council may confer the autonomous status;

AND

Whereas,Clause (Z) of Section 28 of the aforesaid Act provides that an autonomous status on University Departments, affiliated colleges and Recognised Institutions shall be conferred on the recommendation of the Academic Council by the Management Council subject to the pre-determined norms approved by the State Government having regard to the guidelines of the University Grants Commission;

AND

Whereas, the University Grants Commission, New Delhi has issued guidelines for autonomous colleges during the XII PlanPeriod (2012-2017);

AND

Whereas,the Direction regarding conferment of autonomous status for College/ Recognised Institute/University Department/University Institution, Direction No 4 of 1999, issued by the then Vice Chancellor on 6-10-1999, is in existence in the University because of non-receipt of assent to the Draft Statute No. 1 of 1999 from the Honb'le Chancellor;

AND

Whereas, the University Grants Commission Guidelines For Autonomous Colleges have been adopted by the Vice Chancellor on behalf of the Board of College and University Development, the Academic Council and the Management Council of the University, under section 14(7) of the Maharashtra Universities Act, 1994;

AND

Whereas, norms regarding grant of autonomy to the University departments or institutions, affiliated colleges and recognized institutions, are required to be regulated by the statute as provided by sub-section(11) of Section 51 of the Act;

AND

Whereas, no statute is assented to by the Honbl'e Chancellor relating to the matter;

AND

Whereas, passing of the new statute by the Senate in respect of the matter is a time-consuming process;

AND

Whereas, the provisions of the existing Direction No. 4 of 1999 are not consistent with the provisions of the guidelines for autonomous colleges issued by the University Grants Commission, New Delhi;

AND

Whereas, the existing Direction No. 4 of 1999 is required to be substituted by a new Direction to be issued on the basis of the provisions of the guidelines for autonomous colleges issued by the University Grants Commission, New Delhi;

AND

Whereas, the guidelines for autonomous colleges issued by the University Grants Commission, New Delhi are to be made effective for the sake of convenience of the Institutions concerned;

Now, therefore, I, Dr. Siddharthvinayaka P. Kane,Vice-Chancellor, Rashtrasant Tukadoji Maharaj University Nagpur in exercise of the powers vested in me under Section 14(8) of the Maharashtra Universities Act, 1994, do hereby issue the following Directions:-

1. This Direction may be called, "Norms and procedure for grant of autonomy to university Departments or Institutions, Affiliated colleges, and Recognized Institutions ,Direction,2016."

2. This Direction shall come into force with effect from the date of its issuance

3. In this Direction, unless the context otherwise requires:-

   a) "Act" means the Maharashtra Universities Act,1994 i.e. Maharashtra Act No. xxxv of 1994.

   b) "Academic council" means a council constituted as per provisions of sub-section (2) of section 29 of the Act;

   c) "Affiliated college" means a college which has been granted affiliation by the university

   d) "Authority" means the authorities of the university as specified by or under the Act;

   e) "Autonomy" means a privilege of the university conferred by the statutes to permit a college, institution or a university department to conduct academic programmes and examinations, develop syllabus for the respective subjects, and issue certificates of passing the examinations, etc. A college, institution or a university department which has been granted autonomy shall have full academic, administrative, and financial autonomy subject to the provisions of the Act and Statutes;

f) "Autonomous college", "Autonomous institution" or "Autonomous department" means a college, institution or department to which autonomy is granted and is designated to be so by the Statutes;

g) "Board of College and university Development' means a Board constituted under Provision of Section 35(2) of the Act;

h) "College" means a college conducted by the university, affiliated to the university, situated in the university area;

i) "conducted college" means a college maintained and managed by the university;

j) "institution" means an academic institution of higher learning, not being a college, associated with and admitted to the privileges of the university;

k) "Local Managing Committee" means a committee constituted for a college under the provisions of the Act;

l) "management" means the trustees or the managing or governing body, by whatever name called, or any trust registered under the Bombay Public Trusts Act, 1950 (or any society registered under the Societies Registration Act, 1860) under the management of which one or more colleges or recognized institutions or other institutions are conducted and admitted to the privileges of the university;

Provided that, in relation to any college or institution established or maintained by the Central Government or the State Government or a local authority like a zillaparishad, municipal council or municipal corporation, it means, respectively, the Central Government or the State Government or Zillaparishad or the municipal council or the municipal corporation, as the case may be;

m) "Management Council" means a council constituted as per provisions of sub-section (1) of section 27 of the Act;

n) "Principal" means a head of a college, specialized educational institution, post-graduate centre or other recognized institution duly approved by the university;

o) "Recognized institution" means an institution of higher learning, research or specialized studies, other than a college, and recognized to be so by the university;

p) " State Government" means the Government of Maharashtra;

q) "Teacher" means full-time approved professor, associate professor, assistant professor, reader, lecturer, librarian principal, deputy or assistant librarian and documention officer in the university and college librarian, Director or instructor of physical education in any university department, conducted, affiliated or autonomous college, autonomous institution or department or recognized institution in the university;

r) "University "means any of the universities mentioned in the Schedule of the Act;

s) "University area "means the area specified against the name of the university in the Schedule of the Act;

t) "University Department" means a department established and maintained by the university;

u) "University Grants Commission" means the University Grants Commission established under the University Grants Commission Act,1956;

v) "university institution" means a centre, a school, or an institute established and maintained by the university'

w) "university teacher" means a teacher appointed by the university.

4. **Scope:-** This Direction shall govern the matter of grant, renewal, and withdrawal of autonomy to the University Departments, University conducted colleges, University Institutions, affiliated colleges, institutions, and recognized institutions and all other matters incidental and ancillary thereto.

5. The norms and procedure in the matter of grant, renewal, and withdrawal of autonomy to the University departments or Institutions, Affiliated colleges and Recognized Institutions, subject to the approval of the state Government,and also all other matters incidental and ancillary thereto shall be as prescribed under **Appendix** of this Direction [guidelines for autonomous colleges issued by the University Grants Commission, New Delhi bearing bottom page-numbering from 1 to 46.]

6. The application fee and/or deposit, if any, shall be such as may be recommended by the Academic Council and approved by the Management Council of the University.

7. Notwithstanding anything to the contrary contained in Appendix, every application seeking autonomy to the University Department/Conducted college/university Institution/Affiliated college/Recognised Institution shall be placed before the Academic Council and the Management Council of the University, upon recommendations of the Board of College and University Development, for further proceeding.

8. The affiliated College/Recognized Institute/University Department / University Institution which have been granted autonomy before issuance of this Direction, will hereinafter be governed by the provisions of this Direction.

9. The existing Direction No. 4 of 1999 in respect of Direction regarding conferment of autonomous status for college/Recognised Institute/University Department/University Institution No. 4 of 1999 shall stand repealed with effect from date of issuance of this Direction

Place:- Nagpur
Date:- 8-2-2016

(Dr. Sidharthavinayak P. Kane)
Vice-Chancellor

रजिस्ट्री सं० डी० एल०-33004/99 REGD. NO. D. L.-33004/99

भारत का राजपत्र
The Gazette of India

असाधारण
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मानव संसाधन विकास मंत्रालय

(विश्वविद्यालय अनुदान आयोग)

अधिसूचना

नई दिल्ली, 12 फरवरी, 2018

विश्वविद्यालय अनुदान आयोग (महाविद्यालयों को स्वायत्तता का दर्जा प्रदान करने तथा स्वायत्त महाविद्यालयों में मानकों के रखरखाव संबंधी उपाय) विनियम, 2018

फां. सं. 1–1/2012 (ए.सी.).–निम्नलिखित को सर्वसाधारण की जानकारी के लिए प्रकाशित किया जाता है:–

प्रस्तावना

जबकि विश्वविद्यालय अनुदान आयोग (वि0अ0आ0) को विश्वविद्यालयों में उच्चतर शिक्षा के मानकों का निर्धारिण करने तथा समन्वय स्थापित करने के लिए अधिदेशित किया गया है।

और जबकि व्यापक गुणवत्तायुक्त शिक्षा तथा उत्कृष्टता के संवर्धन के लिए महाविद्यालयों को स्वायत्तता प्रदान करना अत्यावश्यक है;

इसलिए, अब विश्वविद्यालय अनुदान आयोग अधिनियम, 1956 की धारा 12 के खण्ड (ञ) के साथ पठित धारा **26** की उपधारा **(1)** के खण्ड (च) तथा (छ) द्वारा प्रदत्त शक्तियों का प्रयोग करते हुए विश्वविद्यालय अनुदान आयोग एतद्द्वारा निम्नलिखित विनियम बनाता है :–

1. **लघु शीर्षक, अनुप्रयोग एवं प्रवर्तन**

1.1 इन विनियमों को विश्वविद्यालय अनुदान आयोग (महाविद्यालयों को स्वायत्तता का दर्जा प्रदान करने तथा स्वायत्त महाविद्यालयों में मानकों के रखरखाव संबंधी उपाय) विनियम, 2018 कहा जायेगा।

1.2 ये विनियम उन सभी महाविद्यालयों/संस्थानों पर लागू होंगे जो देश के विश्वविद्यालयों से संबद्ध हैं अथवा उनके संघटक महाविद्यालय है, तथा जो स्वायत्त महाविद्यालय का दर्जा प्राप्त करना चाहते हैं।

(ख) एक व्यक्ति जो दो वर्ष की अवधि के लिए महाविद्यालय की शासी निकाय द्वारा नामित किया जाना है।

(ग) सम्बद्ध विश्वविद्यालय का वित्त अधिकारी।

(घ) महाविद्यालय का वरिष्ठतम् अध्यापक जिसे प्राचार्य द्वारा दो साल के लिए क्रमावर्ती रूप से नामित किया जाना है।

अवधिः— वित्त समिति की अवधि तीन वर्ष होगी।

बैठकः— वित्त समिति की एक साल में कम से कम दो बैठकें होगी।

वित्त समिति के क्रियाकलाप :

वित्त समिति शासी निकाय के लिए परामर्श समिति के रूप में निम्न कार्य करेगी।

(क) विश्वविद्यालय अनुदान आयोग द्वारा प्राप्त/प्राप्य अनुदान से संबंधित बजट प्राक्कलन तथा शुल्क आदि से प्राप्त आय जो स्वायत्त योजना की गतिविधियों के संचालन के लिए वसूल की गई है।

(ख) उपरोक्त के लिए लेखा—परीक्षित खाते संबंधी।

14. विनियमों के उल्लंघन के परिणाम

14.1 विश्वविद्यालय अनुदान आयोग के सभी दिशा—निर्देशों का कड़ाई से पालन किया जाना चाहिए, उल्लंघन करने पर दोषी स्वायत्त महाविद्यालय के विरुद्ध विश्वविद्यालय अनुदान आयोग समुचित कार्यवाही करेगा।

15. समस्या समाधानः

15.1 भारत सरकार/मानव संसाधन विकास मंत्रालय के परामर्श से विश्वविद्यालय अनुदान आयोग इन विनियमों के कार्यान्वयन में आने वाली समस्या/ओं के समाधान हेतु पूर्णरूपेण अधिकृत है।

पी. के. ठाकुर, सचिव
[विज्ञापन—III/4/असा./428/17]

MINISTRY OF HUMAN RESOURCE DEVELOPMENT

(UNIVERSITY GRANTS COMMISSION)

NOTIFICATION

New Delhi, the 12th February, 2018

University Grants Commission (Conferment of Autonomous Status Upon Colleges and Measures for Maintenance of Standards in Autonomous Colleges) Regulations, 2018

F. No. 1-1/2012(AC).—The following is published for general information:—

Preamble

Whereas the University Grants Commission (UGC) is mandated to coordinate and determine the standards of higher education in universities;

And whereas college autonomy is instrumental for promoting broad based quality education and excellence;

Now therefore, in exercise of the powers conferred by clause (j) of Section 12 read with clauses (f) and (g) of sub-section (1) of Section 26 of the University Grants Commission Act, 1956, the University Grants Commission hereby makes the following Regulations:—

1. Short title, application and commencement:—

1.1 These Regulations shall be called the University Grants Commission (Conferment of Autonomous Status upon Colleges and Measures for Maintenance of Standards in Autonomous Colleges) Regulations, 2018.

1.2 These Regulations shall apply to all Colleges/Institutions which are affiliated to, or are constituent colleges of Universities in the country seeking the conferment of Autonomous College status.

1.3 These Regulations shall come into force from the date of their notification in the Official Gazette.

2. Definitions: -

In these Regulations, unless the context otherwise requires—

2.1 "Academic Council" means the Academic Council of the Autonomous College

2.2 "Act" means the University Grants Commission Act, 1956

2.3 "Board of Studies" means the Board of Studies of a Department of the Autonomous College

2.4 "College" means any institution, whether known as such or by any other name, which provides for undergraduate and/or postgraduate and/or Ph.D. programmes for obtaining any qualification from a university and which, in accordance with the rules and regulations of such university, is recognized as competent to provide for such programmes/courses of study and present students undergoing such courses of study for the examination for the award of such qualification

2.5 "Commission" means the University Grants Commission (UGC)

2.6 "Finance Committee" means the Finance Committee of the Autonomous College

2.7 "Governing Body" means the Governing Body of the Autonomous College, which is different from the Trust Board or the Board of Management or the Executive Committee or the Management Committee

2.8 "Notification" means a notification issued by the affiliating University declaring a college as an autonomous one after the conferment of autonomous status by the UGC

2.9 "Parent University" means the University to which the college concerned is affiliated, or of which the college concerned is a constituent

2.10 "Statutory body" means a body constituted under any law for the time being in force for determining and maintaining prescribed standards of quality in the relevant areas of higher education

3. ROLE/TERMS AND CONDITIONS OF AN AUTONOMOUS COLLEGE

3.1 Review existing courses/programmes and, restructure, redesign and prescribe its own courses/programmes of study and syllabi

3.2 To formulate new courses/programmes within the nomenclature specified by UGC as per the Specification of Degrees 2014 and amended from time to time

3.3 Evolve methods of assessment of students performance, conduct of examinations and notification of results

3.4 To announce results, issue mark sheets, migration and other certificates; however, the degree shall be awarded by the University with the name of the college on the degree certificate

3.5 Autonomous colleges need not pay affiliation fee to the parent university every year. One time fee can be paid at the time of conferment of autonomous status. Such fees can be decided by the Executive council of the parent university

3.6 Prescribe rules for admission in consonance with the reservation policy of the state government/national policy

3.7 May fix fees of the courses at their own level

3.8 Constitute their own Governing Body, Academic Council, Board of Studies and Finance Committee

3.9 They shall have complete administrative autonomy and have the privilege of appointing their own Administrative staff and teaching faculty including Principal. However, the staff will be appointed as per the UGC (Minimum Qualifications for Appointment of Teachers and other Academic Staff in Universities and Colleges and Measures for the Maintenance of Standards in Higher Education) Regulations 2010 as amended from time to time

3.10 The autonomous colleges shall continue to receive funds as being done before the grant of autonomous status, if any

3.11 Autonomy granted to the college is at the institutional level and is not partial, and shall cover the programmes at all levels such as U.G., P.G. and Ph.D offered by the college. The courses introduced by the college after the conferment of autonomous status shall automatically come under the purview of autonomy

3.12 The students enrolled at the time of granting autonomy to the College shall also be covered under autonomy

3.13 Autonomous status shall be granted initially for a period of ten years; further extension shall be for five years at a time except those covered under clause 6.5

4. ROLE OF THE PARENT UNIVERSITY

4.1 To forward the application of the college for autonomous status/provide nominee on the Expert Committee/various Statutory Bodies and issue notification within 30 days for a college to function as an autonomous entity once autonomous status is conferred on the college

4.2 If the University does not forward the proposal/provide nominee within 30 days, it shall be presumed that the University has no objection to the processing of the proposal by the UGC for conferment of autonomous status

4.3 The college on attaining autonomous status will continue to be affiliated to the affiliating University but will enjoy the privileges of autonomy

5. ROLE OF THE STATE GOVERNMENT

5.1 To provide nominee on the Expert Committee/various Statutory Bodies within 30 days

5.2 The State Govt. will continue to provide the same funds to Government/Aided colleges as they had been providing before the conferment of autonomous status

5.3 To ensure that all sanctioned faculty positions are filled on regular and ongoing basis and that a minimum of 85% posts remain filled at all time

6. ELIGIBILITY

6.1 Colleges (of any discipline) whether aided, partially aided and unaided/self financing are eligible provided they are under Section 2(f) of the UGC Act

6.2 The college should have at least 10 years of existence

6.3 The colleges must be accredited by either NAAC with minimum 'A' Grade or by NBA for at least three programme(s) with a minimum score of 675 individually or a corresponding accreditation Grade/score from a UGC empanelled accreditation agency. However, if the number of programme(s) being run by the Institution is less than three, then each of the programmes should secure 675 or more marks. Accreditation status must be valid at the time of application.

Provided further, the existing autonomous colleges will be required to comply with this eligibility condition within a maximum period of five years from the date of notification of these Regulations.

The constituent colleges shall also undergo separate accreditation by NAAC/NBA/UGC empanelled accreditation agency to be considered eligible.

6.4 (i) Colleges accredited with a score of 3.0 and above, up to 3.25 on a 4 point scale of NAAC/corresponding NBA score / corresponding accreditation score from a UGC empanelled accreditation agency at the time of application shall be considered for grant of autonomous status with an on-site visit of the duly constituted Expert Committee.

(ii) Colleges which have a NAAC score of 3.26 and above, up to 3.50 or a corresponding NBA score or a corresponding accreditation Grade/score from a UGC empanelled accreditation agency for one complete cycle and also accredited accordingly in the second cycle, shall be considered for grant of autonomous status without onsite visit by the Expert Committee.

(iii) Colleges with 3.51 and above in a 4 point scale of NAAC or a minimum of three programmes have been accredited by NBA with a minimum score of 750 individually or a corresponding accreditation Grade/score from a UGC empanelled accreditation agency at the time of application shall be considered for grant of autonomous status without onsite visit by the Expert Committee.

However, the colleges are required to adhere to University Grants Commission's Regulations like (a) curbing the menace of ragging in Higher Education Institutions Regulations 2012; (b) UGC (Promotion of Equity in Higher Educational Institutions) Regulations 2012; (c) UGC (Grievance Redressal) Regulations 2012, etc. in letter and spirit.

The application of colleges covered under 6.4 (ii) and (iii) above shall be considered as the report of the Expert Committee for consideration of the Commission and its approval thereof.

6.5 If an autonomous college has obtained the score of 3.51 and above on a 4-Point scale from NAAC or a minimum of three programmes have been accredited by NBA with a minimum score of 750 individually or a corresponding accreditation Grade/score from a UGC empanelled accreditation agency, the college shall be granted extension of autonomous status for further ten years without on-site visit.

(*Colleges which apply for reaccreditation within the stipulated six months before the end of the cycle of accreditation period as mentioned in the Accreditation Certificate issued by National Assessment and Accreditation Council/NBA/UGC empanelled* accreditation agency, *the gap period between two consecutive accreditations shall be condoned. In case of other institutions which have not applied as per the guidelines mentioned above, the maximum period for condonation would be one year between the two accreditation cycles*)

7. CONFERMENT/EXTENSION OF AUTONOMOUS STATUS

7.1 A College intending to become autonomous shall make an application in the format specified by the Commission any time during the year

7.2 The college shall forward an advance copy of the proposal to University Grants Commission indicating the date of receipt of the proposal by the parent university for the record of the UGC

7.3 The College shall submit the proposal to the Parent/Affiliating University which may forward the same to UGC within 30 days of the receipt of proposal. In case the proposal is rejected by the University, the decision shall be communicated to the college and University Grants Commission through a "Speaking Order"

7.4 If the University and State Govt. fail to provide the nominees for the UGC Expert Committee, the UGC may proceed with the on-spot visit and take decision on the proposal of the College

7.5 If the College is found eligible as per the guidelines, the Commission shall examine the proposal for conferment/extension of autonomous status with an onsite visit by an Expert Committee constituted by the Chairman of the Commission consisting of three expert members (preferably at the level of Professor/Principal of an autonomous college) out of which one shall be the Chairperson, nominees from the Parent/Affiliating University and the State Government. A UGC official may be nominated to coordinate the visit.

7.6 The decision for conferment /extension of autonomous status shall be taken by the Standing Committee (comprising of three Commission members) on autonomous colleges after due consideration of the recommendations of the Expert Committee. The approval letters may be issued on the basis of the decision of the standing committee. The decisions may be ratified by the Commission subsequently

7.7 If the proposal of a College for the conferment of autonomous status is rejected for any reason whatsoever, the college shall be eligible to reapply, but not before one year from the date of rejection of its earlier proposal

7.8 The autonomous College shall apply in the prescribed format to University Grants Commission for extension of autonomous status six months prior to expiry of the autonomy cycle

7.9 In case of expiry of accreditation cycle, the College seeking extension of autonomous status must submit a proof of having applied for accreditation by NAAC/NBA to be eligible for extension

7.10 Till the extension of autonomous status is awarded by the UGC, the College shall continue to avail the autonomous status. The UGC shall also consider the interim period while granting extension of autonomous status to the College

7.11 If an Autonomous College wishes to surrender the autonomous status, it shall follow due process of forwarding the resolution by the Governing Body through the University concerned to UGC for consideration. However, such withdrawal shall take effect only after the last batch of students then enrolled under autonomy passes out

8. CRITERIA FOR GRANTING AUTONOMY TO COLLEGES

8.1 Academic reputation and previous performance in university examinations and its academic/co-curricular/extension activities in the past

8.2 Academic/extension / research achievements of the faculty

8.3 Quality and merit in the selection of students and teachers, subject to statutory requirements in this regard

8.4 Adequacy of infrastructure in terms of class rooms, library books and e-resources, laboratories and equipments, sports facilities, facilities for recreation activities, residential accommodation for faculty and students, transport facilities etc.

8.5 Quality of institutional management

8.6 Financial strength of the institution

8.7 Responsiveness of administrative structure

8.8 Motivation and involvement of faculty in the promotion of innovative reforms

09. MONITORING OF AUTONOMOUS COLLEGES

9.1 IQAC cell shall be established in the college for regular monitoring of the college under intimation to UGC. The Cell shall have an external Peer Team comprising of academicians of repute and will send report to UGC regarding the performance of the College. The report shall also be put on public domain on the website of the College. The external peer review shall be conducted atleast once in a year.

9.2 On receipt of adverse report by the external peer team of IQAC or in case of complaint, UGC has the power to constitute its own Expert Committee for careful scrutiny of the report and may revoke the autonomous status of the college after giving due opportunity to the management by way of notification and by passing a speaking order.

9.3 The autonomous college shall, without fail, upload on its website information regarding the courses offered by it, the fees for the courses, the details of the faculty alongwith qualification and unique ID, the admission procedure, the details of relevant infrastructures, research activities of the college along with the details of Ph.D. students enrolled, if any, with the date of enrolment, topics and supervisor.

9.4 The college shall also put on its website the creation of various Committees/Cells as mandated in the various UGC Regulations notified from time to time. The college shall conduct the meetings of the statutory bodies regularly and upload the minutes of the meetings on the college website.

9.5 The college shall upload on its website all the information about the college in the prescribed format and the same shall be sent to UGC while applying for fresh/extension of autonomous status. The college shall also submit progress report and utilization certificate annually as per the prescribed formats.

9.6 All the Regulations notified by the UGC shall be followed in letter and spirit by all the Autonomous Colleges and an undertaking to this effect shall be uploaded on the College website.

9.7 The number of contractual faculty in an autonomous college should not be more than 10% of the total number of sanctioned faculty positions in the college.

10. MATTERS REGARDING STARTING OF NEW COURSES

10.1 An autonomous college is free to start diploma (undergraduate and postgraduate) or certificate courses without prior approval of the University. However, approval of the concerned statutory bodies of the college may be obtained, wherever required. Diplomas and certificates shall be issued under the seal of the college. The University should, however, be informed about such introduction of new courses.

10.2 An autonomous college is free to start a new degree or postgraduate course/Ph.D. with the approval of the Academic Council of the college and concerned Statutory Council(s), wherever required, provided the nomenclature of the degree is in consonance with UGC Notification on Specification of Degrees, 2014 as amended from time to time.

Such courses shall fulfill the minimum standards prescribed by the university/UGC in terms of number of hours, curricular content and standards, and the university shall be duly informed of such courses.

10.3 An autonomous college may rename an existing course as per the UGC Notification on Specification of Degrees, 2014 as amended from time to time after restructuring/ redesigning it with the approval of the college Academic Council as per UGC norms. The university should be duly informed of such proceedings.

11. EXAMINATION CELL & SYSTEM

11.1 Autonomous College shall have an Examination Cell headed by Controller of Examinations. The Principal of the college shall be the Chief Controller, Examinations.

11.2 The Controller of Examinations shall be assisted by the Deputy Controller of Examinations along with other office support.

12. FINANCIAL ASSISTANCE

12.1 The Commission shall provide financial assistance to autonomous colleges as per the extant provisions of the scheme guidelines (prescribed separately).However, self-financing colleges shall not be provided autonomy grant. In matters related to utilization of autonomy grant and maintaining the accounts, the college shall remain guided by the scheme guidelines.

13. GOVERNANCE OF AN AUTONOMOUS COLLEGE

13.1 The autonomous college shall have the following statutory bodies to ensure proper management of academic, financial and general administrative affairs:

(a) Governing Body
(b) Academic Council
(c) Board of Studies
(d) Finance Committee

(The Governing Body is different from Trust Board/Board of Management/Executive Committee/Management Committee).

13.2 The College shall, in addition, have other non statutory committees such as the Planning and Evaluation Committee, Grievance Redressal Committee, Examination Committee, Admission Committee, Library Committee, Student Welfare Committee, Internal Complaints Committee, Extra-Curricular Activities Committee and Academic Audit Committee.

13.3 <u>GOVERNING BODY:</u>

A. Constitution of Governing Body of Private /Self Financing College/Constituent College run by Trust/Society

Number	Category	Nature
5 Members	Management	Trust or management as per the constitution or byelaws, with the Chairman or President/Director as the chairperson
2 Members	Teachers of the College	Nominated by the Principal based on seniority by rotation
1 Member	Educationist or industrialist	Nominated by the management
1 Member	UGC Nominee	Nominated by the UGC
1 Member	State Government nominee	Academician not below the rank of professor or State Government official of Directorate of Higher Education/State Council of Higher Education
1 Member	University Nominee	Nominated by the University
1 Member	Principal of College	Ex-Officio

B. Constitution of Governing Body of Government Colleges

Number	Category	Nature
3 Members one of them to be Chairperson	Educationist, Industrialist, Professional	Nominated by the State Government, persons of proven academic interest with at least PG level qualification
2 Members	Teachers of the College	Nominated by the Principal on seniority by rotation.
1 Member	Educationist or industrialist	Nominated by the Principal for two years
1 Member	UGC Nominee	Nominated by UGC
1 Member	State Government nominee	Nominated by the State Government
1 Member	University Professor	Nominated by the University
1 Member	Principal of College	Ex-Officio

C. Constitution of Governing Body of Constituent Colleges run by University

Number	Category	Nature
3 Members one of them to be Chairperson	Educationist, Industrialist, Professional	Nominated by the University, persons of proven academic interest with at least PG level qualification
2 Members	Teachers of the College	Nominated by the Principal on seniority by rotation.
1 Member	State Government nominee	Nominated by the State Government
1 Member	University Professor	Nominated by the University
1 Member	UGC Nominee	Nominated by UGC
1 Member	Principal of College	Ex-Officio

Term: The Governing Body shall be reconstituted every three years except in the case of UGC nominee who shall have a term of five years.

Meetings: Meetings of the Governing Body shall be held at least twice a year.

Functions of the Governing Body:

Subject to the existing provision in the bye-laws of respective college and rules laid down by the state government/parent university, the Governing Body shall:

- Guide the college while fulfilling the objectives for which the college has been granted autonomous status.
- Institute scholarships, fellowships, studentships, medals, prizes and certificates on the recommendations of the Academic Council
- Approve new programmes of study leading to degrees and/or diplomas.
- All recruitments of Teaching Faculty/Principal shall be made by the Governing Body/state government as applicable in accordance with the policies laid down by the UGC and State Government from time to time.
- To approve annual budget of the college before submitting the same at the UGC.
- Perform such other functions and institute committees, as may be necessary and deemed fit for the proper development of the college

13.4 <u>ACADEMIC COUNCIL:</u>

COMPOSITON OF ACADEMIC COUNCIL:

1. The Principal (Chairman)
2. All the Heads of Departments in the college
3. Four teachers of the college representing different categories of teaching staff by rotation on the basis of seniority of service in the college.
4. Not less than four experts/academicians from outside the college representing such areas as Industry, Commerce, Law, Education, Medicine, Engineering, Sciences etc., to be nominated by the Governing Body.
5. Three nominees of the university not less than Professors.
6. A faculty member nominated by the Principal (Member Secretary).

Term: The term of the nominated members shall be three years.
Meetings: Academic Council shall meet at least twice a year.

Functions of the Academic Council:

The Academic Council shall have powers to:

(a) Scrutinize and approve the proposals with or without modification of the Boards of Studies with regard to courses of study, academic regulations, curricula, syllabi and modifications thereof, instructional and evaluation arrangements, methods, procedures relevant thereto etc., provided that where the Academic Council differs on any proposal, it shall have the right to return the matter for reconsideration to the Board of Studies concerned or reject it, after giving reasons to do so.

(b) Make regulations regarding the admission of students to different programmes of study in the college keeping in view the policy of the Government.

(c) Make regulations for sports, extra-curricular activities, and proper maintenance and functioning of the playgrounds and hostels.

(d) Recommend to the Governing Body proposals for institution of new programmes of study.

(e) Recommend to the Governing Body institution of scholarships, studentships, fellowships, prizes and medals, and to frame regulations for the award of the same.

(f) Advise the Governing Body on suggestions(s) pertaining to academic affairs made by it.

(g) Perform such other functions as may be assigned by the Governing Body.

13.5 BOARD OF STUDIES:

Composition of Board of Studies:

1. Head of the Department concerned (Chairman).

2. The entire faculty of each specialization.

3. Two subject experts from outside the Parent University to be nominated by the Academic Council.

4. One expert to be nominated by the Vice-Chancellor from a panel of six recommended by the college principal.

5. One representative from industry/corporate sector/allied area relating to placement.

6. One postgraduate meritorious alumnus to be nominated by the principal. The Chairman, Board of Studies, may with the approval of the principal of the college, co-opt:

(a) Experts from outside the college whenever special courses of studies are to be formulated.

(b) Other members of staff of the same faculty.

Term: The term of the nominated members shall be three years.

Meetings: The Board of Studies shall meet at least twice a year.

Functions:

The Board of Studies of a Department in the college shall:

(a) Prepare syllabi for various courses keeping in view the objectives of the college, interest of the stakeholders and national requirement for consideration and approval of the Academic Council;

(b) Suggest methodologies for innovative teaching and evaluation techniques;

(c) Suggest panel of names to the Academic Council for appointment of examiners; and

(d) Coordinate research, teaching, extension and other academic activities in the department/college.

13.6 FINANCE COMMITTEE:

Composition of Finance Committee:

(a) The Principal (Chairman).

(b) One person to be nominated by the Governing Body of the college for a period of two years.
(c) Finance Officer of the affiliating University

(d) One senior-most teacher of the college to be nominated in rotation by the principal for two years.

Term: Term of the Finance Committee shall be three years.

Meetings: The Finance Committee shall meet at least twice a year
Functions of the Finance Committee:
The Finance Committee shall act as an advisory body to the Governing Body, to consider:

(a) Budget estimates relating to the grant received/receivable from UGC, and income from fees, etc. collected for the activities to undertake the scheme of autonomy; and
(b) Audited accounts for the above.

14. CONSEQUENCES OF VOILATION OF REGULATIONS

14.1 All UGC directives shall be strictly followed, failing which UGC may take appropriate actions, as it deems fit, against the defaulting Autonomous College.

15. REMOVAL OF DIFFICULTIES

15.1 University Grants Commission reserves the right to remove difficulty/difficulties in the course of implementation of these Regulations in consultation with the Government of India/Ministry of Human Resource Development.

P. K. THAKUR, Secy.

[ADVT.-III/4/Exty./428/17]

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डॉ. मंजू सिंह
संयुक्त सचिव
Dr. Manju Singh
Joint Secretary

विश्वविद्यालय अनुदान आयोग
University Grants Commission
बहादुरशाह ज़फर मार्ग, नई दिल्ली-110002
Bahadur Shah Zafar Marg, New Delhi-110002
दूरभाष Phone : कार्यालय Off : 011-23238876
Fax : 011-23232297 E-mail : manjusingh.ugc@nic.in

BY SPEED POST

No.F. 22-1/2016(AC)

March, 2016

The Registrar,
Rashtrasant Tukadoji Maharaj Nagpur University,
Ravindranath Tagore Marg,
Nagpur-440 001 (Maharashtra)

09 MAR 2016

Sub:- Grant of Extension of Autonomous Status to Yeshwantarao Chavan College of Engineering, Wanadongri, Hingna Road, Nagpur-441 110 (Maharashtra) affiliated to Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur

Sir/Madam,

This is with reference to the proposal submitted by your college for extension of autonomous status.

On the basis of the report of the UGC Expert Committee and on the basis of the recommendations of the Standing Committee, the Commission at its meeting held on 29.02.2016 decided to grant extension of autonomous status to Yeshwantarao Chavan College of Engineering, Wanadongri, Hingna Road, Nagpur-441 110 (Maharashtra) affiliated to Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur under the UGC scheme for autonomous colleges for a period of six years w.e.f. 2016-2017 to 2021-2022

Rashtrasant Tukadoji Maharaj Nagpur University, Ravindranath Tagore Marg, Nagpur-440 001 (Maharashtra) may now go ahead and issue necessary orders in this regard by endorsing a copy of the same to this office for our records. The admissible grant under this scheme will be released to the College as per its eligibility, according to the norms as laid down as per applicable Guidelines for Autonomous Colleges by The Joint Secretary, University Grants Commission, Western Regional Office, Ganeshkhind, Pune – 411007.

Yours faithfully

(MANJU SINGH)

Cont....

RECEIVED
Y. C. C. E., NAGPUR
INWARD NO 2396
DATE 12.03.16
Signature

14.03.16
Principal
12/03/2016
Administrative Officer
Registrar, DAM

Copy to:-

1. The Principal Secretary,
   Tech & Higher Education Deptt.
   Govt. of Maharashtra,
   Mantralaya Annexe Building,
   Mumbai – 400 032.

2. The Joint Secretary,
   University Grants Commission,
   Western Regional Office, Ganeshkhind,
   Pune – 411007.

3. The Principal,
   Yeshwantarao Chavan College of Engineering,
   Wanadongri, Hingna Road,
   Nagpur-441 110 (Maharashtra)

   (A copy of the Expert Committee report is also enclosed for your information and guidance).

4. Meeting Cell.

5. Concerned file

6. Guard File.

(MANJU SINGH)

Implementation of CBCS / Electives by the institution for 2020-21

List of Electives approved by the competent body for the Year 2020-21

Count of Elective Subject offered	CT	CV	EE	EL	ETC	IT	ME	Grand Total
OE-I	5	6	3	3	3	2	4	26
OE-II	5	5	3	3	5	2	4	27
OE-III	5	6	3	3	3	2	4	26
OE-IV	5	5	3	3	5	2	4	27
PE-I	14	18	8	5	14	6	16	81
PE-II	10	9	8	4	12	6	8	57
PE-III	4	9	4	4	5	4	16	46
PE-IV	14	9	8	4	5	8	9	57
PE-V	5	9	4		5	3	14	40
PE-VI			4		6	4		14
Grand Total	**67**	**76**	**48**	**29**	**63**	**39**	**79**	**401**

Nagar Yuwak Shikshan Sanstha's

Yeshwantrao Chavan College of Engineering

(An Autonomous Institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)

SoE No. FY-201

B.E. SCHEME OF EXAMINATION 2018-19

(Revised Scheme of Examination w.e.f. 2020-21 onward)

First Year BE

SN	Sem	Type	Sub. Code	Subject	T/P	Contact Hours				Credits	% Weightage			ESE Duration Hours
						L	T	P	Hrs		MSEs*	TA**	ESE	
First Semester Group "A"														
1	1	BS	GE2101	Engineering Mathematics I	T	3	1	0	4	4	30	30	40	3
2	1	BS	GE2105	Engineering Physics	T	4	0	0	4	4	30	30	40	3
3	1	BS	GE2106	**Lab.:** Engineering Physics	P	0	0	2	2	1		60	40	
4	1	HS	GE2107	Communications Skills	T	3	0	0	3	3	30	30	40	3
5	1	BES	CV2101	Engineering Mechanics	T	3	1	0	4	4	30	30	40	3
6	1	BES	CV2102	**Lab.:** Engineering Mechanics	P	0	0	2	2	1		60	40	
7	1	BES	IT2101	Introduction to Computer Programing	T	3	1	0	4	4	30	30	40	3
8	1	BES	IT2102	**Lab.:** Introduction to Computer Programing	P	0	0	2	2	1		100		
9	1	BES	ME2103	Workshop Practice	P	0	0	2	2	1		60	40	
					TOTAL	**16**	**3**	**8**	**27**	**23**				
First Semester Group "B"														
1	1	BS	GE2102	Engineering Mathematics II	T	3	1	0	4	4	30	30	40	3
2	1	BS	GE2103	Engineering Chemistry	T	4	0	0	4	4	30	30	40	3
3	1	BS	GE2104	**Lab.:** Engineering Chemistry	P	0	0	2	2	1		60	40	
4	1	HS	GE2108	Social Sciences	T	3	0	0	3	3	30	30	40	3
5	1	BES	EL2101	Electrical Engineering	T	3	1	0	4	4	30	30	40	3
6	1	BES	EL2102	**Lab.:** Electrical Engineering	P	0	0	2	2	1		60	40	
7	1	BES	ME2101	Engineering Graphics	T	1	0	0	1	1	30	30	40	3
8	1	BES	ME2102	**Lab.:** Engineering Graphics	P	0	0	4	4	2		100		
9	1	BES	EE2101	Basic Electronics	T	3	1	0	4	4	30	30	40	3
					TOTAL	**17**	**3**	**8**	**28**	**24**				

MSEs* = Three MSEs of 15 Marks each will conducted and marks of better 2 of these 3 MSEs will be considered for Continuous Assessment

TA – for Theory : 20 marks on lecture quizzes, 8 marks on assignments, 2 marks on class performance

TA – for Practical : MSPA will be 15 marks each

Chairperson	Dean (Acad. Matters)	June 2020 Date of Release	1.02 Version	Applicable for AY 2020-21 Onwards

Nagar Yuwak Shikshan Sanstha's

Yeshwantrao Chavan College of Engineering

(An Autonomous Institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)

SoE No. FY-201

B.E. SCHEME OF EXAMINATION 2018-19

(Revised Scheme of Examination w.e.f. 2020-21 onward)

First Year BE

SN	Sem	Type	Sub. Code	Subject	T/P	Contact Hours				Credits	% Weightage			ESE Duration Hours
						L	T	P	Hrs		MSEs*	TA**	ESE	
1	2	BS	GE2102	Engineering Mathematics II	T	3	1	0	4	4	30	30	40	3
2	2	BS	GE2103	Engineering Chemistry	T	4	0	0	4	4	30	30	40	3
3	2	BS	GE2107	**Lab.:** Engineering Chemistry	P	0	0	2	2	1		60	40	
4	2	HS	GE2108	Social Sciences	T	3	0	0	3	3	30	30	40	3
5	2	BES	EL2101	Electrical Engineering	T	3	1	0	4	4	30	30	40	3
6	2	BES	EL2102	**Lab.:** Electrical Engineering	P	0	0	2	2	1		60	40	
7	2	BES	ME2101	Engineering Graphics	T	1	0	0	1	1	30	30	40	3
8	2	BES	ME2102	**Lab.:** Engineering Graphics	P	0	0	4	4	2		100		
9	2	BES	EE2101	Basic Electronics	T	3	1	0	4	4	30	30	40	3
				TOTAL		**17**	**3**	**8**	**28**	**24**				
Second Semester Group "B"														
1	2	BS	GE2101	Engineering Mathematics I	T	3	1	0	4	4	30	30	40	3
2	2	BS	GE2105	Engineering Physics	T	4	0	0	4	4	30	30	40	3
3	2	BS	GE2106	**Lab.:** Engineering Physics	P	0	0	2	2	1		60	40	
4	2	HS	GE2107	Communications Skills	T	3	0	0	3	3	30	30	40	3
5	2	BES	CV2101	Engineering Mechanics	T	3	1	0	4	4	30	30	40	3
6	2	BES	CV2102	**Lab.:** Engineering Mechanics	P	0	0	2	2	1		60	40	
7	2	BES	IT2101	Introduction to Computer Programing	T	3	1	0	4	4	30	30	40	3
8	2	BES	IT2102	**Lab.:** Introduction to Computer Programing	P	0	0	2	2	1		100		
9	2	BES	ME2103	Workshop Practice	P	0	0	2	2	1		60	40	
				TOTAL		**16**	**3**	**8**	**27**	**23**				

MSEs* = Three MSEs of 15 Marks each will conducted and marks of better 2 of these 3 MSEs will be considered for Continuous Assessment

TA – for Theory : 20 marks on lecture quizzes, 8 marks on assignments, 2 marks on class performance

TA – for Practical : MSPA will be 15 marks each

Chairperson	Dean (Acad. Matters)	June 2020 Date of Release	1.02 Version	Applicable for AY 2020-21 Onwards

Nagar Yuwak Shikshan Sanstha's

Yeshwantrao Chavan College of Engineering

(An Autonomous Institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)

SoE No. CV-201

B.E. SCHEME OF EXAMINATION 2018-19

(Revised Scheme of Examination w.e.f. 2020-21 onward)

Civil Engineering

SN	Sem	Type	Sub. Code	Subject	T/P	Contact Hours				Credits	% Weightage			ESE Duration Hours
						L	T	P	Hrs		MSEs*	TA**	ESE	
TOTAL FIRST & SECOND SEM										47				
Third Semester														
1	3	BS	GE2201	Engineering Mathematics III	T	3	0	0	3	3	30	30	40	3
2	3	PC	CV2201	Strength of Materials	T	3	0	0	3	3	30	30	40	3
3	3	PC	CV2202	**Lab:-** Strength of Materials	P	0	0	2	2	1		60	40	
4	3	PC	CV2203	Geotechnical Engineering	T	3	0	0	3	3	30	30	40	3
5	3	PC	CV2204	**Lab:-** Geotechnical Engineering	P	0	0	2	2	1		60	40	
6	3	PC	CV2205	Fluid Mechanics	T	3	0	0	3	3	30	30	40	3
7	3	PC	CV2206	**Lab:-** Fluid Mechanics	P	0	0	2	2	1		60	40	
8	3	PC	CV2207	Water Supply Engineering	T	3	0	0	3	3	30	30	40	3
9	3	PC	CV2208	**Lab:-**Water Supply Engineering	P	0	0	2	2	1		60	40	
					TOTAL	**15**	**0**	**8**	**23**	**19**				
Fourth Semster														
1	4	BS	GE2204	Advance Mathematical Techniques	T	3	0	0	3	3	30	30	40	3
2	4	PC	CV2251	Concrete Technology	T	3	0	0	3	3	30	30	40	3
3	4	PC	CV2252	**Lab:-** Concrete Technology	P	0	0	2	2	1		60	40	
4	4	PC	CV2253	Surveying	T	3	0	0	3	3	30	30	40	3
5	4	PC	CV2254	**Lab:-** Surveying	P	0	0	2	2	1		60	40	
6	4	PC	CV2255	Structural Analysis	T	4	0	0	4	4	30	30	40	3
7	4	PC	CV2256	**Lab:-** Structural Analysis	P	0	0	2	2	1		60	40	
8	4	PC	CV2257	Transportation Engineering	T	3	0	0	3	3	30	30	40	3
9	4	PC	CV2258	**Lab:-** Transportation Engineering	P	0	0	2	2	1		60	40	
					TOTAL	**16**	**0**	**8**	**24**	**20**				
Audit Courses														
1	4	HS	GE2121	Env Studies for 4 Sem. CV,ME,EE,IT	A	3	0	0	3	0				

MSEs* = Three MSEs of 15 Marks each will conducted and marks of better 2 of these 3 MSEs will be considered for Continuous Assessment

TA ** = for Theory : 20 marks on lecture quizzes, 8 marks on assignments, 2 marks on class performance

TA = for Practical : MSPA will be 15 marks each**

		June 2020	1.02
Chairperson	Dean (Acad. Matters)	Date of Release	Version

Applicable for AY 2020-21 Onwards

Nagar Yuwak Shikshan Sanstha's

Yeshwantrao Chavan College of Engineering

(An Autonomous Institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)

SoE No. CV-201

B.E. SCHEME OF EXAMINATION 2018-19

(Revised Scheme of Examination w.e.f. 2020-21 onward)

Civil Engineering

SN	Sem	Type	Sub. Code	Subject	T/P	Contact Hours				Credits	% Weightage			ESE Duration Hours
						L	T	P	Hrs		MSEs*	TA**	ESE	
Fifth Semester														
1	5	HS	GE2311	Fundamental of Management	T	3	0	0	3	3	30	30	40	3
2	5	PC	CV2301	Reinforced Concrete Structures	T	3	0	0	3	3	30	30	40	4
3	5	PC	CV2302	Advanced Structural Analysis	T	3	0	0	3	3	30	30	40	3
4	5	PC	CV2303	**Lab:-** Analysis and Design Studio	P	0	0	2	2	1		60	40	
5	5	PE-I		Professional Elective-I	T	3	0	0	3	3	30	30	40	3
6	5	PE-I		**Lab:-** Professional Elective -I	P	0	0	2	2	1		60	40	
7	5	OE-I		Open Elective - I *	T	3	0	0	3	3	30	30	40	3
8	5	OE-I		Open Elective - II *	T	3	0	0	3	3	30	30	40	3
					TOTAL	**18**	**0**	**4**	**22**	**20**				

Professional Elective - I

1	5	PE-I	CV2311	PE-I : Advanced Surveying
	5	PE-I	CV2312	**PE-I Lab :** Advanced Surveying
2	5	PE-I	CV2313	PE-I : Computer Applications in Civil Engineering
	5	PE-I	CV2314	**PE-I Lab :** Computer Applications in Civil Engineering
3	5	PE-I	CV2315	PE-I : Building Construction and Materials
	5	PE-I	CV2316	**PE-I Lab :** Building Construction and Materials
4	5	PE-I	CV2317	PE-I : Matrix Analysis of Structures
	5	PE-I	CV2318	**PE-I Lab :** Matrix Analysis of Structures
5	5	PE-I	CV2319	PE-I : Advanced Concrete Technology
	5	PE-I	CV2320	**PE-I Lab :** Advanced Concrete Technology
6	5	PE-I	CV2321	PE-I : Water Treatment
	5	PE-I	CV2322	**PE-I Lab :** Water Treatment
7	5	PE-I	CV2323	PE-I : Environmental Management
	5	PE-I	CV2324	**PE-I Lab :** Environmental Management
8	5	PE-I	CV2325	PE-I : Soil Characterization & Identification
	5	PE-I	CV2326	**PE-I Lab :** Soil Characterization & Identification
9	5	PE-I	CV2327	PE-I : Geographical Information Systems
	5	PE-I	CV2328	**PE-I Lab :** Geographical Information Systems

Open Electives -I

1	5	OE-I	CV2331	OE-I : Building Services Engineering
2	5	OE-I	CV2332	OE-I : Construction Techniques
3	5	OE-I	CV2333	OE-I : Introduction to Environmental Management
4	5	OE-I	CV2334	OE-I : Basics of Transportation Engineering
5	5	OE-I	CV2335	OE-I : Basics of Water Resource Engineering
6	5	OE-I	CV2336	OE-I : Elements of Water Power Engineering

Open Electives -II

1	5	OE-II	CV2341	OE II : Elements of Earthquake Engineering
2	5	OE-II	CV2342	OE II : Introduction to Finite Element Method
3	5	OE-II	CV2343	OE II : Air Pollution and Solid Waste Management
4	5	OE-II	CV2344	OE-II : Environmental & Social Impact Assessment
5	5	OE-II	CV2345	OE II : Disaster Management
5	5	OE-II	CV2346	OE II : PE-II SOLID WASTE MANAGEMENT TECHNIQUES

MSEs* = Three MSEs of 15 Marks each will conducted and marks of better 2 of these 3 MSEs will be considered for Continuous Assessment

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TA = for Practical : MSPA will be 15 marks each**

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SoE No. CV-201

B.E. SCHEME OF EXAMINATION 2018-19

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Civil Engineering

SN	Sem	Type	Sub. Code	Subject	T/P	Contact Hours				Credits	% Weightage			ESE Duration Hours
						L	T	P	Hrs		MSEs*	TA**	ESE	
Sixth Semester														
1	6	HS	GE2312	Fundamental of Economics	T	3	0	0	3	3	30	30	40	3
2	6	PC	CV2351	Steel Structures	T	3	0	0	3	3	30	30	40	4
3	6	PC	CV2352	**Lab:-** Building Design Drawing	P	0	0	2	2	1		60	40	
4	6	PC	CV2353	Hydraulic Engineering	T	3	0	0	3	3	30	30	40	3
5	6	PC	CV2354	**Lab:-** Hydraulic Engineering	P	0	0	2	2	1		60	40	
6	6	PC	CV2355	Foundation Engineering	T	3	0	0	3	3	30	30	40	3
7	6	PE-II		Professional Elective -II	T	3	0	0	3	3	30	30	40	3
8	6	OE-II		Open Elective - III **	T	3	0	0	3	3	30	30	40	3
9	6	OE-IV		Open Elective - IV **	T	3	0	0	3	3	30	30	40	3
10	6	STR	CV2360	Industry Visit and its report	P	0	0	0	0	1		100		
					TOTAL	**21**	**0**	**4**	**25**	**24**				
Audit Courses														
1	6	IT	IT1121	Industrial Programmin Language	A	3	0	0	3	0				

Professional Elective - II

1	6	PE-II	CV2361	PE-II : Building Services
2	6	PE-II	CV2362	PE-II : New Engineering Materials
3	6	PE-II	CV2363	PE-II : Construction Management And Machinery
4	6	PE-II	CV2364	PE-II : Earthquake Engineering
5	6	PE-II	CV2365	PE-II : Optimization Techniques
6	6	PE-II	CV2366	PE-II : Introduction to Remote Sensing
7	6	PE-II	CV2367	PE-II : Environmental Geotechniques
8	6	PE-II	CV2368	PE-II : Traffic Engineering
9	6	PE-II	CV2369	PE-II : Water Transmission and Distribution Systems
10	6	PE-II	CV2370	PE-II : Structural Industrial Practices

Open Electives -III

1	VI	OE-III	CV2371	OE-III : Building Services Engineering
2	VI	OE-III	CV2372	OE-III : Construction Techniques
3	VI	OE-III	CV2373	OE-III : Introduction to Environmental Management
4	VI	OE-III	CV2374	OE-III : Basics of Transportation Engineering
5	VI	OE-III	CV2375	OE-III : Basics of Water Resource Engineering
6	VI	OE-III	CV2376	OE-III : Elements of Water Power Engineering

Open Electives -IV

1	VI	OE-IV	CV2381	OE-IV : Elements of Earthquake Engineering
2	VI	OE-IV	CV2382	OE-IV : Introduction to Finite Element Method
3	VI	OE-IV	CV2383	OE-IV : Air Pollution and Solid Waste Management
4	VI	OE-IV	CV2384	OE-IV : Environmental & Social Impact Assessment
5	VI	OE-IV	CV2385	OE-IV : Disaster Management

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Civil Engineering

SN	Sem	Type	Sub. Code	Subject	T/P	Contact Hours				Credits	% Weightage			ESE Duration Hours
						L	T	P	Hrs		MSEs*	TA**	ESE	
Seventh Semester														
1	7	PC	CV2401	Estimating & Costing	T	3	0	0	3	3	30	30	40	3
2	7	PC	CV2402	**Lab:-** Estimating &Costing	P	0	0	2	2	1		60	40	
3	7	PC	CV2403	Wastewater Engineering	T	3	0	0	3	3	30	30	40	3
4	7	PC	CV2404	Hydrology and Water Resources Engineering	T	3	0	0	3	3	30	30	40	3
5	7	PE-III		Professional Elective -III	T	3	0	0	3	3	30	30	40	3
6	7	PE-IV		Professional Elective -IV	T	3	0	0	3	3	30	30	40	3
7	7	PE-V		Professional Elective -V	T	3	0	0	3	3	30	30	40	3
8	7	STR	CV2409	Mini Project	P	0	0	4	4	2		60	40	
9	7	STR	CV2410	Campus Recruitment Training (CRT)	P	0	0	0	0	2		100		
					TOTAL	**18**	**0**	**6**	**24**	**23**				

Professional Elective - III

1	7	PE-III	CV2411	PE-III : Prestressed Concrete
2	7	PE-III	CV2412	PE-III : Advanced RCC
3	7	PE-III	CV2413	PE-III : Numerical Methods and Computational Techniques
4	7	PE-III	CV2414	PE-III : Environmental Impact Assessment
5	7	PE-III	CV2415	PE-III : Energy Conversion and Management
6	7	PE-III	CV2416	PE-III : Geotechnical Investigation & Ground Improvement Techniques
7	7	PE-III	CV2417	PE-III : Earth and Earth Retaining Structures
8	7	PE-III	CV2418	PE-III : Urban Transportation Planning
9	7	PE-III	CV2419	PE-III : Advanced Hydraulics

Professional Elective - IV

1	7	PE-IV	CV2421	PE-IV : Natural Resources Management
2	7	PE-IV	CV2422	PE-IV : Finite Element Method
3	7	PE-IV	CV2423	PE-IV : Introduction to Structural Dynamics
4	7	PE-IV	CV2424	PE-IV : Wastewater Treatment
5	7	PE-IV	CV2425	PE-IV : Environmental Legislation and Management System
6	7	PE-IV	CV2426	PE-IV : Advanced Foundation Engineering
7	7	PE-IV	CV2427	PE-IV : Geosynthetics
8	7	PE-IV	CV2428	PE-IV : Advanced Transportation Engineering
9	7	PE-IV	CV2429	PE-IV : Watershed Management

Professional Elective - V

1	7	PE-V	CV2431	PE-V : Maintenance and Rehabilitation Engineering
2	7	PE-V	CV2432	PE-V : Project Planning and Management
3	7	PE-V	CV2433	PE-V : Modern Surveying Technique
4	7	PE-V	CV2434	PE-V : Advanced Steel Design
5	7	PE-V	CV2435	PE-V : Design of Bridge Structures
6	7	PE-V	CV2436	PE-V : Industrial Waste Water Treatment and Reuse
7	7	PE-V	CV2437	PE-V : Finite Element methods in Geotechnical Engineering
8	7	PE-V	CV2438	PE-V : Pavement Design
9	7	PE-V	CV2439	PE-V : Water Power Engineering

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Eigth Semester				

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Civil Engineering

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						L	T	P	Hrs		MSEs*	TA**	ESE	
1	8	STR	CV2451	Major Project	P	0	0	12	12	9		60	40	
2	8	STR	CV2452	Extra curricular Activity Evaluation	P	0	0	0	0	1		100		
					TOTAL	0	0	12	12	10				
					GRAND TOTAL	88	0	42	130	163				

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Mechanical Engineering

SN	Sem	Type	Sub. Code	Subject	T/P	Contact Hours				Credits	% Weightage			ESE Duration Hours
						L	T	P	Hrs		MSEs*	TA**	ESE	
				TOTAL FIRST & SECOND SEM						47				
				Third Semester										
1	3	BS	GE2201	Engineering Mathematics III	T	3	0	0	3	3	30	30	40	3
2	3	PC	ME2201	Material Science & Metallurgy	T	3	0	0	3	3	30	30	40	3
3	3	PC	ME2202	**Lab:-** Material Science & Metallurgy	P	0	0	2	2	1	0	60	40	
4	3	PC	ME2203	Machining Process	T	3	0	0	3	3	30	30	40	3
5	3	PC	ME2204	**Lab:-** Machining Process	P	0	0	2	2	1	0	60	40	
6	3	PC	ME2205	Mechanics of Material	T	4	0	0	4	4	30	30	40	3
7	3	PC	ME2206	**Lab:-** Mechanics of Material	P	0	0	2	2	1	0	60	40	
8	3	PC	ME2207	Kinematics of Machines	T	3	0	0	3	3	30	30	40	3
9	3	PC	ME2208	Fluid Mechanics	T	4	0	0	4	4	30	30	40	3
10	3	PC	ME2209	**Lab:-** Fluid Mechanics	P	0	0	2	2	1	0	60	40	
				TOTAL		**20**	**0**	**8**	**28**	**24**				
				Fourth Semster										
1	4	BS	GE2204	Advance Mathematical Techniques	T	3	0	0	3	3	30	30	40	3
2	4	PC	ME2251	Design of Machine Elements	T	3	0	0	3	3	30	30	40	3
3	4	PC	ME2252	Engineering Thermodynamics	T	3	0	0	3	3	30	30	40	3
4	4	PC	ME2253	**Lab:-** Machine Drawing	P	0	0	2	2	1		60	40	
5	4	PC	ME2254	Manufacturing Process-II	T	3	0	0	3	3	30	30	40	3
6	4	PC	ME2255	**Lab:-** Manufacturing Process-II	P	0	0	2	2	1		60	40	
7	4	PC	ME2256	Mechanical measurement & Metrology	T	4	0	0	4	4	30	10	60	3
8	4	PC	ME2257	**Lab:-** Mechanical measurement & Me	P	0	0	2	2	1		60	40	
				TOTAL		**16**	**0**	**6**	**22**	**19**				
				Audit Courses										
1	4	HS	GE2121	Env Studies for 4 Sem. CV,ME,EE,IT	A	3	0	0	3	0				

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Mechanical Engineering

SN	Sem	Type	Sub. Code	Subject	T/P	Contact Hours				Credits	% Weightage			ESE Duration Hours
						L	T	P	Hrs		MSEs*	TA**	ESE	
Fifth Semester														
1	5	HS	GE2311	Fundamental of Management	T	3	0	0	3	3	30	30	40	3
2	5	PC	ME2301	Heat Transfer	T	3	0	0	3	3	30	30	40	3
3	5	PC	ME2302	**Lab:-** Heat Transfer	P	0	0	2	2	1		60	40	
4	5	PC	ME2303	Dynamics of Machines	T	3	0	0	4	3	30	30	40	3
5	5	PC	ME2304	**Lab:-** Dynamics of Machines	P	0	0	2	2	1		60	40	
6	5	PC	ME2305	Production Management	T	3	0	0	3	3	30	30	40	3
7	5	OE-I		Open Elective - I *	T	3	0	0	3	3	30	30	40	3
8	5	OE-II		Open Elective - II *	T	3	0	0	3	3	30	30	40	3
9	5	STR	ME2310	**Industry Visit and its report**	P	0	0	0	0	1		100		
					TOTAL	**18**	**0**	**4**	**23**	**21**				

Open Electives -I

1	5	OE-I	ME2331	OE I : Operations Research Techniques
2	5	OE-I	ME2332	OE I : Automobile Engineering
3	5	OE-I	ME2333	OE I : Control System Engineering
4	5	OE-I	ME2334	OEI: Robotics and Subtractive Manufacturing

Open Electives -II

4	5	OE-II	ME2341	OE II : Total Quality Management
5	5	OE-II	ME2342	OE II : Reliability Engineering
6	5	OE-II	ME2343	OE II : Power Generation Engineering
7	5	OE-II	ME2344	OE II : Project Evaluation & Management

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Mechanical Engineering

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						L	T	P	Hrs		MSEs*	TA**	ESE	
Sixth Semester														
1	6	HS	GE2312	Fundamental of Economics	T	3	0	0	3	3	30	30	40	3
2	6	PC	ME2351	Fluid Machines	T	3	0	0	3	3	30	30	40	3
3	6	PC	ME2352	**Lab:-** Fluid Machines	P	0	0	2	2	1		60	40	
4	6	PC	ME2353	Computer Aided Design (CAD LAB)	P	0	0	2	2	1		60	40	
5	6	PC	ME2354	Design of Mechanical Drives	T	3	0	0	3	3	30	30	40	3
6	6	PE-I		Professional Elective I	T	3	0	0	3	3	30	30	40	3
7	6	PE-I		**Lab:- Professional Elective I**	P	0	0	2	2	1		60	40	
8	6	OE-III		Open Elective - III **	T	3	0	0	3	3	30	30	40	3
9	6	OE-IV		Open Elective - IV **	T	3	0	0	3	3	30	30	40	3
				TOTAL		**18**	**0**	**6**	**24**	**21**				

*** Refure list Open Elective- I & II**

**** Refure list Open Elective- III & IV**

Audit Courses														
1	6	IT	IT1121	Industrial Programmin Language	A	3	0	0	3	0				

List of Professional Electives-I

1	6	PE-I	ME2361	PE I : Finite Element Methods
	6	PE-I	ME2362	PE I : Lab:- Finite Element Methods
2	6	PE-I	ME2363	PE I :Industrial Fluid Power
	6	PE-I	ME2364	PE I : Lab:- Industrial Fluid Power
3	6	PE-I	ME2365	PE I : I.C. Engines
	6	PE-I	ME2366	PE I : Lab:- I.C. Engines
4	6	PE-I	ME2367	PE I : Refrigeration & Cryogenics
	6	PE-I	ME2368	PE I : Lab:- Refrigeration & Cryogenics
5	6	PE-I	ME2369	PE I : Computer Integrated Manufacturing
	6	PE-I	ME2370	PE I : Lab:- Computer Integrated Manufacturing
6	6	PE-I	ME2371	PE I : Mechatronics
	6	PE-I	ME2372	PE I : Lab:- Mechatronics
	6	PE-I	ME2373	PE I: Thermal Engineering Systems
	6	PE-I	ME2374	PE I : Lab:Thermal Engineering Systems

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Mechanical Engineering

SN	Sem	Type	Sub. Code	Subject	T/P	Contact Hours				Credits	% Weightage			ESE Duration Hours
						L	T	P	Hrs		MSEs*	TA**	ESE	
Seventh Semester														
1	7	PC	ME2401	Automation In Production	T	3	0	0	3	3	30	30	40	3
2	7	PC	ME2402	**Lab:-** Automation In Production	P	0	0	2	2	1		60	40	
3	7	PE		Professional Elective II	T	3	0	0	3	3	30	30	40	3
4	7	PE		Professional Elective III	T	3	0	0	3	3	30	30	40	3
5	7	PE		**Lab:-** Professional Elective III	P	0	0	2	2	1		60	40	
6	7	PE		Professional Elective IV	T	3	0	0	3	3	30	30	40	3
7	7	PE		Professional Elective V	T	3	0	0	3	3	30	30	40	3
8	7	STR	ME2409	Mini Project	P	0	0	4	4	2		60	40	
9	7	STR	ME2410	Campus Recrutment Training (CRT)	P	0	0	0	0	2		100		
					TOTAL	**15**	**0**	**8**	**23**	**21**				

Professional Electives -II

1	7	PE-II	ME2411	PE II : Tool Design
2	7	PE-II	ME2412	PE II : Rapid Prototyping
3	7	PE-II	ME2413	PE II : Fuel Cell Technology
4	7	PE-II	ME2414	PE II : Energy Management
5	7	PE-II	ME2415	PE II : Material Handling Systems
6	7	PE-II	ME2416	PE II : Reliability Engineering
7	7	PE-II	ME2417	PE II : Advanced Manufacturing Techniques
8	7	PE-II	ME2418	PE II : Optimization Techniques

Professional Electives -III

9	7	PE-III	ME2421	PE III : Vibration
10	7	PE-III	ME2422	PE III : Lab:- Vibration
11	7	PE-III	ME2423	PE III : Machine Tool Design
12	7	PE-III	ME2424	PE III : Lab:- Machine Tool Design
13	7	PE-III	ME2425	PE III : Industrial Fluid Power
14	7	PE-III	ME2426	PE III : Lab:- Industrial Fluid Power
15	7	PE-III	ME2427	PE III : Vehicle Engineering
16	7	PE-III	ME2428	PE III : Lab:- Vehicle Engineering
17	7	PE-III	ME2429	PE III : Solar Energy and It'S Utilisation
18	7	PE-III	ME2430	PE III : Lab:- Solar Energy and It'S Utilisation
19	7	PE-III	ME2431	PE III : CNC & Robotics
20	7	PE-III	ME2432	PE III : Lab:- CNC & Robotics
21	7	PE-III	ME2433	PE III : DBMS
22	7	PE-III	ME2434	PE III : Lab:- DBMS
23	7	PE-III	ME2435	PE III : Advanced Welding Techniques
24	7	PE-III	ME2436	PE III : Lab:- Advanced Welding Techniques

Professional Electives -IV

25	7	PE-IV	ME2441	PE IV : Sysnthesis of Mechanism
26	7	PE-IV	ME2442	PE IV : Design for Manufacturing & Assembly
27	7	PE-IV	ME2443	PE IV : Renewable Energy System
28	7	PE-IV	ME2444	PE IV : Engineering of Plastics
29	7	PE-IV	ME2445	PE IV : Finance & Cost Management
30	7	PE-IV	ME2446	PE IV : Artificial Intelligence
31	7	PE-IV	ME2447	PE IV : Maintainance Management
32	7	PE-IV	ME2448	PE IV : TQM
33	7	PE-IV	ME2449	PE IV : Project Evaluation & Management
34	7	PE-V	ME2461	PE V : Stress Analysis
35	7	PE-V	ME2462	PE V : Product Design and Development
36	7	PE-V	ME2463	PE V : Power Plant Engineering
37	7	PE-V	ME2464	PE V : Air Conditioning
38	7	PE-V	ME2465	PE V : Value Engineering
39	7	PE-V	ME2466	PE V : Design of Experiments and Taguchi Methods
40	7	PE-V	ME2467	PE V : Industrial Safety
41	7	PE-V	ME2468	PE V : Control System Engineering
42	7	PE-V	ME2469	PE V : Tribology
43	7	PE-V	ME2465	PE V : Value Engineering
44	7	PE-V	ME2466	PE V : Design of Experiments and Taguchi Methods
45	7	PE-V	ME2467	PE V : Industrial Safety
46	7	PE-V	ME2468	PE V : Control System Engineering
47	7	PE-V	ME2469	PE V : Tribology

MSEs* = Three MSEs of 15 Marks each will conducted and marks of better 2 of these 3 MSEs will be considered for Continuous Assessment

TA ** = for Theory : 20 marks on lecture quizzes, 8 marks on assignments, 2 marks on class performance

TA = for Practical : MSPA will be 15 marks each**

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Yeshwantrao Chavan College of Engineering

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SoE No. ME-201

B.E. SCHEME OF EXAMINATION 2018-19

(Revised Scheme of Examination w.e.f. 2020-21 onward)

Mechanical Engineering

SN	Sem	Type	Sub. Code	Subject	T/P	Contact Hours				Credits	% Weightage			ESE Duration Hours
						L	T	P	Hrs		MSEs*	TA**	ESE	
Eigth Semester														
1	8	STR	ME2451	Major Project	P	0	0	12	12	9		60	40	
2	8	STR	ME2452	Extra curricular Activity Evaluation	P	0	0	0	0	1		100		
				TOTAL		**0**	**0**	**12**	**12**	**10**				
				GRAND TOTAL		**87**	**0**	**44**	**132**	**163**				

MSEs* = Three MSEs of 15 Marks each will conducted and marks of better 2 of these 3 MSEs will be considered for Continuous Assessment

TA ** = for Theory : 20 marks on lecture quizzes, 8 marks on assignments, 2 marks on class performance

TA = for Practical : MSPA will be 15 marks each**

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SoE No. EL-201

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Electrical Engineering

SN	Sem	Type	Sub. Code	Subject	T/P	Contact Hours				Credits	% Weightage			ESE Duration Hours
						L	T	P	Hrs		MSEs*	TA**	ESE	
TOTAL FIRST & SECOND SEM										47				
Third Semester														
1	3	BS	GE2201	Engineering Mathematics III	T	3	0	0	3	3	30	30	40	3 Hours
2	3	PC	EL2201	Analog Electronics	T	3	0	0	3	3	30	30	40	3 Hours
3	3	PC	EL2202	Lab. : Electronics Engineering Workshop	P	0	0	2	2	1		60	40	
4	3	PC	EL2203	Electrical Machines	T	4	0	0	4	4	30	30	40	3 Hours
5	3	PC	EL2204	Lab.:Electrical Machines	P	0	0	2	2	1		60	40	
6	3	PC	EL2205	Network Analysis	T	3	0	0	3	3	30	30	40	3 Hours
7	3	PC	EL2206	Lab.:Computer Programming	P	0	0	2	2	1		60	40	
8	3	PC	EL2207	Electrical Measurement & Instrumentation	T	3	0	0	3	3	30	30	40	3 Hours
9	3	PC	EL2208	Lab.:Electrical Measurement & Instrumentation	P	0	0	2	2	1		60	40	
					TOTAL	16	0	8	24	20				
Fourth Semster														
1	4	BS	GE2204	Advance Mathematical Techniques	T	3	0	0	3	3	30	30	40	3 Hours
2	4	PC	EL2251	Electrical Machines in Power System	T	3	0	0	3	3	30	30	40	3 Hours
3	4	PC	EL2252	Lab.:Electrical Machines in Power System	P	0	0	2	2	1		60	40	
4	4	PC	EL2253	Electrical Energy Generation System	T	3	0	0	3	3	30	30	40	3 Hours
5	4	PC	EL2254	Lab.:Renewable Energy System	P	0	0	2	2	1		60	40	
6	4	PC	EL2255	Electric & Magnetic Fields	T	3	0	0	3	3	30	30	40	3 Hours
7	4	PC	EL2256	Lab.:Electrical Engineering Workshop	P	0	0	2	2	1		60	40	
8	4	PC	EL2257	Microprocessor	T	3	0	0	3	3	30	30	40	3 Hours
9	4	PC	EL2258	Lab.:Microprocessor	P	0	0	2	2	1		60	40	
10	4	PC	EL2259	Signals & Systems	T	4	0	0	4	4	30	30	40	3 Hours
					TOTAL	19	0	8	27	23				
List of Audit Courses														
1	3	HS	GE2121	Env Studies for 3 Sem. EL,ET,CT	A	3	0	0	3	0				

MSEs* = Three MSEs of 15 Marks each will conducted and marks of better 2 of these 3 MSEs will be considered for Continuous Assessment

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TA = for Practical : MSPA will be 15 marks each**

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Electrical Engineering

SN	Sem	Type	Sub. Code	Subject	T/P	Contact Hours				Credits	% Weightage			ESE Duration Hours
						L	T	P	Hrs		MSEs*	TA**	ESE	
Fifth Semester														
1	5	HS	GE2312	Fundamental of Economics	T	3	0	0	3	3	30	30	40	3 Hours
2	5	PC	EL2301	Power Electronics	T	3	0	0	3	3	30	30	40	3 Hours
3	5	PC	EL2302	Lab.:Power Electronics	P	0	0	2	2	1		60	40	
4	5	PC	EL2303	Fundamentals of Power System	T	3	0	0	3	3	30	30	40	3 Hours
5	5	PC	EL2304	Electrical Drives	T	3	0	0	3	3	30	30	40	
6	5	PC	EL2305	Lab.:Electrical Drives	P	0	0	2	2	1		60	40	
7		OE		Open Elective - I *	T	3	0	0	3	3	30	30	40	3 Hours
8	5	OE		Open Elective - II *	T	3	0	0	3	3	30	30	40	3 Hours
					TOTAL	18	0	4	22	20				

Audit Courses														
1	5	IT	IT1121	Industrial Programmin Language	A	3	0	0	3	0				

Open Electives -I

1	5	OE	EL2311	OEI:Renewable Energy Generation System
2	5	OE	EL2312	OEI:Electrical Machines and their Applications
3	5	OE	EL2313	OEI:Testing and Maintenance of Electrical Machines

Open Electives -II

4	5	OE	EL2321	OEII:Electrical Energy Audit and Safety
5	5	OE	EL2322	OEII:Utilization of Electrical Energy
6	5	OE	EL2323	OEII:Power System Engineering

MSEs* = Three MSEs of 15 Marks each will conducted and marks of better 2 of these 3 MSEs will be considered for Continuous Assessment

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TA** = for Practical : MSPA will be 15 marks each

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Electrical Engineering

SN	Sem	Type	Sub. Code	Subject	T/P	Contact Hours				Credits	% Weightage			ESE Duration Hours
						L	T	P	Hrs		MSEs*	TA**	ESE	
Sixth Semester														
1	6	HS	GE2311	Fundamental of Management	T	3	0	0	3	3	30	30	40	3 Hours
2	6	PC	EL2351	Control System	T	3	0	0	3	3	30	30	40	3 Hours
3	6	PC	EL2352	Lab.:Control System	P	0	0	2	2	1		60	40	
4	6	PC	EL2353	Power System Analysis	T	3	0	0	3	3	30	30	40	3 Hours
5	6	PE		**Professional Elective I**	T	3	0	0	3	3	30	30	40	3 Hours
6	6	PE	EL2354	**Lab.:**Simulation of Power Electronics & Power System	P	0	0	2	2	1		60	40	
7	6	OE		**Open Elective III ***	T	3	0	0	3	3	30	30	40	3 Hours
8	6	OE		**Open Elective IV ***	T	3	0	0	3	3	30	30	40	3 Hours
9	6	PC	EL2355	Lab.:Substation Design	P	0	0	2	2	1		60	40	
10	5/6	STR	EL2360	**Industry Visit and its report**	P	0	0	0	0	1		60	40	
					TOTAL	**18**	**0**	**6**	**24**	**22**				

Professional Electives -I

1	6	PE	EL2361	**PEI:**Advanced Power Electronics
2	6	PE	EL2362	**PEI**:Electrical Distribution in Power System
3	6	PE	EL2363	**PEI:**Illumination Engineering (MOOC)
4	6	PE	EL2364	**PEI:**Electric Vehicles
5	6	PE	EL2365	**PEI**:Electric Power Utilization

Open Electives -III

6	6	OE	EL2371	**OEIII**:Renewable Energy Generation System
7	6	OE	EL2372	**OEIII**:Electrical Machines and their Applications
8	6	OE	EL2373	**OEIII**:Testing and Maintenance of Electrical Machines

Open Electives -IV

9	6	OE	EL2381	**OEIV:**Electrical Energy Audit and Safety
10	6	OE	EL2382	**OEIV**:Utilization of Electrical Energy
11	6	OE	EL2383	**OEIV**:Power System Engineering

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Electrical Engineering

SN	Sem	Type	Sub. Code	Subject	T/P	Contact Hours				Credits	% Weightage			ESE Duration Hours
						L	T	P	Hrs		MSEs*	TA**	ESE	
Seventh Semester														
1	7	PC	EL2401	Switchgear & Protection	**T**	3	0	0	3	3	30	30	40	3 Hours
2	7	PC	EL2402	Lab.:Switchgear & Protection	**P**	0	0	2	2	1		60	40	
3	7	PC	EL2403	High Voltage Engineering	T	3	0	0	3	3	30	30	40	3 Hours
4	7	PC	EL2404	Lab.:High Voltage Engineering	**P**	0	0	2	2	1		60	40	
5	7	PE		**Professional Elective II**	**T**	3	0	0	3	3	30	30	40	3 Hours
6	7	PE		**Professional Elective III**	**T**	3	0	0	3	3	30	30	40	3 Hours
7	7	PE		**Professional Elective IV**	**T**	3	0	0	3	3	30	30	40	3 Hours
8	7	STR	EL2409	Mini Project	**P**	0	0	4	4	2		100		
9	7	STR	EL2410	Campus Recrutment Training (CRT)	**P**	0	0	0	0	2		100		
					TOTAL	**15**	**0**	**8**	**23**	**21**				

Professional Electives -II

1	7	PE	EL2411	**PEII:** Fundamentals of Power Quality
2	7	PE	EL2412	**PEII:**Electrical Installation Design
3	7	PE	EL2413	**PEII:**Electrical Machine Design
4	7	PE	EL2421	**PEII:** Power System Operation and Control

Professional Electives -III

5	7	PE	EL2422	**PEIII**:FACTS Devices
6	7	PE	EL2423	**PEIII**:Electrical Energy Audit and Safety Analysis
7	7	PE	EL2424	**PEIII:**Advanced Control System
8	7	PE	EL2425	**PEIII:**Artificial Intelligence Based System

Professional Electives -IV

9	7	PE	EL2431	**PEIV:**Advanced Electrical Drives
10	7	PE	EL2432	**PEIV**:Fundamentals of Smart Grid
11	7	PE	EL2433	**PEIV**:Computer Methods in Power System
12	7	PE	EL2434	**PEIV**:EHVAC-HVDC Transmission

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Electrical Engineering

SN	Sem	Type	Sub. Code	Subject	T/P	Contact Hours				Credits	% Weightage			ESE Duration Hours
						L	T	P	Hrs		MSEs*	TA**	ESE	
Eigth Semester														
1	8	STR	EL2451	Major Project	P	0	0	12	12	9		60	40	
2	8	STR	EL2452	Extra curricular Activity Evaluation	P	0	0	0	0	1		100		
				TOTAL		**0**	**0**	**12**	**12**	**10**				
				GRAND TOTAL		**86**	**0**	**46**	**132**	**163**				

MSEs* = Three MSEs of 15 Marks each will conducted and marks of better 2 of these 3 MSEs will be considered for Continuous Assessment

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Electronics Engineering

SN	Sem	Type	Sub. Code	Subject	T/P	Contact Hours				Credits	% Weightage			ESE Duration Hours
						L	T	P	Hrs		MSEs*	TA**	ESE	
TOTAL FIRST & SECOND SEM										47				
Third Semester														
1	3	BS	GE2201	Engineering Mathematics III	T	3	0	0	3	3	30	30	40	3 Hours
2	3	PC	EE2201	Electronic Devices	T	3	1	0	4	4	30	30	40	3 Hours
3	3	PC	EE2202	**Lab:**Electronic Devices	P	0	0	2	2	1		60	40	
4	3	PC	EE2203	Signal and Systems	T	3	0	0	3	3	30	30	40	3 Hours
5	3	PC	EE2204	**Lab**:Programming Language	P	0	0	2	2	1		60	40	
6	3	PC	EE2205	Digital Logic Design	T	3	0	0	3	3	30	30	40	3 Hours
7	3	PC	EE2206	**Lab:** Digital Logic Design	P	0	0	2	2	1		60	40	
8	3	PC	EE2207	Network Analysis	T	3	0	0	3	3	30	30	40	3 Hours
9	3	PC	EE2208	**Lab:**Network Analysis	P	0	0	2	2	1		60	40	
					TOTAL	**15**	**1**	**8**	**24**	**20**				
Fourth Semster														
1	4	BS	GE2204	Advance Mathematical Techniques	T	3	0	0	3	3	30	30	40	3 Hours
2	4	PC	EE2251	Electronic Circuits	T	3	0	0	3	3	30	30	40	3 Hours
3	4	PC	EE2252	**Lab:**Electronic Circuits	P	0	0	2	2	1		60	40	
4	4	PC	EE2253	Microcontroller and its Applications	T	3	0	0	3	3	30	30	40	3 Hours
5	4	PC	EE2254	**Lab:** Microcontroller and its Applications	P	0	0	2	2	1		60	40	
6	4	PC	EE2255	Analog Communication	T	3	0	0	3	3	30	30	40	3 Hours
7	4	PC	EE2256	**Lab**.: Analog Communication	P	0	0	2	2	1		60	40	
8	4	PC	EE2257	Electromagnetic Fields	T	3	1	0	4	4	30	30	40	3 Hours
9	4	PC	EE2258	**Lab**: Simulation Lab/Workshp Lab	P	0	0	2	2	1		60	40	
					TOTAL	**15**	**1**	**8**	**24**	**20**				
Audit Courses														
1	4	HS	GE2121	Env Studies for 4 Sem. CV,ME,EE,IT	A	3	0	0	3	0				

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TA = for Practical : MSPA will be 15 marks each**

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Electronics Engineering

SN	Sem	Type	Sub. Code	Subject	T/P	Contact Hours				Credits	% Weightage			ESE Duration Hours
						L	T	P	Hrs		MSEs*	TA**	ESE	
Fifth Semester														
1	5	HS	GE2311	Fundamental of Management	T	3	0	0	3	3	30	30	40	3 Hours
2	5	PC	EE2301	Digital Signal Processing	T	3	0	0	3	3	30	30	40	3 Hours
3	5	PC	EE2302	**Lab:** Digital Signal Processing	P	0	0	2	2	1		60	40	
4	5	PC	EE2303	Analog Integrated Circuit & its Application	T	3	0	0	3	3	30	30	40	3 Hours
	5	PC	EE2304	**Lab:** Analog Integrated Circuit & its Application	P	0	0	2	2	1		60	40	
5	5	PE		Professional Elective-I	T	3	0	0	3	3	30	30	40	3 Hours
6	5	PE		Lab.: Professional Elective-I	P	0	0	2	2	1		60	40	
7	5	OE		Open Elective - I *	T	3	0	0	3	3	30	30	40	3 Hours
8	5	OE		Open Elective - II *	T	3	0	0	3	3	30	30	40	3 Hours
9	5	STR	EE2310	**Industry Visit and its report**	P	0	0	0	0	1		100		
					TOTAL	**18**	**0**	**6**	**24**	**22**				
List of Audit Courses														
1	5	IT	IT1121	Industrial Programmin Language	A	3	0	0	3	0				

Professional Electives -I

1	5	PE-I	EE2311	PE-I:Computer Communication Network
2	5	PE-I	EE2312	**Lab:**PE-I:Computer Communication Network
3	5	PE-I	EE2313	PE-I:Embedded System
4	5	PE-I	EE2314	**Lab:**PE-I:Embedded System
5	5	PE-I	EE2315	PE-I:Algorithm & Data Structure
6	5	PE-I	EE2316	**Lab:**PE-I:Algorithm & Data Structure
7	5	PE-I	EE2317	PE-I: Applied Machine Learning
8	5	PE-I	EE2318	**Lab:**PE-I:Applied Machine Learning

Open Electives -I

1	5	OE-I	EE2331	OE I : Fuzzy Logic & Neural Network
2	5	OE-I	EE2332	OE I : Basics of Analog and Digital Communication
3	5	OE-I	EE2333	OE I : Biomedical Instrumentation

Open Electives -II

1	5	OE-II	EE2341	OE II : Data Acquisition & Signal Conditioning
2	5	OE-II	EE2342	OE II : Microprocessor Programming
3	5	OE-II	EE2343	OE II : Consumer Electronics

MSEs* = Three MSEs of 15 Marks each will conducted and marks of better 2 of these 3 MSEs will be considered for Continuous Assessment

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TA = for Practical : MSPA will be 15 marks each**

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Electronics Engineering

SN	Sem	Type	Sub. Code	Subject	T/P	Contact Hours				Credits	% Weightage			ESE Duration Hours
						L	T	P	Hrs		MSEs*	TA**	ESE	
Sixth Semester														
1	6	HS	GE2312	Fundamental of Economics	T	3	0	0	3	3	30	30	40	3 Hours
2	6	PC	EE2351	Control System Engineering	T	3	0	0	3	3	30	30	40	3 Hours
3	6	PC	EE2352	Transmission Lines and Waveguides	P	0	0	2	2	1		60	40	
4	6	PC	EE2353	Digital Communication	T	3	0	0	3	3	30	30	40	3 Hours
5	6	PC	EE2354	**Lab:**Digital Communication	T	3	0	0	3	3	30	30	40	3 Hours
7	6	PE		Professional Elective-II	T	3	0	0	3	3	30	30	40	3 Hours
8	6	PE		Lab.: Professional Elective-II	P	0	0	2	2	1		60	40	
9	6	OE		Open Elective - III **	T	3	0	0	3	3	30	30	40	3 Hours
10	6	OE		Open Elective - IV **	T	3	0	0	3	3	30	30	40	3 Hours
					TOTAL	**21**	**0**	**4**	**25**	**23**				

Professional Electives -II

1	6	PE II	EE2361	PE II:Internet of Things
	6	PE II	EE2362	**Lab:** PE II:Internet of Things
2	6	PE II	EE2363	PE II:Digital CMOS Circuits
	6	PE II	EE2364	**Lab:** PE II:Digital CMOS Circuits
3	6	PE II	EE2365	PE II:Digital Image Processsing
	6	PE II	EE2366	**Lab:**PE II:Digital Image Processsing
4	6	PE II	EE2367	PE II:Object Oriented Programming
	6	PE II	EE2368	**Lab:**PE II:Object Oriented Programming

Open Electives -III

1	6	OE-III	EE2381	OE III : Fuzzy Logic & Neural Network
2	6	OE-III	EE2382	OE III : Basics of Analog and Digital Communication
3	6	OE-III	EE2383	OE III : Biomedical Instrumentation
Open Electives -IV				
4	6	OE-IV	EE2391	OE IV : Data Acquisition & Signal Conditioning
5	6	OE-IV	EE2392	OE IV : Microprocessor Programming
6	6	OE-IV	EE2393	OE IV : Consumer Electronics

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TA = for Practical : MSPA will be 15 marks each**

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Seventh Semester				

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Electronics Engineering

SN	Sem	Type	Sub. Code	Subject	T/P	Contact Hours				Credits	% Weightage			ESE Duration Hours
						L	T	P	Hrs		MSEs*	TA**	ESE	
1	7	PC	EE2401	Digital System Design	T	3	0	0	3	3	30	30	40	3 Hours
2	7	PC	EE2402	**Lab.**: Digital System Design	P	0	0	2	2	1		60	40	
3	7	PE		Professional Elective-III	T	3	0	0	3	3	30	30	40	3 Hours
4	7	PE		Professional Elective-IV	T	3	0	0	3	3	30	30	40	3 Hours
5	7	PE		Lab. : Professional Elective-IV	P	0	0	2	2	1		60	40	
6	7	PE		Professional Elective-V	T	3	0	0	3	3	30	30	40	3 Hours
7	7	PE		Professional Elective-VI	T	3	0	0	3	3	30	30	40	3 Hours
8	7	STR	EE2409	Mini Project	P	0	0	4	4	2		100		
9	7	STR	EE2410	Campus Recrutment Training (CRT)	P	0	0	0	0	2		100		
					TOTAL	15	0	8	23	21				

Professional Electives -III

1	7	PE III	EE2411	PE III: Switching Theory & Finite Automata
2	7	PE III	EE2412	PE III :Power Electronics
3	7	PE III	EE2413	PE III: Wireless Sensor Network
4	7	PE III	EE2414	PE III: VLSI Signal Processing

Professional Electives -IV

1	7	PE IV	EE2421	PE IV: Wireless Communication
	7	PE IV	EE2422	**Lab:** PE IV:Wireless Communication
2	7	PE IV	EE2423	PE IV: RF and Microwave
	7	PE IV	EE2424	**Lab:** PE IV: RF and Microwave
3	7	PE IV	EE2425	PE IV: Analog VLSI Design
	7	PE IV	EE2426	**Lab. :** PE IV: Analog VLSI Design
4	7	PE IV	EE2427	PE IV: Operating Systems
	7	PE IV	EE2428	**Lab:** PE IV:Operating Systems

Professional Electives -V

1	7	PE V	EE2431	PE V: Industrial Automation
2	7	PE V	EE2432	PE V: Nano Electronics
4	7	PE V	EE2433	PE V: Optical Communication
5	7	PE V	EE2434	PE V: RF Circuit Design

Professional Electives -VI

1	7	PE-VI	EE2441	PE-VI: E-Commerce and Data Analytics
2	7	PE-VI	EE2442	PE-VI: MEMS
3	7	PE-VI	EE2443	PE-VI: Biomedical Instrumentation
4	7	PE-VI	EE2444	PE-VI: Computer Organization

MSEs* = Three MSEs of 15 Marks each will conducted and marks of better 2 of these 3 MSEs will be considered for Continuous Assessment

TA ** = for Theory : 20 marks on lecture quizzes, 8 marks on assignments, 2 marks on class performance

TA = for Practical : MSPA will be 15 marks each**

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Nagar Yuwak Shikshan Sanstha's

Yeshwantrao Chavan College of Engineering

(An Autonomous Institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)

SoE No. EE-201

B.E. SCHEME OF EXAMINATION 2018-19

(Revised Scheme of Examination w.e.f. 2020-21 onward)

Electronics Engineering

SN	Sem	Type	Sub. Code	Subject	T/P	Contact Hours				Credits	% Weightage			ESE Duration Hours
						L	T	P	Hrs		MSEs*	TA**	ESE	
1	8	STR	EE2451	Major Project/Industrial Internship Evaluation	P	0	0	12	12	9		60	40	
2	8	STR	EE2452	Extra curricular Activity Evaluation	P	0	0	0	0	1		100		
					TOTAL	**0**	**0**	**12**	**12**	**10**				

GRAND TOTAL	84	2	46	132	163	

MSEs* = Three MSEs of 15 Marks each will conducted and marks of better 2 of these 3 MSEs will be considered for Continuous Assessment

TA ** = for Theory : 20 marks on lecture quizzes, 8 marks on assignments, 2 marks on class performance

TA = for Practical : MSPA will be 15 marks each**

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Nagar Yuwak Shikshan Sanstha's

Yeshwantrao Chavan College of Engineering

(An Autonomous Institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)

SoE No. ET-201

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Electronics & Telecommunication Engineering

SN	Sem	Type	Sub. Code	Subject	T/P	Contact Hours				Credits	% Weightage			ESE Duration Hours
						L	T	P	Hrs		MSEs*	TA**	ESE	
				TOTAL FIRST & SECOND SEM						47				
				Third Semester										
1	3	BS	GE2201	Engineering Mathematics III	T	3	0	0	3	3	30	30	40	3 Hours
2	3	PC	ET2201	Electronic Devices and Circuits	T	3	1	0	4	4	30	30	40	3 Hours
3	3	PC	ET2202	Lab: Electronic Devices and Circuits	P	0	0	2	2	1		60	40	
4	3	PC	ET2203	Digital Circuits and Fundamentals of Microprocessor.	T	3	0	0	3	3	30	30	40	3 Hours
5	3	PC	ET2204	**Lab:** Digital Circuits and Fundamentals of Microprocessor.	P	0	0	2	2	1		60	40	
6	3	PC	ET2205	Electronic Measurement and Instrumentation	T	3	0	0	3	3	30	30	40	3 Hours
7	3	PC	ET2206	Lab: Electronic Measurement and Instrumentation	P	0	0	2	2	1		60	40	
8	3	PC	ET2207	Network Analysis	T	3	0	0	3	3	30	30	40	3 Hours
				TOTAL THIRD SEM		**15**	**1**	**6**	**22**	**19**				
				Fourth Semster										
1	4	BS	GE2204	Advance Mathematical Techniques	T	3	0	0	3	3	30	30	40	3 Hours
2	4	PC	ET2251	Electromagnetic Fields	T	3	1	0	4	4	30	30	40	3 Hours
3	4	PC	ET2252	Microcontroller and Interfacing	T	3	0	0	3	3	30	30	40	3 Hours
4	4	PC	ET2253	Lab: Microcontroller and Interfacing	P	0	0	2	2	1		60	40	
5	4	PC	ET2254	Analog Communication	T	3	0	0	3	3	30	30	40	3 Hours
6	4	PC	ET2255	Lab: Analog Communication	P	0	0	2	2	1		60	40	
7	4	PC	ET2256	Control Systems	T	3	0	0	3	3	30	30	40	3 Hours
8	4	PC	ET2257	Lab.: Control Systems	P	0	0	2	2	1		60	40	
				TOTAL FOURTH SEM		**15**	**1**	**6**	**22**	**19**				
				List of Audit Courses										
1	3	HS	GE2121	Env Studies for 3 Sem. EL,ET,CT	A	3	0	0	3	0				

MSEs* = Three MSEs of 15 Marks each will be conducted and marks of better 2 of these 3 MSEs will be considered for Continuous Assessment

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TA = for Practical : MSPA will be 15 marks each**

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Yeshwantrao Chavan College of Engineering

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SoE No. ET-201

B.E. SCHEME OF EXAMINATION 2018-19

(Revised Scheme of Examination w.e.f. 2020-21 onward)

Electronics & Telecommunication Engineering

SN	Sem	Type	Sub. Code	Subject	T/P	Contact Hours				Credits	% Weightage			ESE Duration Hours
						L	T	P	Hrs		MSEs*	TA**	ESE	
Fifth Semester														
1	5	HS	GE2312	Fundamental of Economics	T	3	0	0	3	3	30	30	40	3 Hours
2	5	PC	ET2301	Analog Integrated circuits	T	3	0	0	3	3	30	30	40	3 Hours
3	5	PC	ET2302	Lab: Analog Integrated circuits	P	0	0	2	2	1		60	40	
4	5	PC	ET2303	Fields & Radiating Systems	T	3	1	0	4	4	30	30	40	3 Hours
5	5	PC	ET2304	Signals & Systems	T	3	0	0	3	3	30	30	40	3 Hours
6	5	PC	ET2305	Lab. :Signals & Systems	P	0	0	2	2	1		60	40	
7	5	OE		Open Elective - I *	T	3	0	0	3	3	30	30	40	3 Hours
8	5	OE		Open Elective - II *	T	3	0	0	3	3	30	30	40	3 Hours
9	5		ET2306	Lab.: Electronics Workshop	P	0	0	2	2	1		60	40	
10	5/6	STR	ET2310	Industry Visit and its report	P	0	0	0	0	1		100		
				TOTAL FIFTH SEM		18	1	6	25	23				

Audit Courses														
1	5	IT	IT1121	Industrial Programmin Language	A	3	0	0	3	0				

Open Electives -I

1	5	OE 1	ET2311	OE I : Microcontroller & Embedded Systems
2	5	OE 1	ET2312	OE I : Principles of Communication Engineering
3	5	OE 1	ET2313	OE I : Fundamentals of Image Processing

Open Electives -II

4	5	OE 2	ET2321	OE II : Soft computing
5	5	OE 2	ET2322	OE II : Industrial Instrumentation
6	5	OE 2	ET2323	OE II : Medical Electronics
7	5	OE 2	ET2324	OE II : Display Technology & Applications
7	5	OE 2	ET2325	OE II : PLCs and SCADA

MSEs* = Three MSEs of 15 Marks each will be conducted and marks of better 2 of these 3 MSEs will be considered for Continuous Assessment

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TA = for Practical : MSPA will be 15 marks each**

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Electronics & Telecommunication Engineering

SN	Sem	Type	Sub. Code	Subject	T/P	Contact Hours				Credits	% Weightage			ESE Duration Hours
						L	T	P	Hrs		MSEs*	TA**	ESE	
Sixth Semester														
1	6	HS	GE2311	Fundamental of Management	T	3	0	0	3	3	30	30	40	3 Hours
2	6	PC	ET2351	Digital Signal Processing	T	3	0	0	3	3	30	30	40	3 Hours
3	6	PC	ET2352	Lab: Digital Signal Processing	P	0	0	2	2	1		60	40	
4	6	PE		Professional Elective I	T	3	0	0	3	3	30	30	40	3 Hours
5	6	PE		Lab. : Professional Elective I	P	0	0	2	2	1		60	40	
6	6	PE		Professional Elective II	T	3	0	0	3	3	30	30	40	3 Hours
7	6	PE		Lab. : Professional Elective II	P	0	0	2	2	1		60	40	
8	6	OE		Open Elective - III **	T	3	0	0	3	3	30	30	40	3 Hours
9	6	OE		Open Elective - IV **	T	3	0	0	3	3	30	30	40	3 Hours
				TOTAL SIXTH SEM		**18**	**0**	**6**	**24**	**21**				

Professional Electives -I

1	6	PE I	ET2361	PE I : Object Oriented Programming
2	6	PE I	ET2362	PE I : Lab. Object Oriented Programming
3	6	PE I	ET2363	PE I : Discrete Structures
4	6	PE I	ET2364	PE I : Lab. Discrete Structures
5	6	PE I	ET2365	PE I : Microprocessors and Peripherals
6	6	PE I	ET2366	PE I : Lab. Microprocessors and Peripherals
7	6	PE I	ET2367	PE I : Electronic Instrumentation
8	6	PE I	ET2368	PE I :Lab Electronic Instrumentation
9	6	PE I	ET2371	PE I : Fundamentals of Computing
10	6	PE I	ET2372	PE I : Lab Fundamentals of Computing
11	6	PE I	ET2373	PE I : Algorithms and data structures
12	6	PE I	ET2374	PE I :Lab Algorithms and data structures

Professional Electives -II

1	6	PE II	ET2377	PE II : Antenna Theory & Design
2	6	PE II	ET2378	PE II : Lab. Antenna Theory & Design
3	6	PE II	ET2379	PE II : Digital system Design
4	6	PE II	ET2380	PE II : Lab. Digital system Design
5	6	PE II	ET2381	PE II : Internet of Things (IoT)
6	6	PE II	ET2382	PE II : Lab. Internet of Things (IoT)
7	6	PE II	ET2383	PE II : Optical Communication
8	6	PE II	ET2384	PE II : Lab. Optical Communication
9	6	PE II	ET2385	PE II :Principles of image processing
10	6	PE II	ET2386	PE II : Lab. Principles of image processing
11	6	PE II	ET2387	PE II : TV & Video Engineering
12	6	PE II	ET2388	PE II : Lab. TV & Video Engineering

Open Electives -III

1	6	OE 3	ET2391	OE III : Microcontroller & Embedded Systems
2	6	OE 3	ET2392	OE III : Principles of Communication Engineering
3	6	OE 3	ET2393	OE III : Fundamentals of Image Processing

Open Electives -IV

4	6	OE 4	ET2396	OE IV : Soft computing
5	6	OE 4	ET2397	OE IV : Industrial Instrumentation
6	6	OE 4	ET2398	OE IV : Medical Electronics
7	6	OE 4	ET2399	OE IV : Display Technology & Applications
7	6	OE 4	ET2400	OE IV : PLCs & SCADA

MSEs* = Three MSEs of 15 Marks each will be conducted and marks of better 2 of these 3 MSEs will be considered for Continuous

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TA = for Practical : MSPA will be 15 marks each**

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Nagar Yuwak Shikshan Sanstha's

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SoE No. ET-201

B.E. SCHEME OF EXAMINATION 2018-19

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Electronics & Telecommunication Engineering

SN	Sem	Type	Sub. Code	Subject	T/P	Contact Hours				Credits	% Weightage			ESE Duration Hours
						L	T	P	Hrs		MSEs*	TA**	ESE	
Seventh Semester														
1	7	PC	ET2401	RF & Microwave	T	3	0	0	3	3	30	30	40	3 Hours
2	7	PC	ET2402	Lab: RF & Microwave	P	0	0	2	2	1		60	40	
3	7	PC	ET2403	Digital Communication	T	3	0	0	3	3	30	30	40	3 Hours
4	7	PC	ET2405	Lab: Digital Communication	P	0	0	2	2	1		60	40	
5	7	PE		Professional Elective III	T	3	0	0	3	3	30	30	40	3 Hours
6	7	PE		Professional Elective IV	T	3	0	0	3	3	30	30	40	3 Hours
7	7	PE		Professional Elective V	T	3	0	0	3	3	30	30	40	3 Hours
8	7	PE		Professional Elective VI	T	3	0	0	3	3	30	30	40	3 Hours
9	7	STR	ET2409	Mini Project	P	0	0	4	4	2		100		
10	7	STR	ET2410	Campus Recrutment Training (CRT)	P	0	0	0	0	2		100		
				TOTAL SEVENTH SEM		**18**	**0**	**8**	**26**	**24**				

Professional Electives -III

1	7	PE	ET2411	PE III : Power Electronics
2	7	PE	ET2412	PE III : Data Compression & Encryption
3	7	PE	ET2413	PE III : Analog VLSI
4	7	PE	ET2414	PE III : Error Correcting Codes
5	7	PE	ET2415	PE III : Wireless Mobile Communication Systems

Professional Electives -IV

6	7	PE	ET2421	PE IV : Satellite Communication & RADAR Engineering
7	7	PE	ET2422	PE IV : Embedded System
8	7	PE	ET2423	PE IV : Switching Theory
9	7	PE	ET2424	PE IV : Topics in Machine Learning
10	7	PE	ET2425	PE IV : Multimedia Communications

Professional Electives -V

11	7	PE	ET2431	PE V : Display Technology
12	7	PE	ET2432	PE V : Biomedical Instrumentation
13	7	PE	ET2433	PE V : Fuzzy Logic & Neural Network
14	7	PE	ET2434	PE V : Wireless Sensor Networks
15	7	PE	ET2435	PE V : RF Circuit Design

Professional Electives -VI

16	7	PE	ET2441	PE VI : CMOS VLSI Design
17	7	PE	ET2442	PE VI : Digital Image Analysis for Remote Sensing
18	7	PE	ET2443	PE VI : Microwave Integrated circuits
19	7	PE	ET2444	PE VI : Communication Networks
20	7	PE	ET2445	PE VI : Computer Architecture and Organization
20	7	PE	ET2446	PE VI : PLCs & SCADA

MSEs* = Three MSEs of 15 Marks each will be conducted and marks of better 2 of these 3 MSEs will be considered for Continuous Assessment

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TA = for Practical : MSPA will be 15 marks each**

Chairperson	Dean (Acad. Matters)	June 2020	1.02
		Date of Release	Version

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Electronics & Telecommunication Engineering

SN	Sem	Type	Sub. Code	Subject	T/P	Contact Hours				Credits	% Weightage			ESE Duration Hours
						L	T	P	Hrs		MSEs*	TA**	ESE	
Eigth Semester														
2	8	STR	ET2451	Major Project	P	0	0	12	12	9		60	40	
3	8	STR	ET2452	Extra curricular Activity Evaluation	P	0	0	0	0	1		100		
				TOTAL EIGHTH SEM		**0**	**0**	**12**	**12**	**10**				

				GRAND TOTAL	**84**	**3**	**44**	**131**	**163**		

MSEs* = Three MSEs of 15 Marks each will be conducted and marks of better 2 of these 3 MSEs will be considered for Continuous Assessment

TA ** = for Theory : 20 marks on lecture quizzes, 8 marks on assignments, 2 marks on class performance

TA = for Practical : MSPA will be 15 marks each**

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SoE No. CT-201

B.E. SCHEME OF EXAMINATION 2018-19

(Revised Scheme of Examination w.e.f. 2020-21 onward)

Computer Technology

SN	Sem	Type	Sub. Code	Subject	T/P	Contact Hours				Credits	% Weightage			ESE Duration Hours
						L	T	P	Hrs		MSEs*	TA**	ESE	
TOTAL FIRST & SECOND SEM										47				
Third Semester														
1	3	BS	GE2201	Engineering Mathematics III	T	3	0	0	3	3	30	30	40	3 Hours
2	3	PC	CT2201	Computer Architecture & Organisation	T	4	0	0	4	4	30	30	40	3 Hours
3	3	PC	CT2202	Object Oriented Programming	T	3	0	0	3	3	30	30	40	3 Hours
4	3	PC	CT2203	Lab: Object Oriented Programming	P	0	0	2	2	1		60	40	
5	3	PC	CT2204	Data Structures	T	4	0	0	4	4	30	30	40	3 Hours
6	3	PC	CT2205	Lab: Data Structures	P	0	0	2	2	1		60	40	
7	3	PC	CT2206	Lab: Python Programming	P	0	0	2	2	1		60	40	
8	3	PC	CT2207	Lab: Web Technology	P	0	0	2	2	1		60	40	
				TOTAL		14	0	8	22	18				
Fourth Semster														
1	4	BS	GE2206	Discrete Mathematics and Probability Theory	T	3	0	0	3	3	30	30	40	3 Hours
2	4	PC	CT2251	Operating Systems	T	3	0	0	3	3	30	30	40	3 Hours
3	4	PC	CT2252	Lab:Operating Systems	P	0	0	2	2	1		60	40	
4	4	PC	CT2253	Advanced Data Structures	T	4	0	0	4	4	30	30	40	3 Hours
5	4	PC	CT2254	Lab: Advanced Data Structures	P	0	0	2	2	1		60	40	
6	4	PC	CT2255	Mathematical Foundations for Data Analysis	T	3	0	0	3	3	30	30	40	3 Hours
7	4	PC	CT2256	Lab: Mathematical Foundations for Data Analysis	P	0	0	2	2	1		60	40	
8	4	PC	CT2257	Database Management Systems	T	3	0	0	3	3	30	30	40	3 Hours
9	4	PC	CT2258	Lab: Database Management Systems	P	0	0	2	2	1		60	40	
				TOTAL		16	0	8	24	20				
Audit Courses														
1	3	HS	GE2121	Env Studies for 3 Sem. EL,ET,CT	A	3	0	0	3	0				

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TA = for Practical : MSPA will be 15 marks each**

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Computer Technology

SN	Sem	Type	Sub. Code	Subject	T/P	Contact Hours				Credits	% Weightage			ESE Duration Hours
						L	T	P	Hrs		MSEs*	TA**	ESE	
Fifth Semester														
1	5	HS	GE2312	Fundamentals of Economics	T	3	0	0	3	3	30	30	40	3 Hours
2	5	PC	CT2301	Computer Networks	T	3	0	0	3	3	30	30	40	3 Hours
3	5	PC	CT2302	Lab: Computer Networks	P	0	0	2	2	1		60	40	
4	5	PC	CT2303	Theoretical Foundations of Computer Science	T	4	0	0	4	4	30	30	40	3 Hours
5	5	PE		Professional Elective-I	T	3	0	0	3	3	30	30	40	3 Hours
6	5	PE		Lab: Professional Elective-I	P	0	0	2	2	1		60	40	
7	5	OE		Open Elective - I *	T	3	0	0	3	3	30	30	40	3 Hours
8	5	OE		Open Elective - II *	T	3	0	0	3	3	30	30	40	3 Hours
9	**5/6**	**STR**	**CT2310**	**IND VISIT and its report**	P	**0**	**0**	**0**	**0**	**1**		100		
					TOTAL	**19**	**0**	**4**	**23**	**22**				

Professional Electives -I

1	5	PE-I	CT2311	PE I: Randomized Algorithm
	5	PE-I	CT2312	PE I: Lab Randomized Algorithm
2	5	PE-I	CT2313	PE I: Mobile Operating System
	5	PE-I	CT2314	PE I: Lab: Mobile Operating System
3	~~5~~	PE-I	CT2315	PE I: Advanced Web Technologies
	5	PE-I	CT2316	PE I: Lab: Advanced Web Technologies
4	5	PE-I	CT2317	PE I: Introduction to Geographical Information System
	5	PE-I	CT2318	PE I: Lab: Introduction to Geographical Information System
5	5	PE-I	CT2319	PE I: Computer Graphics
	5	PE-I	CT2320	PE I: Lab: Computer Graphics
6	5	PE-I	CT2321	PE I: Realtime Systems
	5	PE-I	CT2322	PE I: Lab:Realtime Systems
7	5	PE-I	CT2323	PEI : Privacy and Security in Online Social Networks
	5	PE-I	CT2324	PEI : Lab: Privacy and Security in Online Social Networks

Open Electives -I

1	5	OE-I	CT2325	OE I: Introduction to DBMS
2	5	OE-I	CT2326	OE I: Essentials of IT
3	5	OE-I	CT2327	OE I: Image Processing
4	5	OE-I	CT2328	OE I: Operating System Concepts
5	5	OE-I	CT2329	OE-I Introduction to Salesforce

Open Electives -II

1	5	OE-II	CT2331	OE II: Soft Computing
2	5	OE-II	CT2332	OE II: Software Testing
3	5	OE-II	CT2333	OE II: Internet Technology
4	5	OE-II	CT2334	OE II: Multimedia and Animation
5	5	OE-II	CT2335	OE II: Current Trends and Technologies

MSEs* = Three MSEs of 15 Marks each will conducted and marks of better 2 of these 3 MSEs will be considered for Continuous Assessment

TA ** = for Theory : 20 marks on lecture quizzes, 8 marks on assignments, 2 marks on class performance

TA = for Practical : MSPA will be 15 marks each**

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Applicable for AY 2020-21 Onwards

Sixth Semester

Nagar Yuwak Shikshan Sanstha's

Yeshwantrao Chavan College of Engineering

(An Autonomous Institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)

SoE No. CT-201

B.E. SCHEME OF EXAMINATION 2018-19

(Revised Scheme of Examination w.e.f. 2020-21 onward)

Computer Technology

SN	Sem	Type	Sub. Code	Subject	T/P	Contact Hours				Credits	% Weightage			ESE Duration Hours
						L	T	P	Hrs		MSEs*	TA**	ESE	
1	6	HS	GE2311	Fundamentals of Management	T	3	0	0	3	3	30	30	40	3 Hours
2	6	PC	CT2351	Design & Analysis of Algorithms	T	3	0	0	3	3	30	30	40	3 Hours
3	6	PC	CT2352	Lab: Design & Analysis of Algorithms	P	0	0	2	2	1		60	40	
4	6	PC	CT2353	Language Processor	T	3	0	0	3	3	30	30	40	3 Hours
5	6	PC	CT2354	Lab: Language Processor	P	0	0	2	2	1		60	40	
6	6	PC	CT2355	Software Engineering	T	3	0	0	3	3	30	30	40	3 Hours
7	6	PC	CT2356	Lab: Software Engineering	P	0	0	2	2	1		60	40	
8	6	PE		Professional Elective-II	T	3	0	0	3	3	30	30	40	3 Hours
9	6	PE		Lab: Professional Elective-II	P	0	0	2	2	1		60	40	
10	6	OE		Open Elective - III **	T	3	0	0	3	3	30	30	40	3 Hours
11	6	OE		Open Elective - IV **	T	3	0	0	3	3	30	30	40	3 Hours
					TOTAL	21	0	8	29	25				

Professional Electives -II

1	6	PE-II	CT2361	PE II: Digital Image Processing
	6	PE-II	CT2362	PE II: Lab: Digital Image Processing
2	6	PE-II	CT2363	PE II: Internet of Things
	6	PE-II	CT2364	PE II: Lab: Internet of Things
3	6	PE-II	CT2365	PE II: Business Intelligence
	6	PE-II	CT2366	PE II: Lab: Business Intelligence
4	6	PE-II	CT2367	PE II: Introduction to Natural Language Processing
	6	PE-II	CT2368	PE II: Lab:Introduction to Natural Language Processing
5	6	PE-II	CT2369	PE II: Customer Relationship Management
	6	PE-II	CT2370	PE II: Lab: Customer Relationship Management

Open Electives -III

1	6	OE-III	CT2371	OE III: Introduction to DBMS
2	6	OE-III	CT2372	OE III: Essestials of IT
3	6	OE-III	CT2373	OE III: Image Processing
4	6	OE-III	CT2374	OE III: Operating System Concepts
5	6	OE-III	CT2375	OE III: Introduction to Salesforce

Open Electives -IV

1	6	OE-IV	CT2381	OE IV: Soft Computing
2	6	OE-IV	CT2382	OE IV: Software Testing
3	6	OE-IV	CT2383	OE IV: Internet Technology
4	6	OE-IV	CT2384	OE IV: Multimedia and Animation
5	6	OE-IV	CT2385	OE IV: Current Trends and Technologies

MSEs* = Three MSEs of 15 Marks each will conducted and marks of better 2 of these 3 MSEs will be considered for Continuous Assessment

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TA = for Practical : MSPA will be 15 marks each**

Chairperson	Dean (Acad. Matters)	June 2020	1.02
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Applicable for AY 2020-21 Onwards

Seventh Semester

Nagar Yuwak Shikshan Sanstha's

Yeshwantrao Chavan College of Engineering

(An Autonomous Institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)

SoE No. CT-201

B.E. SCHEME OF EXAMINATION 2018-19

(Revised Scheme of Examination w.e.f. 2020-21 onward)

Computer Technology

SN	Sem	Type	Sub. Code	Subject	T/P	Contact Hours				Credits	% Weightage			ESE Duration Hours
						L	T	P	Hrs		MSEs*	TA**	ESE	
1	7	PC	CT2401	Artificial Intelligence	T	3	0	0	3	3	30	30	40	3 Hours
2	7	PC	CT2402	Lab: Artificial Intelligence	P	0	0	2	2	1		60	40	
3	7	PC	CT2403	Network Security	T	3	0	0	3	3	30	30	40	3 Hours
4	7	PE		Professional Elective-III	T	3	0	0	3	3	30	30	40	3 Hours
5	7	PE		Professional Elective-IV	T	3	0	0	3	3	30	30	40	3 Hours
6	7	PE		Lab:Professional Elective-IV	P	0	0	2	2	1		60	40	
7	7	PE		Professional Elective-V	T	3	0	0	3	3	30	30	40	3 Hours
8	7	STR	CT2409	Mini Project	P	0	0	4	4	2		100		
9	7	STR	CT2410	CRT	P	0	0	0	0	2		100		
					TOTAL	15	0	8	23	21				

Professional Electives -III

1	7	PE-III	CT2411	PE III: Neural Network & Fuzzy Logic
2	7	PE-III	CT2412	PE III: Adhoc Wireless Network
3	7	PE-III	CT2413	PE III: Information Retrival System
4	7	PE-III	CT2414	PE III: Human Computer Interaction

Professional Electives -IV

1	7	PE-IV	CT2421	PE IV: Pattern Recognization
	7	PE-IV	CT2422	PE IV: Lab: Pattern Recognization
2	7	PE-IV	CT2423	PE IV: Cyber Forensic
	7	PE-IV	CT2424	PE IV: Lab: Cyber Forensic
3	7	PE-IV	CT2425	PE IV: Machine Learning
	7	PE-IV	CT2426	PE IV: Lab: Machine Learning
4	7	PE-IV	CT2427	PE IV: Design Patterns
	7	PE-IV	CT2428	PE IV: Lab: Design Patterns
5	7	PE-IV	CT2429	PE IV: Mobile Communication
	7	PE-IV	CT2430	PE IV: Lab: Mobile Communication
6	7	PE-IV	CT2431	PE IV: Software Project Management
	7	PE-IV	CT2432	PE IV: Lab: Software Project Management
7	7	PE-IV	CT2433	PE IV: Numerical Computing
	7	PE-IV	CT2434	PE IV: Lab: Numerical Computing

Professional Electives -V

1	7	PE-V	CT2435	PE V: Cloud Computing
2	7	PE-V	CT2436	PE V: Parallel Programming
3	7	PE-V	CT2437	PE V: Data Mining
4	7	PE-V	CT2438	PE V: Embedded Systems
5	7	PE-V	CT2439	PE V: Operations Research

MSEs* = Three MSEs of 15 Marks each will conducted and marks of better 2 of these 3 MSEs will be considered for Continuous Assessment

TA ** = for Theory : 20 marks on lecture quizzes, 8 marks on assignments, 2 marks on class performance

TA** = for Practical : MSPA will be 15 marks each

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Applicable for AY 2020-21 Onwards

Eigth Semester

1	8	STR	CT2451	Major Project	P	0	0	12	12	9		60	40	

Nagar Yuwak Shikshan Sanstha's

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B.E. SCHEME OF EXAMINATION 2018-19

(Revised Scheme of Examination w.e.f. 2020-21 onward)

Computer Technology

SN	Sem	Type	Sub. Code	Subject	T/P	Contact Hours				Credits	% Weightage			ESE Duration Hours
						L	T	P	Hrs		MSEs*	TA**	ESE	
2	8	STR	CT2452	Extra Curricular Activity Evaluation	P	0	0	0	0	1		100		
					TOTAL	0	0	12	12	10				

GRAND TOTAL	85	0	48	133	163	

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TA** = for Practical : MSPA will be 15 marks each

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Nagar Yuwak Shikshan Sanstha's

Yeshwantrao Chavan College of Engineering

(An Autonomous Institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)

SoE No. IT-201

B.E. SCHEME OF EXAMINATION 2018-19

(Revised Scheme of Examination w.e.f. 2020-21 onward)

Information Technology

SN	Sem	Type	Sub. Code	Subject	T/P	Contact Hours				Credits	% Weightage			ESE Duration Hours
						L	T	P	Hrs		MSEs*	TA**	ESE	
				TOTAL FIRST & SECOND SEM						47				
				Third Semester										
1	3	BS	GE2201	Engineering Mathematics III	T	3	0	0	3	3	30	30	40	3
2	3	PC	IT2201	Digital Circuits & Microprocessors	T	3	0	0	3	3	30	30	40	3
3	3	PC	IT2202	Digital Circuits & Microprocessors Lab	P	0	0	2	2	1		60	40	
4	3	PC	IT2203	Object Oriented Programming	T	3	0	0	3	3	30	30	40	3
5	3	PC	IT2204	Object Oriented Programming Lab	P	0	0	2	2	1		60	40	
6	3	PC	IT2205	Data Structures and Program Design-I	T	4	0	0	4	4	30	30	40	3
7	3	PC	IT2206	Data Structures and Program Design-I Lab	P	0	0	2	2	1		60	40	
8	3	PC	IT2207	Computer Architecture & Organization (Self -Learning-Online)	T	3	0	0	3	3	30	30	40	3
9	3	PC	IT2208	Software Lab	P	0	0	2	2	1		60	40	
				TOTAL THIRD SEM		16	0	8	24	20				

				Fourth Semster										
1	4	BS	GE2206	Discrete Mathematics and Probability Theory	T	3	0	0	3	3	30	30	40	3
2	4	PC	IT2251	Data Structures and Program Design-II	T	3	0	0	3	3	30	30	40	3
3	4	PC	IT2252	Data Structures and Program Design-II Lab	P	0	0	2	2	1		60	40	
4	4	PC	IT2253	Computer Networks	T	4	0	0	4	4	30	30	40	3
5	4	PC	IT2254	Computer Networks Lab	P	0	0	2	2	1		60	40	
6	4	PC	IT2255	Operating Systems	T	3	0	0	3	3	30	30	40	3
7	4	PC	IT2256	Operating Systems Lab	P	0	0	2	2	1		60	40	
8	4	PC	IT2257	Theory of Computation	T	3	0	0	3	3		60	40	
				TOTAL FOURTH SEM		16	0	6	22	19				

Audit Courses														
1	4	HS	GE2121	Env Studies for 4 Sem. CV,ME,EE,IT	A	3	0	0	3	0				

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TA = for Practical : MSPA will be 15 marks each**

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Applicable for AY 2020-21 Onwards

Nagar Yuwak Shikshan Sanstha's

Yeshwantrao Chavan College of Engineering

(An Autonomous Institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)

SoE No. IT-201

B.E. SCHEME OF EXAMINATION 2018-19

(Revised Scheme of Examination w.e.f. 2020-21 onward)

Information Technology

SN	Sem	Type	Sub. Code	Subject	T/P	Contact Hours				Credits	% Weightage			ESE Duration Hours
						L	T	P	Hrs		MSEs*	TA**	ESE	
Fifth Semester														
1	5	HS	GE2312	Fundamental of Economics	T	3	0	0	3	3	30	30	40	3
2	5	PC	IT2301	Data Base Management Systems	T	3	0	0	3	3	30	30	40	3
3	5	PC	IT2302	**Lab :** Data Base Management Systems	P	0	0	2	2	1		60	40	
4	5	PC	IT2303	Software Engineering (Self-Learning-Online)	T	3	0	0	3	3	30	30	40	3
5	5	PE		**Professional Elective - I**	T	3	0	0	3	3	30	30	40	3
6	5	PE		**Lab : Professional Elective-I**	P	0	0	2	2	1		60	40	
7	5	OE		**Open Elective-I**	T	3	0	0	3	3	30	30	40	3
8	5	OE		**Open Elective-II**	T	3	0	0	3	3	30	30	40	3
9	5	STR	IT2310	**Industrial Visit and Learning**	P	0	0	0	0	1		100		
				TOTAL FIFTH SEM		**18**	**0**	**4**	**22**	**21**				

Professional Electives -I

1	5	PE-1	IT2311	PE I: Web Programming
	5	PE-1	IT2312	PE I: Lab.: Web Programming
2	5	PE-1	IT2313	PE I: Data Analysis and Statistics
	5	PE-1	IT2314	PE I: Lab.: Data Analysis and Statistics
3	5	PE-1	IT2315	PE I: Customer Relationship Management
	5	PE-1	IT2316	PE I: Lab. Customer Relationship Management

Open Electives -I

1	5	OE I	IT2321	OE I: Industry 4.0
2	5	OE I	IT2322	OE I: Core JAVA

Open Electives -II

1	5	OE-II	IT2331	OE II: Introduction to Machine Learning
2	5	OE-II	IT2332	OE II: Information Security

MSEs* = Three MSEs of 15 Marks each will be conducted and marks of better 2 of these 3 MSEs will be considered for Continuous Assessment

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TA = for Practical : MSPA will be 15 marks each**

		June 2020	1.02	Applicable for AY 2020-21 Onwards
Chairperson	Dean (Acad. Matters)	Date of Release	Version	

Nagar Yuwak Shikshan Sanstha's

Yeshwantrao Chavan College of Engineering

(An Autonomous Institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)

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B.E. SCHEME OF EXAMINATION 2018-19

(Revised Scheme of Examination w.e.f. 2020-21 onward)

Information Technology

SN	Sem	Type	Sub. Code	Subject	T/P	Contact Hours				Credits	% Weightage			ESE Duration Hours
						L	T	P	Hrs		MSEs*	TA**	ESE	
Sixth Semester														
1	6	HS	GE2311	Fundamentals of Management	T	3	0	0	3	3	30	30	40	3
2	6	PC	IT2351	Design & Analysis of Algorithms	T	3	0	0	3	3	30	30	40	3
3	6	PC	IT2352	**Lab:** Design & Analysis of Algorithms	P	0	0	2	2	1		60	40	
5	6	PC	IT2353	Principles of Compiler Design	T	3	0	0	3	3	30	30	40	3
6	6	PC	IT2354	**Lab:** Principles of Compiler Design	P	0	0	2	2	1		60	40	
7	6	PE		**Professional Elective - II**	T	3	0	0	3	3	30	30	40	3
8	6	PE		**Lab : Professional Elective-II**	P	0	0	2	2	1		60	40	
9	6	OE		**Open Elective-III**	T	3	0	0	3	3	30	30	40	3
10	6	OE		**Open Elective-IV**	T	3	0	0	3	3	30	30	40	3
				TOTAL SIXTH SEM		**18**	**0**	**6**	**24**	**21**				

List of Professional Electives-I & II

Professional Electives -II				
	6	PE-2	IT2361	PE II::Machine Learning
1	6	PE-2	IT2362	PE II:Machine Learning Lab
	6	PE-2	IT2363	PE II: Business Intelligence
2	6	PE-2	IT2364	PE II: Lab.: Business Intelligence
	6	PE-2	IT2365	PE II: Internet of Things
3	6	PE-2	IT2366	PE II: Lab.: Internet of Things

Open Electives -III

1	6	OE-III	IT2371	OE-III : Industry 4.0
2	6	OE-III	IT2372	OE-III : Core JAVA

Open Electives -IV

1	6	OE-IV	IT2381	OE-IV: Introduction to Machine Learning
2	6	OE-IV	IT2382	OE-IV: Information Security

MSEs* = Three MSEs of 15 Marks each will be conducted and marks of better 2 of these 3 MSEs will be considered for Continuous Assessment

TA ** = for Theory : 20 marks on lecture quizzes, 8 marks on assignments, 2 marks on class performance

TA = for Practical : MSPA will be 15 marks each**

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Chairperson	Dean (Acad. Matters)	Date of Release	Version	

Nagar Yuwak Shikshan Sanstha's

Yeshwantrao Chavan College of Engineering

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B.E. SCHEME OF EXAMINATION 2018-19

(Revised Scheme of Examination w.e.f. 2020-21 onward)

Information Technology

SN	Sem	Type	Sub. Code	Subject	T/P	Contact Hours				Credits	% Weightage			ESE Duration Hours
						L	T	P	Hrs		MSEs*	TA**	ESE	
Seventh Semester														
1	7	PC	IT2401	Data Mining	T	3	0	0	3	3	30	30	40	3
2	7	PC	IT2402	Data Mining Lab	P	0	0	2	2	1		60	40	
3	7	PC	IT2403	Principles of Artificial Intelligence	T	3	0	0	3	3	30	30	40	3
4	7	PE		Professional Elective III	T	3	0	0	3	3	30	30	40	3
5	7	PE		Professional Elective IV	T	3	0	0	3	3	30	30	40	3
6	7	PE		Lab.: Professional Elective IV	P	0	0	2	2	1		60	40	
7	7	PE		Professional Elective V	T	3	0	0	3	3	30	30	40	3
8	7	PE		Professional Elective VI	T	3	0	0	3	3	30	30	40	3
8	7	STR	IT2409	Mini Project	P	0	0	4	4	2		60	40	
9	7	STR	IT2410	Campus Recrutment Training (CRT)	P	0	0	0	0	2		100		
				TOTAL SEVENTH SEM		18	0	8	26	24				

List of Professional Electives-III, IV,V & VI

Professional Electives -III				
1	7	PE-3	IT2411	PE III: Cloud Computing
2	7	PE-3	IT2412	PE III:Real Time Systems
3	7	PE-3	IT2413	PE III: Network Security
4	7	PE-3	IT2414	PE III: Information Retrieval
Professional Electives -IV				
	7	PE-4	IT2421	PE IV: Neural Network and Fuzzy Logic
1	7	PE-4	IT2422	PE IV: Lab.: Neural Network and Fuzzy Logic
	7	PE-4	IT2423	PE IV: Ethical Hacking and Cyber Forensics
2	7	PE-4	IT2424	PE IV:Lab:Ethical Hacking and Cyber Forensics
	7	PE-4	IT2425	PE IV: Human Computer Interaction
3	7	PE-4	IT2426	PE IV: Lab:Human Computer Interaction
	7	PE-4	IT2427	PE IV: Parallel Computing
4	7	PE-4	IT2428	PE IV: Lab: Parallel Computing
Professional Electives - V				
1	7	PE-5	IT2431	PE V: Digital Image Processing
2	7	PE-5	IT2432	PE V: Distributed Systems
3	7	PE-5	IT2433	PE V: Coding Standardand and Technical Documentation
Professional Electives - VI				
1	7	PE-6	IT2441	PE VI: Advanced Computer Architecture
2	7	PE-6	IT2442	PE VI: Mobile Communication
3	7	PE-6	IT2443	PE VI: E-commerce
4	7	PE-6	IT2444	PE VI: Natural Language Processing

MSEs* = Two MSEs of 15 Marks each will conducted and marks of of these 2 MSEs will be considered for Continuous Assessment

TA ** = for Theory : 12 marks on lecture quizzes, 12 marks on two TA2 activitied decided by course teacher, 2 marks on class attendance and 4 marks on TA4 activities

TA = for Practical : MSPA will be 15 marks each**

		June 2020	1.02
Chairperson	Dean (Acad. Matters)	Date of Release	Version

Applicable for AY 2021-22 Onwards

Nagar Yuwak Shikshan Sanstha's

Yeshwantrao Chavan College of Engineering

(An Autonomous Institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)

B.E. SCHEME OF EXAMINATION 2018-19

(Revised Scheme of Examination w.e.f. 2020-21 onward)

SoE No. IT-201

Information Technology

SN	Sem	Type	Sub. Code	Subject	T/P	Contact Hours				Credits	% Weightage			ESE Duration Hours
						L	T	P	Hrs		MSEs*	TA**	ESE	
Eighth Semester														
1	8	STR	IT2451	Major Project	P	0	0	12	12	9		60	40	
2	8	STR	IT2452	Extra curricular Activity Evaluation	P	0	0	0	0	1		100		
TOTAL EIGHTH SEM						0	0	12	12	10				
GRAND TOTAL						86	0	44	130	162				

MSEs* = Two MSEs of 15 Marks each will conducted and marks of of these 2 MSEs will be considered for Continuous Assessment

TA ** = for Theory : 12 marks on lecture quizzes, 12 marks on two TA2 activitied decided by course teacher, 2 marks on class attendance and 4 marks on TA4 activities

TA = for Practical : MSPA will be 15 marks each**

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Applicable for AY 2021-22 Onwards

Dean (Acad)
Yeshwantrao Chavan
College of Engineering
Wanadongri Hingna Road
NAGPUR - 441 110

SEAL

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College of Engineering
Wanadongri, Hingna Road
NAGPUR - 441110

Nagar Yuwak Shikshan Sanstha's

Yeshwantrao Chavan College of Engineering

(An Autonomous Institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)

M. Tech. SCHEME OF EXAMINATION 2014

Department of Civil Engineering

Structural Engineering

Sl. No.	Course Code	Course Title	Contact Hours				Credits	% Weightage				ESE Duration Hrs.
			L	T	P	Total Contact Hrs.		MSE- I	MSE- II	TA	ESE	
I SEMESTER												
1	CV1901	Numerical Methods	3	0	0	3	3	15	15	10	60	3
2	CV1902	Theory of Elasticity and Elastic Stability	3	0	0	3	3	15	15	10	60	3
3	CV1903	Structural Dynamics	3	0	0	3	3	15	15	10	60	3
4	CV1904	Lab: Structural Dynamics	0	0	2	2	1			40	60	
5	CV1905	Matrix Analysis of Structures	3	0	0	3	3	15	15	10	60	3
6	CV1906	Lab: Matrix Analysis of Structures	0	0	2	2	1			40	60	
7	CV1907	Design of Substructures	3	0	0	3	3	15	15	10	60	3
8	CV1908	Research Practice	0	0	2	2	1			100		
		Total	**15**	**0**	**6**	**21**	**18**					
II SEMESTER												
1	CV1911	Finite Element Method	3	0	0	3	3	15	15	10	60	3
2	CV1912	Theory of Plates and Shells	3	0	0	3	3	15	15	10	60	3
3	CV1913	Earthquake and wind effects on Structures	3	0	0	3	3	15	15	10	60	3
4	**Professional Elective-I**		3	0	0	3	3	15	15	10	60	3
	CV1914	Advanced Concrete Structures										
	CV1915	Prestressed Concrete										
	CV1916	Composite Structures										
5	**Professional Elective-II**		3	0	0	3	3	15	15	10	60	3
	CV1917	Advanced Steel Structures										
	CV1918	New Engineering Materials										
	CV1919	Smart Structures and Applications										
6	CV1920	Lab: Steel Design Studio	0	0	2	2	1			40	60	
7	CV1921	Lab: RCC Design Studio	0	0	2	2	1			40	60	
8	CV1922	Seminar	0	0	2	2	1			100		
		Total	**15**	**0**	**6**	**21**	**18**					
III SEMESTER												
1	**Professional Elective-III**		3	0	0	3	3	15	15	10	60	3
	CV1923	Tall Building										
	CV1924	Design of Environmental Strucutres										
	CV1925	Bridge Engineering										
2	**Professional Elective-IV**		3	0	0	3	3	15	15	10	60	3
	CV1926	Plastic Analysis and Design of Structures										
	CV1927	Seismic Analysis and Design of Structures										
	CV1928	Design of Industrial Structures										
3	CV1929	Project Phase-I	0	0	16	16	8			100		
		Total	**6**	**0**	**16**	**22**	**14**					
IV SEMESTER												
1	CV1931	Project Phase- II	0	0	24	24	12			40	60	
		Total	**0**	**0**	**24**	**24**	**12**					
		Grand Total of Credits					**62**					

Chairperson	**Date of Release**	May 2014	**Applicable for**	
Dean (Acad. Matt.)	**Version**	**1**	**AY 2014-15 Onwards**	

Nagar Yuwak Shikshan Sanstha's

Yeshwantrao Chavan College of Engineering

(An Autonomous Institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)

M. Tech. SCHEME OF EXAMINATION 2014

Department of Civil Engineering

Environmental Engineering

Sl. No.	Course Code	Course Title	Contact Hours				Credits	% Weightage				ESE Duration Hrs.
			L	T	P	Total Contact Hrs.		MSE-I	MSE-II	TA	ESE	
I SEMESTER												
1	GE1901	Computational Methods	3	0	0	3	3	15	15	10	60	3
2	CV1951	Environmental Chemistry and Microbiology	3	0	0	3	3	15	15	10	60	3
3	CV1952	Lab: Environmental Chemistry and Microbiology	0	0	2	2	1			40	60	
4	CV1953	Water Supply and Wastewater Collection	3	0	0	3	3	15	15	10	60	3
5	CV1954	Municipal Water Treatment	3	0	0	3	3	15	15	10	60	3
6	CV1955	Municipal Waste Water Treatment and Disposal	3	0	0	3	3	15	15	10	60	3
7	CV1956	Seminar-I	0	0	2	2	1			100		
Total			**15**	**0**	**4**	**19**	**17**					
II SEMESTER												
1	CV1961	Industrial Waste Water Treatment and Disposal	3	0	0	3	3	15	15	10	60	3
2	CV1962	Environmental Management	3	0	0	3	3	15	15	10	60	3
3	CV1963	Air Quality Management	3	0	0	3	3	15	15	10	60	3
4	CV1965	Lab: Air Quality Management	0	0	2	2	1			40	60	
5	CV1964	Municipal Solid Waste Management	3	0	0	3	3	15	15	10	60	3
6	**Professional Elective- I**		3	0	0	3	3	15	15	10	60	3
	CV1967	Hazardous Waste Management										
	CV1968	Water Resource Management										
	CV1969	Advanced Water Treatment										
7	CV1966	Seminar II	0	0	2	2	1			100		
Total			**15**	**0**	**4**	**19**	**17**					
III SEMESTER												
1	**Professional Elective- II**		3	0	0	3	3	15	15	10	60	3
	CV1971	Environmental Modelling										
	CV1972	Rural Water Supply and Sanitation										
	CV1976	**PE-II Remote Sensing And GIS In Water Resources And Environmental Engineering**										
2	**Professional Elective- III**		3	0	0	3	3	15	15	10	60	3
	CV1973	Applied Structures										
	CV1974	Environmental Biotechnology										
3	CV1975	Project Phase - I	0	0	16	16	8			100		
Total			**6**	**0**	**16**	**22**	**14**					
IV SEMESTER												
1	CV1981	Project Phase - II	0	0	24	24	12			40	60	
Total			**0**	**0**	**24**	**24**	**12**					
Grand Total of Credits							**60**					

Chairperson	**Date of Release**	May 2015	**Applicable for**
Dean (Acad. Matt.)	**Version**	**1.01**	**AY 2015-16 Onwards**

Nagar Yuwak Shikshan Sanstha's

Yeshwantrao Chavan College of Engineering

(An Autonomous Institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)

M. Tech. SCHEME OF EXAMINATION 2014

Department of Mechanical Engineering

CAD / CAM

Sl. No.	Course Code	Course Title	Contact Hours				Credits	% Weightage				ESE Duration Hrs.
			L	T	P	Total Contact Hrs.		MSE- I	MSE- II	TA	ESE	
I SEMESTER												
1	ME1901	Stress Analysis	3	0	0	3	3	15	15	10	60	3
2	ME1902	Computer Integrated Manufacturing	3	0	0	3	3	15	15	10	60	3
3	**Professional Elective- I**		3	0	0	3	3	15	15	10	60	3
	ME1907	Project Engineering										
	ME1908	Tool Design										
	ME1909	Object Oriented Programmings										
	ME1910	Reliability Engineering										
4	ME1903	Computer Graphics and Solid Modeling	3	0	0	3	3	15	15	10	60	3
5	ME1904	Lab: Computer Graphics and Solid Modeling	0	0	2	2	1			40	60	
6	ME1905	CNC Technologies	3	0	0	3	3	15	15	10	60	3
7	ME1906	Lab: CNC Technologies	0	0	2	2	1			40	60	
			15	**0**	**4**	**19**	**17**					
II SEMESTER												
1	ME1911	Robotics	3	0	0	3	3	15	15	10	60	3
2	ME1912	Modelling & Simulation	3	0	0	3	3	15	15	10	60	3
3	ME1913	Finite Element Method	3	0	0	3	3	15	15	10	60	3
4	ME1914	Lab: Finite Element Method	0	0	2	2	1			40	60	
5	ME1915	Artificial Intelligence	3	0	0	3	3	15	15	10	60	3
6	**Professional Elective-II**		3	0	0	3	3	15	15	10	60	3
	ME1917	Product Data Management										
	ME1918	Mechatronics										
	ME1919	Machine Tool Design										
	ME1920	Plant Design										
7	ME1916	Seminar	0	0	2	2	1			100		
			15	**0**	**4**	**19**	**17**					
III SEMESTER												
1	ME1921	Product Design & Development	3	0	0	3	3	15	15	10	60	3
2	**Professional Elective - III**		3	0	0	3	3	15	15	10	60	3
	ME1923	Computational Fluid Dynamics										
	ME1924	Design Optimization Techniques										
	ME1925	Rapid Prototyping										
	ME1926	Design for Manufacturing and Assembly										
3	ME1922	Project Phase -I	0	0	16	16	8			100		
			6	**0**	**16**	**22**	**14**					
IV SEMESTER												
1	ME1931	Project Phase-II	0	0	24	24	12			40	60	
			0	**0**	**24**	**24**	**12**					
Grand Total of Credits							**60**					

Chairperson	**Date of Release**	May 2014	**Applicable for**
Dean (Acad. Matt.)	**Version**	**1**	**AY 2014-15 Onwards**

Nagar Yuwak Shikshan Sanstha's

Yeshwantrao Chavan College of Engineering

(An Autonomous Institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)

M. Tech. SCHEME OF EXAMINATION 2014

Department of Mechanical Engineering

Production Engineering

Sl. No.	Course Code	Course Title	Contact Hours				Credits	% Weightage				ESE Duration Hrs.
			L	T	P	Total Contact Hrs.		MSE- I	MSE- II	TA	ESE	
I SEMESTER												
1	ME1951	Engineering Statistics & Design of Experiments	3	0	0	3	3	15	15	10	60	3
2	Professional Elective- I		3	0	0	3	3	15	15	10	60	3
	ME1957	Quality Control & Metrology										
	ME1958	Reliability Engineering										
	ME1959	Design for Manufacturing and Assembly										
3	ME1952	Industrial Engineering	3	0	0	3	3	15	15	10	60	3
4	ME1953	Manufacturing Engineering - I	3	0	0	3	3	15	15	10	60	3
5	ME1954	Lab: Manufacturing Engineering - I	0	0	2	2	1			40	60	
6	ME1955	Computer Integrated Manufacturing	3	0	0	3	3	15	15	10	60	3
7	ME1956	Lab: Computer Integrated Manufacturing	0	0	2	2	1			40	60	
Total			15	0	4	19	17					
II SEMESTER												
1	ME1961	Tool Engineering	3	0	0	3	3	15	15	10	60	3
2	ME1962	Production Management	3	0	0	3	3	15	15	10	60	3
3	ME1963	*Manufacturing Engineering - II	3	0	0	3	3	15	15	10	60	3
4	ME1964	Lab: Manufacturing Engineering-II	0	0	2	2	1			40	60	
5	ME1965	Computer in Production Management	3	0	0	3	3	15	15	10	60	3
6	Professional Elective- II		3	0	0	3	3	15	15	10	60	3
	ME1967	Maintenance Engineering										
	ME1968	CNC and Robotics										
	ME1969	Welding Technology										
7	ME1966	Seminar	0	0	2	2	1			100		
Total			15	0	4	19	17					
III SEMESTER												
1	ME1971	Productivity Management	3	0	0	3	3	15	15	10	60	3
2	Professional Elective- III		3	0	0	3	3	15	15	10	60	3
	ME1973	Quantitative Techniques										
	ME1974	Plastics and Composites										
	ME1975	Project Evaluation & Management										
3	ME1972	Project Phase-I	0	0	16	16	8			100		
Total			6	0	16	22	14					
IV SEMESTER												
1	ME1981	Project Phase-II	0	0	24	24	12			40	60	
Total			0	0	24	24	12					
Grand Total of Credits							60					

Chairperson	Date of Release	May 2014	Applicable for
Dean (Acad. Matt.)	Version	1.00	AY 2014-15 Onwards

Nagar Yuwak Shikshan Sanstha's

Yeshwantrao Chavan College of Engineering

(An Autonomous Institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)

M. Tech. SCHEME OF EXAMINATION 2014

Department of Electrical Engineering

Integrated Power Systems

Sl. No.	Course Code	Course Title	Contact Hours				Credits	% Weightage				ESE Duration Hrs.
			L	T	P	Total Contact Hrs.		MSE - I	MSE - II	TA	ESE	
I SEMESTER												
1	EL1901	Advanced Power Electronics	3	0	0	3	3	15	15	10	60	3
2	EL1902	Analog & Digital Protection	3	0	0	3	3	15	15	10	60	3
3	EL1903	Digital Control System	3	0	0	3	3	15	15	10	60	3
4	EL1904	HVDC Power Transmission	3	0	0	3	3	15	15	10	60	3
5	EL1905	Power System Modelling	3	0	0	3	3	15	15	10	60	3
6	EL1906	Lab: Analog & Digital Protection	0	0	4	4	2			40	60	
8	EL1907	Lab: Advance Power Electronics	0	0	4	4	2			40	60	
Total			**15**	**0**	**8**	**23**	**19**					
II SEMESTER												
1	EL1911	Power System planning	3	0	0	3	3	15	15	10	60	3
2	EL1912	Application of Power Electronics to Power System	3	0	0	3	3	15	15	10	60	3
3	EL1913	Power Quality	3	0	0	3	3	15	15	10	60	3
4	**Professional Elective- I**		3	0	0	3	3	15	15	10	60	3
	EL1916	Electrical Drives and Controls										
	EL1918	Renewable Energy System										
5	**Lab: Professional Elective I**		0	0	4	4	2			40	60	
	EL1917	Lab: Electrical Drives and Controls										
	EL1919	Lab: Renewable Energy System										
6	**Professional Elective II**		3	0	0	3	3	15	15	10	60	3
	EL1920	Advanced Digital Signal Processing										
	EL1921	EHV Power Transmission										
	EL1922	Restructuring of Power System										
7	EL1914	Power System Simulation	0	0	4	4	2			40	60	
8	EL1915	Seminar	0	0	2	2	1			100		
Total			**15**	**0**	**10**	**25**	**20**					
III SEMESTER												
1	**Professional Elective - III**		3	0	0	3	3	15	15	10	60	3
	EL1933	Power System Stability										
	EL1934	Electrical Distribution Systems										
	EL1935	Power System Operation and Control										
	EL1936	Transients in Power Systems										
2	**Professional Elective - IV**		3	0	0	3	3	15	15	10	60	3
	EL1937	Distribtuted Automation										
	EL1938	Power Electronics for Renewable Energy Systems										
	EL1939	Control System Design										
3	EL1931	Lab.: Power System Design	0	0	4	4	2			40	60	
4	EL1932	Project Phase -I	0	0	16		8			100		
		Total	**6**	**0**	**20**	**10**	**16**					
IV SEMESTER												
1	EL1941	Project Phase-II	0	0	20	24	12			40	60	
Total			**0**	**0**	**20**	**24**	**12**					
Grand Total of Credits							**67**					

Chairperson	**Date of Release**	Nov. 2017	**Applicable for**
Dean (Acad. Matt.)	**Version**	**1.02**	**AY 2014-15 Onwards**

Nagar Yuwak Shikshan Sanstha's

Yeshwantrao Chavan College of Engineering

(An Autonomous Institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)

M. Tech. SCHEME OF EXAMINATION 2014

Department of Electronics Engineering

Electronics Engineering

Sl. No.	Course Code	Course Title	Contact Hours				Credits	% Weightage				ESE Duration Hrs.
			L	T	P	Total Contact Hrs.		MSE-I	MSE-II	TA	ESE	
I SEMESTER												
1	EE1901	Advanced Digital Signal Processing	3	0	0	3	3	15	15	10	60	3
2	EE1902	Digital IC Design	3	0	0	3	3	15	15	10	60	3
3	EE1903	RISC & DSP Processor Architecture	3	0	0	3	3	15	15	10	60	3
4	EE1904	Advanced Digital System Design	3	0	0	3	3	15	15	10	60	3
5	EE1905	Advanced Communication Systems	3	0	0	3	3	15	15	10	60	3
6	EE1906	Lab: Advanced Digital Signal Processing	0	0	2	2	1			40	60	
7	EE1907	Lab: Digital IC Design	0	0	2	2	1			40	60	
8	EE1908	Lab: Advanced Digital System Design	0	0	2	2	1			40	60	
Total			**15**	**0**	**6**	**21**	**18**					
II SEMESTER												
1	EE1911	RF Circuit Design	3	0	0	3	3	15	15	10	60	3
2	EE1912	Soft Computing Techniques	3	0	0	3	3	15	15	10	60	3
3	EE1913	Digital Image Processing	3	0	0	3	3	15	15	10	60	3
4	**Professional Elective- I**		3	0	0	3	3	15	15	10	60	3
	EE1916	Analog IC Design										
	EE1917	Multirate signal Processing										
	EE1918	Low Power CMOS VLSI Design										
5	**Professional Elective- II**		3	0	0	3	3	15	15	10	60	3
	EE1919	Wireless Communication										
	EE1920	VLSI Signal Processing										
	EE1921	Verification & testing of VLSI Circuit										
6	EE1914	Lab : Digital Image Processing	0	0	2	2	1			40	60	
7	EE1915	Lab: RF Circuit Design	0	0	2	2	1			40	60	
8	EE1922	Seminar	0	0	2	2	1			100		
Total			**15**	**0**	**6**	**21**	**18**					
III SEMESTER												
1	**Professional Elective- III**		3	0	0	3	3	15	15	10	60	3
	EE1932	Wireless Sensor										
	EE1933	Biomedical Instrumentation										
	EE1934	Mixed signal VLSI Design										
	EE1935	Cryptography & Network Security										
2	**Professional Elective- IV**		3	0	0	3	3	15	15	10	60	3
	EE1936	Adaptive Signal Processing										
	EE1937	Embedded System & RTOS										
	EE1938	Advanced Computer Architecture										
	EE1939	Pattern recognition										
3	EE1931	Project Phase - I	0	0	16	16	8			100		
Total			**6**	**0**	**16**	**22**	**14**					
IV SEMESTER												
1	EE1941	Project Phase - II	0	0	24	24	12			40	60	
Total			**0**	**0**	**24**	**24**	**12**					
Grand Total of Credits							**62**					

Chairperson	**Date of Release**	May 2014	**Applicable for**
Dean (Acad. Matt.)	**Version**	**1**	**AY 2014-15 Onwards**

Nagar Yuwak Shikshan Sanstha's

Yeshwantrao Chavan College of Engineering

(An Autonomous Institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)

M. Tech. SCHEME OF EXAMINATION 2014

Department of Electronics Engineering

VLSI DESIGN

Sl. No.	Course Code	Course Title	Contact Hours				Credits	% Weightage				ESE Duration Hrs.
			L	T	P	Total Contact Hrs.		MSE - I	MSE - II	TA	ESE	
I SEMESTER												
1	EE1951	VLSI Signal Processing	3	0	0	3	3	15	15	10	60	3
2	EE1952	Digital IC Design	3	0	0	3	3	15	15	10	60	3
3	EE1953	VLSI Technology	3	0	0	3	3	15	15	10	60	3
4	EE1954	Embedded System & RTOS	3	0	0	3	3	15	15	10	60	3
5	EE1955	Advanced Digital System Design	3	0	0	3	3	15	15	10	60	3
6	EE1956	Lab: Embedded System & RTOS	0	0	2	2	1			40	60	
7	EE1957	Lab: Digital IC Design	0	0	2	2	1			40	60	
8	EE1958	Lab: Advanced Digital System Design	0	0	2	2	1			40	60	
			15	**0**	**6**	**21**	**18**					
II SEMESTER												
1	EE1961	RF Circuit design	3	0	0	3	3	15	15	10	60	3
2	EE1962	Analog IC Design	3	0	0	3	3	15	15	10	60	3
3	EE1963	Sythesis & Optimisation of VLSI Circuits	3	0	0	3	3	15	15	10	60	3
4	**Professional Elective - I**		3	0	0	3	3	15	15	10	60	3
	EE1966	Low Power CMOS VLSI Design										
	EE1967	Hardware Software Codesign										
	EE1968	Nano Scale MOS Transistors										
5	**Professional Elective - II**		3	0	0	3	3	15	15	10	60	3
	EE1969	Verification & Testing of VLSI Circuit										
	EE1970	Digital Image Processing										
	EE1971	Solid State Devices & Modelling										
6	EE1964	Lab: RF Circuit design	0	0	2	2	1			40	60	
7	EE1965	Lab: Analog IC Design	0	0	2	2	1			40	60	
8	EE1972	Seminar	0	0	2	2	1			100		
			15	**0**	**6**	**21**	**18**					
III SEMESTER												
1	**Professional Elective - III**		3	0	0	3	3	15	15	10	60	3
	EE1982	Mixed Signal VLSI Design										
	EE1983	Micro Electro Mechanical Systems										
	EE1984	VLSI for wireless communication										
2	**Professional Elective - IV**		3	0	0	3	3	15	15	10	60	3
	EE1985	ASIC Design										
	EE1986	Semiconductor Memory Design										
	EE1987	Advanced Computer Architecture										
3	EE1981	Project Phase - I	0	0	16	16	8			100		
			6	**0**	**16**	**22**	**14**					
IV SEMESTER												
1	EE1991	Project Phase - II	0	0	24	24	12			40	60	
			0	**0**	**24**	**24**	**12**					
Grand Total of Credits							**62**					

Chairperson	**Date of Release**	May 2014	**Applicable for**
Dean (Acad. Matt.)	**Version**	**1**	**AY 2014-15 Onwards**

Nagar Yuwak Shikshan Sanstha's

Yeshwantrao Chavan College of Engineering

(An Autonomous Institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)

M. Tech. SCHEME OF EXAMINATION 2014

Department of Electronics & Telecommunication Engineering

Communication Engineering

Sl. No.	Course Code	Course Title	Contact Hours				Credits	% Weightage				ESE Duration Hrs.
			L	T	P	Total Contact Hrs.		MSE-I	MSE-II	TA	ESE	
I SEMESTER												
1	ET1951	Mathematical Foundations for Communication Engineering	3	0	0	3	3	15	15	10	60	3
2	ET1952	Passive RF Circuits & Systems	3	0	0	3	3	15	15	10	60	3
3	ET1953	Lab: Passive RF Circuits & Systems	0	0	2	2	1			40	60	
4	ET1954	Advanced Digital Communication	3	0	0	3	3	15	15	10	60	3
5	ET1955	Lab: Advanced Digital Communication	0	0	2	2	1			40	60	
6	ET1956	Adaptive Signal Processing	3	0	0	3	3	15	15	10	60	3
7	ET1957	Lab: Adaptive Signal Processing	0	0	2	2	1			40	60	
8	Professional Elective- I		3	0	0	3	3	15	15	10	60	3
	ET1958	Error Control Coding										
	ET1959	Embedded Systems & DSP Processor										
	ET1960	Pattern Recognition										
Total			15	0	6	21	18					
II SEMESTER												
1	ET1961	Advanced Antenna Theory	3	0	0	3	3	15	15	10	60	3
2	ET1962	Lab: Advanced Antenna Theory	0	0	2	2	1			40	60	
3	ET1963	VLSI Signal Processing	3	0	0	3	3	15	15	10	60	3
4	ET1964	Digital Image processing	3	0	0	3	3	15	15	10	60	3
5	ET1965	Lab: Digital Image processing	0	0	2	2	1			40	60	
6	ET1966	Wireless Communications & Networks	3	0	0	3	3	15	15	10	60	3
7	Professional Elective -II		3	0	0	3	3	15	15	10	60	3
	ET1967	Selected Topics in Communication Systems										
	ET1968	Speech Processing										
	ET1969	Detection & Estimation Theory										
	ET1973	Real Time Operating System										
8	ET1978	Seminar	0	0	2	2	1			100		
Total			15	0	6	21	18					
III SEMESTER												
1	Professional Elective- III		3	0	0	3	3	15	15	10	60	3
	ET1970	Multimedia Communications										
	ET1971	Active RF Devices and Circuits										
	ET1972	Soft Computing										
2	Professional Elective-IV		3	0	0	3	3	15	15	10	60	3
	ET1974	High Speed Networks										
	ET1975	Wireless Sensor Networks										
	ET1979	Micro Electro Mechanical Systems										
3	ET1976	Project Phase-I	0	0	16	16	8			100		
Total			6	0	16	22	14					
IV SEMESTER												
1	ET1977	Project Phase-II	0	0	24	24	12			40	60	
Total			0	0	24	24	12					
Grand Total of Credits							62					

Chairperson	Date of Release	May 2014	Applicable for
Dean (Acad. Matt.)	Version	1	AY 2014-15 Onwards

Nagar Yuwak Shikshan Sanstha's

Yeshwantrao Chavan College of Engineering

(An Autonomous Institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)

M. Tech. SCHEME OF EXAMINATION 2014

Department of Computer Technology

Computer Science & Engineering

Sl. No.	Course Code	Course Title	Contact Hours				Credits	% Weightage				ESE Duration Hrs.
			L	T	P	Total Contact Hrs.		MSE - I	MSE - II	TA	ESE	
I SEMESTER												
1	CSE1901	High Performance Computer Architecture	3	0	0	3	3	15	15	10	60	3
2	CSE1902	Real Time Systems	3	0	0	3	3	15	15	10	60	3
3	CSE1903	Network Security & Cryptography	3	0	0	3	3	15	15	10	60	3
4	CSE1904	Lab: Network Security & Cryptography	0	0	2	2	1			40	60	2
5	CSE1905	Algorithm Design Techniques	3	0	0	3	3	15	15	10	60	3
6	CSE1906	Lab: Algorithm Design Techniques	0	0	2	2	1			40	60	2
7	Professional Elective-I		3	0	0	3	3	15	15	10	60	3
	CSE1907	Advanced Digital Image Processing										
	CSE1908	Ethical Hacking										
	CSE1909	Machine Learning										
	CSE1910	Grid and Cloud Computing										
Total			15	0	4	19	17					
II SEMESTER												
1	CSE1911	Data Mining	3	0	0	3	3	15	15	10	60	3
2	CSE1912	Distributed Systems	3	0	0	3	3	15	15	10	60	3
3	CSE1913	Optimizing Compilers	3	0	0	3	3	15	15	10	60	3
4	CSE1914	Lab: Optimizing Compilers	0	0	2	2	1			40	60	2
5	CSE1915	Software Architecture	3	0	0	3	3	15	15	10	60	3
6	CSE1916	Lab: Software Architecture	0	0	2	2	1			40	60	2
7	CSE1917	Seminar	0	0	2	2	1			100		1
8	Professional Elective-II		3	0	0	3	3	15	15	10	60	3
	CSE1918	Soft Computing Techniques										
	CSE1919	Data Warehousing										
	CSE1920	Wireless Sensor Network										
	CSE1921	Information Retrieval Systems										
Total			15	0	6	21	18					
III SEMESTER												
1	Professional Elective- III		3	0	0	3	3	15	15	10	60	3
	CSE1923	Computer Vision										
	CSE1924	Natural Language Processing										
	CSE1925	Optimization Techniques										
	CSE1926	Database Security										
2	Professional Elective-IV		3	0	0	3	3	15	15	10	60	3
	CSE1927	Cyber Forensics										
	CSE1928	Pattern Recognition										
	CSE1929	Algorithms for Bioinformatics										
	CSE1930	Semantic Web and Social Networks										
3	CSE1922	Project Phase – I	0	0	16	16	8			100		
Total			6	0	16	22	14					
IV SEMESTER												
1	CSE1931	Project Phase - II	0	0	24	24	12			40	60	
			0	0	24	24	12					
Grand Total of credits							61					

Chairperson	Date of Release	May 2014	Applicable for
Dean (Acad. Matt.)	Version	1.00	AY 2014-15 Onwards

Nagar Yuwak Shikshan Sanstha's

Yeshwantrao Chavan College of Engineering

(An Autonomous Institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)

M. Tech. SCHEME OF EXAMINATION 2014

Department of Information Technology

Information Technology

Sl. No.	Course Code	Course Title	Contact Hours				Credits	% Weightage				ESE Duration Hrs.
			L	T	P	Total Contact Hrs.		MSE - I	MSE - II	TA	ESE	
I SEMESTER												
1	IT1901	Advanced Database Systems	3	0	0	3	3	15	15	10	60	3
2	IT1902	Lab: Advanced Database Systems	0	0	2	2	1			40	60	
3	IT1903	Advances in Algorithms	3	0	0	3	3	15	15	10	60	3
4	IT1904	Lab: Advances in Algorithms	0	0	2	2	1			40	60	
5	IT1905	Soft Computing	3	0	0	3	3	15	15	10	60	3
6	IT1906	Lab: Soft Computing	0	0	2	2	1			40	60	
7	IT1907	Advanced Computer Architecture	3	0	0	3	3	15	15	10	60	3
8	**Professional Elective-I**		3	0	0	3	3	15	15	10	60	3
	IT1908	Geographical Information Systems										
	IT1909	Artificial Intelligence										
	IT1910	Internet Technology										
	IT1911	High Performance Computer Networks										
Total			**15**	**0**	**6**	**21**	**18**					
II SEMESTER												
1	IT1912	Parallel Computing	3	0	0	3	3	15	15	10	60	3
2	IT1913	Lab: Parallel Computing	0	0	2	2	1			40	60	
3	IT1914	Object Oriented Systems	3	0	0	3	3	15	15	10	60	3
4	IT1915	Lab: Object Oriented Systems	0	0	2	2	1			40	60	
5	IT1916	Business Intelligence & Analytics	3	0	0	3	3	15	15	10	60	3
6	IT1917	Lab:Business Intelligence & Analytics	0	0	2	2	1			40	60	
7	IT1918	Computer System Secutity	3	0	0	3	3	15	15	10	60	3
8	**Professional Elective-II**		3	0	0	3	3	15	15	10	60	3
	IT1919	Advanced Digital Image Processing										
	IT1920	Advanced Compiler Design										
	IT1921	Bioinformatics										
	IT1922	Mobile Communication Systems										
9	IT1923	Seminar	0	0	2	2	1			100		
Total			**15**	**0**	**8**	**23**	**19**					
III SEMESTER												
1	**Professional Elective-III**		3	0	0	3	3	15	15	10	60	3
	IT1924	Distributed Systems										
	IT1925	Operation Research Techniques										
	IT1926	Pattern Recognition										
	IT1927	Wireless Sensor Networks										
	IT1928	Software Architecture										
2	**Professional Elective-IV**		3	0	0	3	3	15	15	10	60	3
	IT1929	Cloud Computing										
	IT1930	Computer Vision										
	IT1931	Cyber Forensics										
	IT1932	Internet Routing Design										
	IT1933	Embedded Systems Design										
	IT1934	Management Information Systems										
3	IT1935	Project Phase- I	0	0	16	16	8			100		
Total			**6**	**0**	**16**	**22**	**14**					
IV SEMESTER												
1	IT1936	Project Phase - II	0	0	24	24	12			40	60	
Total			**0**	**0**	**24**	**24**	**12**					
Grand Total Of Credits							**63**					

Chairperson	**Date of Release**	May 2014	**Applicable for**
Dean (Acad. Matt.)	**Version**	**1.00**	**AY 2014-15 Onwards**

Dean (Acad)
Yeshwantrao Chavan
College of Engineering
Wanadongri Hingna Road
NAGPUR - 441 110

SEAL

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Yeshwatrao Chavan
College of Engineering
Wanadongri, Hingna Road
NAGPUR - 441110

Nagar Yuwak Shikshan Sanstha's

Yeshwantrao Chavan College of Engineering

(An Autonomous Institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)

M. Tech. SCHEME OF EXAMINATION 2018-19

Structural Engineering

S N	Sem	Sub Code	Subject	T/P	Contact Hours				Credits	% Weightage				ESE Duration Hours
					L	T	P	Hrs		MSE-I	MSE-II	TA	ESE	
I SEMESTER														
1	1	Cv/2901	Numerical Methods	T	3	0	0	3	3	15	15	10	60	3
2	1	Cv/2902	Theory of Elasticity and Elastic Stability	T	3	0	0	3	3	15	15	10	60	3
3	1	Cv/2903	Structural Dynamics	T	3	0	0	3	3	15	15	10	60	3
4	1	Cv/2904	Lab: Structural Dynamics	P	0	0	2	2	1	-	-	40	60	-
5	1	Cv/2905	Matrix Analysis of Structures	T	3	0	0	3	3	15	15	10	60	3
6	1	Cv/2906	Lab: Matrix Analysis of Structures	P	0	0	2	2	1	-	-	40	60	-
7	1	Cv/2907	Design of Substructures & Foundations	T	3	0	0	3	3	15	15	10	60	3
8	1	Cv/2908	Research Practice	P	0	0	2	2	1	-	-	40	60	-
Total					15	0	6	21	18					
II SEMESTER														
1	2	Cv/2911	Finite Element Method	T	3	0	0	3	3	15	15	10	60	3
	2	Cv/2912	Lab: Finite Element Method	P	0	0	2	2	1	-	-	40	60	-
2	2	Cv/2913	Theory of Plates and Shells	T	3	0	0	3	3	15	15	10	60	3
3	2	Cv/2914	Earthquake and wind effects on Structures	T	3	0	0	3	3	15	15	10	60	3
4	2	Cv/2915	Advanced Concrete Structures	T	3	0	0	3	3	15	15	10	60	3
5	2		Professional Elective-I	T	3	0	0	3	3	15	15	10	60	3
6	2	Cv/2919	Lab: RCC Design Studio	P	0	0	2	2	1	-	-	40	60	-
7	2	Cv/2920	Seminar		0	0	2	2	1	-	-	100		-
Total					15	0	6	21	18					

List of Professional Elective-I

2	Cv/2916	P E I: New Engineering Materials
2	Cv/2917	P E I: Prestressed Concrete
2	Cv/2918	P E I: Smart Structures and Applications

III SEMESTER														
1	3	Cv/2931	Advanced Steel Structures	T	3	0	0	3	3	15	15	10	60	4
2	3	Cv/2932	Lab: Steel Design Studio	P	0	0	2	2	1	-	-	40	60	-
3	3		Professional Elective-II	T	3	0	0	3	3	15	15	10	60	3
4	3		Professional Elective-III	T	3	0	0	3	3	15	15	10	60	3
5	3	Cv/2939	Project Phase-I	P	0	0	12	12	6	-	-	100		-
Total					9	0	14	23	16					

List of Professional Elective-II

3	Cv/2933	P E II: Tall Building
3	Cv/2934	P E II: Composite Structures
3	Cv/2935	P E II: Bridge Engineering

List of Professional Elective-III

3	Cv/2936	P E III: Plastic Analysis and Design of Structures
3	Cv/2937	P E III: Seismic Analysis and Design of Structures
3	Cv/2938	P E III: Design of Industrial Structures

IV SEMESTER														
1	4	Cv/2940	Project Phase-II		0	0	20	20	10			40	60	
Total					0	0	20	20	10					
Total Credits									62					

Chairperson	Dean (Acad. Matters)	June 2018	1.00	Applicable for Sem 1 & 2 AY 2018-19 & Sem 3 & 4 AY 2019-20 Onwards
		Date of Release	Version	

Nagar Yuvak Shikshan Sanstha's

Yeshwantrao Chavan College of Engineering

(An Autonomous Institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)

M. Tech. SCHEME OF EXAMINATION 2018-19

Environmental Engineering

SN	Sem	Sub Code	Subject	T/P	Contact Hours				Credits	%Weightage				ESE Duration Hours
					L	T	P	Hrs		MSE-I	MSE-II	TA	ESE	
I SEMESTER														
1	1	GE2901	Statistical and Computational Methods	T	3	0	0	3	3	15	15	10	60	3
2	1	CV2961	Environmental Chemistry and Microbiology	T	3	0	0	3	3	15	15	10	60	3
3	1	CV2962	Lab. Environmental Chemistry and Microbiology	P	0	0	2	2	1			40	60	
4	1	CV2963	Water Supply and Waste Water Collection System	T	3	0	0	3	3	15	15	10	60	3
5	1	CV2964	Lab. - Water Supply and Waste Water Collection System	P	0	0	2	2	1			40	60	
6	1	CV2965	Municipal Water Treatment	T	3	0	0	3	3	15	15	10	60	3
7	1	CV2966	Municipal Waste Water Treatment and Disposal	T	3	0	0	3	3	15	15	10	60	3
Total					15	0	4	19	17					
II SEMESTER														
1	2	CV2971	Industrial Waste Water Treatment and Disposal	T	3	0	0	3	3	15	15	10	60	3
2	2	CV2972	Environmental Management	T	3	0	0	3	3	15	15	10	60	3
3	2	CV2973	Air Pollution and Its Control	T	3	0	0	3	3	15	15	10	60	3
4	2	CV2974	Municipal Solid Waste Management	T	3	0	0	3	3	15	15	10	60	3
5	2		Professional Elective-I	T	3	0	0	3	3	15	15	10	60	3
6	2	CV2978	Seminar	P	0	0	2	2	1			100		
Total					15	0	2	17	16					

List of Professional Elective-I

2	CV2975	PE I: Hazardous Waste Management
2	CV2976	PE I: Water Resource Management
2	CV2977	PE I: Advanced Water Treatment

III SEMESTER														
	3		Professional Elective-II	T	3	0	0	3	3	15	15	10	60	3
	3		Professional Elective-III	T	3	0	0	3	3	15	15	10	60	3
	3	CV2989	Project Phase - I	P	0	0	14	14	8			100		
Total					6	0	14	20	14					

List of Professional Elective-II

3	CV2981	PE II: Rural Water Supply and Sanitation
3	CV2982	PE II: Environmental Biotechnology
3	CV2983	PE II: Application of Remote Sensing & GIS in Environmental Engineering

List of Professional Elective-III

3	CV2986	PE III: Energy Conversion and Environment
3	CV2987	PE III: Environmental Optimization and Modeling
3	CV2988	PE III: Water Reuse and Recycling

IV SEMESTER														
1	4	CV2990	Project Phase-II	P	0	0	20	20	20			40	60	
Total					0	0	20	20	20					
Total Credits									67					

Chairperson	Dean (Acad. Matters)	June 2018	1.00	Applicable for Sem 1 & 2 AY 2018-19 & Sem 3 & 4 AY 2019-20 Onwards
		Date of Release	Version	

Nagar Yuwak Shikshan Samstha's

Yeshwantrao Chavan College of Engineering

(An Autonomous Institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)

M. Tech. SCHEME OF EXAMINATION 2018-19

CAD / CAM

SN	Sem	Sub Code	Subject	T/P	Contact Hours				Credits	%Weightage				ESE Duration Hours
					L	T	P	Hrs		MSE-I	MSE-II	TA	ESE	
I SEMESTER														
1	1	ME2901	Stress Analysis	T	3	0	0	3	3	15	15	10	60	3
2	1	ME2902	Computer Integrated Manufacturing	T	3	0	0	3	3	15	15	10	60	3
3	1		Professional Elective- I	T	3	0	0	3	3	15	15	10	60	3
4	1	ME2907	Computer Graphics and Solid Modeling	T	3	0	0	3	3	15	15	10	60	3
5	1	ME2908	Lab: Computer Graphics and Solid Modeling	P	0	0	2	2	1			40	60	
6	1	ME2909	CNC Technologies	T	3	0	0	3	3	15	15	10	60	3
7	1	ME2910	Lab: CNC Technologies	P	0	0	2	2	1			40	60	
Total					15	0	4	19	17					

List of Professional Electives-I

1	ME2903	PE I: Project Engineering
1	ME2904	PE I: Tool Design
1	ME2905	PE I: Object Oriented Programmings
1	ME2906	PE I: Reliability Engineering

II SEMESTER														
1	2	ME2911	Robotics	T	3	0	0	3	3	15	15	10	60	3
2	2	ME2912	Modelling & Simulation	T	3	0	0	3	3	15	15	10	60	3
3	2	ME2913	Finite Element Method	T	3	0	0	3	3	15	15	10	60	3
4	2	ME2914	Lab: Finite Element Method	P	0	0	2	2	1			40	60	
5	2	ME2915	Artificial Intelligence	T	3	0	0	3	3	15	15	10	60	3
6	2		Professional Elective-II	T	3	0	0	3	3	15	15	10	60	3
7	2	ME2920	Seminar	P	0	0	2	2	1			100		
Total					15	0	4	19	17					

List of Professional Electives-II

2	ME2916	PE II: Product Data Management
2	ME2917	PE II: Mechatronics
2	ME2918	PE II: Machine Tool Design
2	ME2919	PE II: Plant Design

III SEMESTER														
1	3	ME2931	Product Design & Development	T	3	0	0	3	3	15	15	10	60	3
2	3		Professional Elective - III	T	3	0	0	3	3	15	15	10	60	3
3	3	ME2939	Project Phase -I	P	0	0	16	16	8			100		
Total					6	0	16	22	14					

List of Professional Electives-III

3	ME2932	PE III: Computational Fluid Dynamics
3	ME2933	PE III: Design Optimization Techniques
3	ME2934	PE III: Rapid Prototyping
3	ME2935	PE III: Design for Manufacturing and Assembly

IV SEMESTER														
1	4	ME2940	Project Phase-II	P	0	0	24	24	12			40	60	
Total					0	0	24	24	12					
Grand Total of Credits									60					

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Chairperson	Dean (Acad. Matters)	Date of Release	Version	

Nagar Yuwak Shikshan Sanstha's

Yeshwantrao Chavan College of Engineering

(An Autonomous Institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)

M. Tech. SCHEME OF EXAMINATION 2018-19

Integrated Power Systems

SN	Sem	Sub Code	Subject	T/P	Contact Hours				Credits	% Weightage				ESE Duration Hours
					L	T	P	Hrs		MSE-I	MSE-II	TA	ESE	
I SEMESTER														
1	1	EL2901	Advanced Power Electronics	T	3	0	0	3	3	15	15	10	60	3
8	1	EL2902	Lab: Advance Power Electronics	P	0	0	4	4	2			40	60	
2	1	EL2903	Analog & Digital Protection	T	3	0	0	3	3	15	15	10	60	3
6	1	EL2904	Lab: Analog & Digital Protection	P	0	0	4	4	2			40	60	
3	1	EL2905	Digital Control System	T	3	0	0	3	3	15	15	10	60	3
4	1	EL2906	HVDC Power Transmission	T	3	0	0	3	3	15	15	10	60	3
5	1	EL2907	Power System Modelling	T	3	0	0	3	3	15	15	10	60	3
Total					**15**	**0**	**8**	**23**	**19**					
II SEMESTER														
1	2	EL2911	Power System planning	T	3	0	0	3	3	15	15	10	60	3
2	2	EL2912	Application of Power Electronics to Power System	T	3	0	0	3	3	15	15	10	60	3
3	2	EL2913	Power Quality	T	3	0	0	3	3	15	15	10	60	3
4	2		**Professional Elective- I**	**T**	3	0	0	3	3	15	15	10	60	3
5	2		**Lab: Professional Elective I**	**P**	0	0	4	4	2			40	60	
6	2		**Professional Elective II**	**T**	3	0	0	3	3	15	15	10	60	3
7	2	EL2921	Power System Simulation	P	0	0	4	4	2			40	60	
Total					**15**	**0**	**8**	**23**	**19**					

List of Professional Electives-I

2	EL2914	PE I: Electrical Drives and Controls
2	EL2915	PE I: Lab: Electrical Drives and Controls
2	EL2916	PE I: Renewable Energy System
2	EL2917	PE I: Lab: Renewable Energy System

List of Professional Electives-II

2	EL2918	PE II: Advanced Digital Signal Processing
2	EL2919	PE II: EHV Power Transmission
2	EL2920	PE II: Restructuring of Power System

III SEMESTER														
1	3		**Professional Elective - III**	**T**	3	0	0	3	3	15	15	10	60	3
2	3		**Professional Elective - IV**	**T**	3	0	0	3	3	15	15	10	60	3
3	3	EL2938	Lab.: Power System Design	P	0	0	4	4	2			40	60	
4	3	EL2939	Project Phase -I	P	0	0	16		8			100		
Total					**6**	**0**	**20**	**10**	**16**					

List of Professional Electives-III

3	EL2931	Power System Stability
3	EL2932	Electrical Distribution Systems
3	EL2933	Power System Operation and Control
3	EL2934	Transients in Power Systems

List of Professional Electives-IV

3	EL2935	Distribtuted Automation
3	EL2936	Power Electronics for Renewable Energy Systems
3	EL2937	Control System Design

IV SEMESTER														
1	4	EL2940	Project Phase-II	P	0	0	20	24	12			40	60	
Total					**0**	**0**	**20**	**24**	**12**					
Grand Total of Credits									**66**					

Chairperson	Dean (Acad. Matters)	June 2018	1.00	Applicable for Sem 1 & 2 AY 2018-19 & Sem 3 & 4 AY 2019-20 Onwards
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Nagar Yuwak Shikshan Sanstha's

Yeshwantrao Chavan College of Engineering

(An Autonomous Institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)

M. Tech. SCHEME OF EXAMINATION 2018-19

Electronics Engineering

SN	Sem	Sub Code	Subject	T/P	Contact				Credits	% Weightage				ESE Duration
					L	T	P	Hrs		MSE-I	MSE-II	TA	ESE	
I SEMESTER														
1	1	EE2901	Advanced Digital Signal Processing	T	3	0	0	3	3	15	15	10	60	3
6	1	EE2902	Lab: Advanced Digital Signal Processing	P	0	0	2	2	1			40	60	
2	1	EE2903	Digital IC Design	T	3	0	0	3	3	15	15	10	60	3
7	1	EE2904	Lab: Digital IC Design	P	0	0	2	2	1			40	60	
3	1	EE2905	RISC & DSP Processor Architecture	T	3	0	0	3	3	15	15	10	60	3
4	1	EE2906	Advanced Digital System Design	T	3	0	0	3	3	15	15	10	60	3
8	1	EE2907	Lab: Advanced Digital System Design	P	0	0	2	2	1			40	60	
5	1	EE2908	Advanced Communication Systems	T	3	0	0	3	3	15	15	10	60	3
Total					**15**	**0**	**6**	**21**	**18**					
II SEMESTER														
1	2	EE2911	RF Circuit Design	T	3	0	0	3	3	15	15	10	60	3
2	2	EE2912	Lab: RF Circuit Design	P	0	0	2	2	1			40	60	
3	2	EE2913	Soft Computing Techniques	T	3	0	0	3	3	15	15	10	60	3
4	2	EE2914	Digital Image Processing	T	3	0	0	3	3	15	15	10	60	3
5	2	EE2915	Lab : Digital Image Processing	P	0	0	2	2	1			40	60	
6	2	**Professional Elective- I**		**T**	3	0	0	3	3	15	15	10	60	3
7	2	**Professional Elective- II**		**T**	3	0	0	3	3	15	15	10	60	3
8	2	EE2922	Seminar	P	0	0	2	2	1			100		
Total					**15**	**0**	**6**	**21**	**18**					

List of Professional Electives-I

2	EE2916	PE I: Analog IC Design
2	EE2917	PE I: Multirate signal Processing
2	EE2918	PE I: Low Power CMOS VLSI Design

List of Professional Electives-II

2	EE2919	PE II: Wireless Communication
2	EE2920	PE II: VLSI Signal Processing
2	EE2921	PE II: Verification & testing of VLSI Circuit

III SEMESTER														
1	3	**Professional Elective- III**		T	3	0	0	3	3	15	15	10	60	3
2	3	**Professional Elective- IV**		T	3	0	0	3	3	15	15	10	60	3
3	3	EE2939	Project Phase - I	P	0	0	16	16	8			100		
Total					**6**	**0**	**16**	**22**	**14**					

List of Professional Electives-III

3	EE2931	PE III :Wireless Sensor
3	EE2932	PE III :Biomedical Instrumentation
3	EE2933	PE III :Mixed signal VLSI Design
3	EE2934	PE III :Cryptography & Network Security

List of Professional Electives-IV

3	EE2935	PE IV :Adaptive Signal Processing
3	EE2936	PE IV :Embedded System & RTOS
3	EE2937	PE IV :Advanced Computer Architecture
3	EE2938	PE IV :Pattern recognition

IV SEMESTER														
1		EE2940	Project Phase - II	P	0	0	24	24	12			40	60	
Total					**0**	**0**	**24**	**24**	**12**					
Grand Total of Credits									**62**					

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Applicable for Sem 1 & 2 AY 2018-19 & Sem 3 & 4 AY 2019-20 Onwards

Nagar Yuwak Shikshan Sanstha's

Yeshwantrao Chavan College of Engineering

(An Autonomous Institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)

M. Tech. SCHEME OF EXAMINATION 2018-19

Communication Engineering

SN	Sem	Sub Code	Subject	T/P	Contact				Credits	% Weightage				ESE Duration
					L	T	P	Hrs		MSE-I	MSE-II	TA	ESE	
I SEMESTER														
1	1	ET2901	Mathematical Foundations for Communication Engineering	T	3	0	0	3	3	15	15	10	60	3
2	1	ET2902	Passive RF Circuits & Systems	T	3	0	0	3	3	15	15	10	60	3
3	1	ET2903	**Lab:** Passive RF Circuits & Systems	P	0	0	2	2	1			40	60	
4	1	ET2904	Advanced Digital Communication	T	3	0	0	3	3	15	15	10	60	3
5	1	ET2905	Lab: Advanced Digital Communication	P	0	0	2	2	1			40	60	
6	1	ET2906	Adaptive Signal Processing	T	3	0	0	3	3	15	15	10	60	3
7	1	ET2907	**Lab:** Adaptive Signal Processing	P	0	0	2	2	1			40	60	
8	1		**Professional Elective- I**	T	3	0	0	3	3	15	15	10	60	3
Total					**15**	**0**	**6**	**21**	**18**					

List of Professional Electives-I		
1	ET2908	PE I: Error Control Coding
1	ET2909	PE I: Embedded Systems & DSP Processor
1	ET2910	PE I: Pattern Recognition

II SEMESTER

1	2	ET2911	Advanced Antenna Theory	T	3	0	0	3	3	15	15	10	60	3
2	2	ET2912	**Lab:** Advanced Antenna Theory	P	0	0	2	2	1			40	60	
3	2	ET2913	VLSI Signal Processing	T	3	0	0	3	3	15	15	10	60	3
4	2	ET2914	Digital Image processing	T	3	0	0	3	3	15	15	10	60	3
5	2	ET2915	**Lab:** Digital Image processing	P	0	0	2	2	1			40	60	
6	2	ET2916	Wireless Communications & Networks	T	3	0	0	3	3	15	15	10	60	3
7	2		**Professional Elective -II**	T	3	0	0	3	3	15	15	10	60	3
8	2	ET2921	Seminar	P	0	0	2	2	1			100		
Total					**15**	**0**	**6**	**21**	**18**					

List of Professional Electives-II		
2	ET2917	PE II: Selected Topics in Communication Systems
2	ET2918	PE II: Speech Processing
2	ET2919	PE II: Detection & Estimation Theory
2	ET2920	PE II: Real Time Operating System

III SEMESTER

1	3		**Professional Elective- III**	T	3	0	0	3	3	15	15	10	60	3
2	3		**Professional Elective-IV**	T	3	0	0	3	3	15	15	10	60	3
3	3	ET2937	Project Phase-I	P	0	0	16	16	8			100		
Total					**6**	**0**	**16**	**22**	**14**					

List of Professional Electives-III		
3	ET2931	PE III: Multimedia Communications
3	ET2932	PE III: Active RF Devices and Circuits
3	ET2933	PE III: Soft Computing

List of Professional Electives-IV		
3	ET2934	PE IV: High Speed Networks
3	ET2935	PE IV: Wireless Sensor Networks
3	ET2936	PE IV: Micro Electro Mechanical Systems

IV SEMESTER

1	4	ET2940	Project Phase-II	P	0	0	24	24	12			40	60	
Total					**0**	**0**	**24**	**24**	**12**					
Grand Total of Credits									62					

		June 2018	1.00	Applicable for Sem 1 & 2 AY 2018-19 & Sem 3 & 4 AY 2019-20 Onwards
Chairperson	Dean (Acad. Matters)	Date of Release	Version	

Nagar Yuwak Shikshan Samstha's

Yeshwantrao Chavan College of Engineering

(An Autonomous Institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)

M. Tech. SCHEME OF EXAMINATION 2018-19

Computer Science Engineering

SN	Sem	Sub Code	Subject	T/P	Contact Hours				Credits	% Weightage				ESE Duration Hours
					L	T	P	Hrs		MSE-I	MSE-II	TA	ESE	
I SEMESTER														
1	1	CSE2901	High Performance Computer Architecture	T	3	0	0	3	3	15	15	10	60	3
2	1	CSE2902	Real Time Systems	T	3	0	0	3	3	15	15	10	60	3
3	1	CSE2903	Network Security & Cryptography	T	3	0	0	3	3	15	15	10	60	3
4	1	CSE2904	Lab: Network Security & Cryptography	P	0	0	2	2	1			40	60	
5	1	CSE2905	Algorithm Design Techniques	T	3	0	0	3	3	15	15	10	60	3
6	1	CSE2906	Lab: Algorithm Design Techniques	P	0	0	2	2	1			40	60	
7	1		Professional Elective-I	T	3	0	0	3	3	15	15	10	60	3
8	1	CSE2911	Software Lab 1	P	0	0	2	2	2			40	60	
Total					15	0	6	21	19					

List of Professional Electives-I

1	CSE2907	PE I: Advanced Digital Image Processing
1	CSE2908	PE I: Ethical Hacking
1	CSE2909	PE I: Machine Learning
1	CSE2910	PE I: Grid and Cloud Computing

II SEMESTER

1	2	CSE2912	Data Mining	T	3	0	0	3	3	15	15	10	60	3
2	2	CSE2913	Distributed Systems	T	3	0	0	3	3	15	15	10	60	3
3	2	CSE2914	Optimizing Compilers	T	3	0	0	3	3	15	15	10	60	3
4	2	CSE2915	Lab: Optimizing Compilers	P	0	0	2	2	1			40	60	
5	2	CSE2916	Software Architecture	T	3	0	0	3	3	15	15	10	60	3
6	2	CSE2917	Lab: Software Architecture	P	0	0	2	2	1			40	60	
7	2	CSE2918	Seminar I (Technical Writing and Publishing)	P	0	0	2	2	1			100	60	1
8	2		Professional Elective-II	T	3	0	0	3	3	15	15	10	60	3
9	2	CSE2923	Software Lab 2	P	0	0	2	2	2			40	60	
Total					15	0	8	23	20					

List of Professional Electives-II

2	CSE2919	PE II: Soft Computing Techniques
2	CSE2920	PE II: Data Warehousing
2	CSE2921	PE II: Wireless Sensor Network
2	CSE2922	PE II: Information Retrieval Systems

III SEMESTER

1	3		Professional Elective- III	T	3	0	0	3	3	15	15	10	60	3
2	3		Professional Elective-IV	T	3	0	0	3	3	15	15	10	60	3
3	3	CSE2939	Project Phase – I	P	0	0	16	16	8		100			
Total					6	0	16	22	14					

List of Professional Electives-III

3	CSE2931	PE III: Computer Vision
3	CSE2932	PE III: Natural Language Processing
3	CSE2933	PE III: Optimization Techniques
3	CSE2934	PE III: Database Security

List of Professional Electives-IV

3	CSE2935	PE IV: Cyber Forensics
3	CSE2936	PE IV: Pattern Recognition
3	CSE2937	PE IV: Algorithms for Bioinformatics
3	CSE2938	PE IV: Semantic Web and Social Networks

IV SEMESTER

1	4	CSE2940	Project Phase - II	P	0	0	24	24	12			40	60	
Total					0	0	24	24	12					
Grand Total of Credits									65					

Chairperson	Dean (Acad. Matters)	June 2018 Date of Release	1.00 Version	Applicable for Sem 1 & 2 AY 2018-19 & Sem 3 & 4 AY 2019-20 Onwards

Dean (Acad.) Yeshwantrao Chavan College of Engineering Wanadongri Hingna Road NAGPUR - 441 110

SEAL

PRINCIPAL Yeshwantrao Chavan College of Engineering Wanadongri, Hingna Road, NAGPUR - 441110

Nagar Yuwak Shikshan Sanstha's

Yeshwantrao Chavan College of Engineering

(An Autonomous Institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)

SoE No. PG-301

M. Tech. SCHEME OF EXAMINATION 2020

Deptt. of Civil Engineering

(Structural Engineering)

Sl. No.	Sem	Course Code	Course Title	T/P	Contact Hours				Credits	% Weightage			ESE Duration Hours
					L	T	P	Total Contact Hrs.		MSEs*	TA**	ESE	
I SEMESTER													
1	1	CV3901	Theory of Elasticity and Elastic Stability	T	3	0	0	3	3	30	30	40	3
2	1	CV3902	Structural Dynamics	T	3	0	0	3	3	30	30	40	3
3	1	CV3903	**Lab:** Structural Dynamics	P	0	0	2	2	1	-	60	40	-
4	1	CV3904	Matrix Analysis of Structures	T	3	0	0	3	3	30	30	40	3
5	1	CV3905	**Lab:** Matrix Analysis of Structures	P	0	0	2	2	1	-	60	40	-
6	1	CV3906	Design of Substructures & Foundations	T	3	0	0	3	3	30	30	40	3
7	1	CV3907	Earthquake and wind effects on Structures	T	3	0	0	3	3	30	30	40	3
8	1	CV3908	Advanced Concrete Structures	T	3	0	0	3	3	30	30	40	3
9	1	CV3909	**Lab:** RCC Design Studio	P	0	0	2	2	1	-	60	40	-
Total					**18**	**0**	**6**	**24**	**21**				
II SEMESTER													
1	2	CV3915	Finite Element Method	T	3	0	0	3	3	30	30	40	3
2	2	CV3916	**Lab:** Finite Element Method	P	0	0	2	2	1	-	60	40	-
3	2	CV3917	Theory of Plates and Shells	T	3	0	0	3	3	30	30	40	3
4	2	CV3918	Advanced Steel Structures	T	3	0	0	3	3	30	30	40	4
5	2	CV3919	**Lab:** Steel Design Studio	P	0	0	2	2	1	-	60	40	-
6	2		Professional Elective-I	T	3	0	0	3	3	30	30	40	3
7	2		Professional Elective-II	T	3	0	0	3	3	30	30	40	3
8	2		Professional Elective-III	T	3	0	0	3	3	30	30	40	3
Total					**18**	**0**	**4**	**22**	**20**				
Professional Elective - I													
1	2	CV3920	PE I: New Engineering Materials										
2	2	CV3921	PE I: Prestressed Concrete										
3	2	CV3922	PE I: Smart Structures and Applications										
Professional Elective - II													
1	2	CV3923	PE II: RC Tall Buildings										
2	2	CV3924	PE II: Composite Strucutres										
3	2	CV3925	PE II: RC Bridge Design										
Professional Elective - III													
1	2	CV3926	PE III: Plastic Analysis and Design of Structures										
2	2	CV3927	PE III: Seismic Analysis and Design of Structures										
3	2	CV3928	PE III: Design of Industrial Structures										
III SEMESTER													
1	3	CV3939	Project Phase-I	P	0	0	16	16	8	-	100	-	-
Total					**0**	**0**	**16**	**16**	**8**				
IV SEMESTER													
1	4	CV3940	Project Phase-II	P	0	0	24	24	12	-	60	40	-
Total					**0**	**0**	**24**	**24**	**12**				
Total Credits									**61**				

MSEs* = Three MSEs of 15 Marks each will conducted and marks of better 2 of these 3 MSEs will be considered for Continuous Assessment

TA ** = for Theory : 20 marks on lecture quizzes, 8 marks on assignments, 2 marks on class performance

TA = for Practical : MSPA will be 15 marks each**

		Jan-20	1.00
Chairperson	**Dean (Acad. Matters)**	**Date of Release**	**Version**

Applicable for Sem 1 & 2 AY 2020-21 & Sem 3 & 4 AY 2021-22 Onwards

Nagar Yuwak Shikshan Sanstha's

Yeshwantrao Chavan College of Engineering

(An Autonomous Institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)

SoE No. PG-301

M. Tech. SCHEME OF EXAMINATION 2020

Deptt. of Civil Engineering

(Environmental Engineering)

Sl. No.	Sem	Course Code	Course Title	T/P	Contact Hours				Credits	% Weightage			ESE Duration Hours
					L	T	P	Total Contact		MSEs*	TA**	ESE	
I SEMESTER													
1	1	CV3961	Environmental Chemistry and Microbiology	T	3	0	0	3	3	30	30	40	3
2	1	CV3962	**Lab :** Environmental Chemistry and Microbiology	P	0	0	2	2	1	-	60	40	-
3	1	CV3963	Water Supply and Waste Water Collection System	T	3	0	0	3	3	30	30	40	3
4	1	CV3964	**Lab :** Water Supply and Waste Water Collection System	P	0	0	2	2	1	-	60	40	-
5	1	CV3965	Municipal Water Treatment	T	3	0	0	3	3	30	30	40	3
6	1	CV3966	Municipal Solid Waste Management	T	3	0	0	3	3	30	30	40	3
7	1	CV3967	Municipal Waste Water Treatment	T	3	0	0	3	3	30	30	40	3
Total					**15**	**0**	**4**	**19**	**17**				
II SEMESTER													
1	2	CV3975	Industrial Waste Water Treatment and Reuse	T	3	0	0	3	3	30	30	40	3
2	2	CV3976	Envrionmental Management	T	3	0	0	3	3	30	30	40	3
3	2	CV3977	Air Quality Management	T	3	0	0	3	3	30	30	40	3
4	2	CV3978	Rural Water Supply and Sanitation	T	3	0	0	3	3	30	30	40	3
5	2		Professional Elective-I	T	3	0	0	3	3	30	30	40	3
6	2		Professional Elective-II	T	3	0	0	3	3	30	30	40	3
7	2	CV3986	Seminar	P	0	0	2	2	1	-	100	-	-
Total					**18**	**0**	**2**	**20**	**19**				
Professional Elective - I													
1	2	CV3979	PE I: Hazardous Waste Management										
2	2	CV3980	PE I: Water Resource Management										
3	2	CV3981	PE I: Environmental Biotechnology										
4	2	CV3982	PE I: Advanced Water Treatment										
Professional Elective - II													
1	2	CV3983	PE II: Energy Conversion and Environment										
2	2	CV3984	PE II: Applied Structure										
3	2	CV3985	PE II: Water Reuse and Recycling										
III SEMESTER													
1	3	CV3989	Project Phase - I	P	0	0	16	16	8	-	100	-	-
Total					**0**	**0**	**16**	**16**	**8**				
IV SEMESTER													
1	4	CV3990	Project Phase-II	P	0	0	24	24	12	-	60	40	-
Total					**0**	**0**	**24**	**24**	**12**				
Total Credits									**56**				

MSEs* = Three MSEs of 15 Marks each will conducted and marks of better 2 of these 3 MSEs will be considered for Continuous Assessment

TA ** = for Theory : 20 marks on lecture quizzes, 8 marks on assignments, 2 marks on class performance

TA = for Practical : MSPA will be 15 marks each**

		Jan-20	1.00	Applicable for Sem 1 & 2 AY 2020-21 & Sem 3 & 4 AY 2021-22 Onwards
Chairperson	Dean (Acad. Matters)	Date of Release	Version	

Nagar Yuwak Shikshan Sanstha's

Yeshwantrao Chavan College of Engineering

(An Autonomous Institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)

SoE No. PG-301

M. Tech. SCHEME OF EXAMINATION 2020

Deptt. of Electronics & Telecommunication

(Communication Engineering)

Sl. No.	Sem	Course Code	Course Title	T/P	Contact Hours				Credits	% Weightage			ESE Duration Hours
					L	T	P	Total Contact Hrs.		MSEs*	TA**	ESE	
I SEMESTER													
1	1	ET3901	Mathematical Foundations for Communication Engineering	T	3	0	0	3	3	30	30	40	3
2	1	ET3902	Passive RF Circuits & Systems	T	3	0	0	3	3	30	30	40	3
3	1	ET3903	**Lab:** Passive RF Circuits & Systems	P	0	0	2	2	1		60	40	
4	1	ET3904	Advanced Digital Communication	T	3	0	0	3	3	30	30	40	3
5	1	ET3905	**Lab:** Advanced Digital Communication	P	0	0	2	2	1		60	40	
6	1	ET3906	Adaptive Signal Processing	T	3	0	0	3	3	30	30	40	3
7	1	ET3907	**Lab:** Adaptive Signal Processing	P	0	0	2	2	1		60	40	
8	1		**Professional Elective- I**	**T**	3	0	0	3	3	30	30	40	3
9	1		**Professional Elective- II**	**T**	3	0	0	3	3	30	30	40	3
Total					**18**	**0**	**6**	**24**	**21**				

List of Professional Electives-I		
1	ET3908	PE I: Error Control Coding
1	ET3909	PE I: Embedded Systems & DSP Processor
1	ET3910	PE I: Pattern Recognition

List of Professional Electives-II		
1	ET3911	PE II: Multimedia Communications
1	ET3912	PE II: Active RF Devices and Circuits
1	ET3913	PE II: Soft Computing

II SEMESTER													
1	2	ET3915	Advanced Antenna Theory	T	3	0	0	3	3	30	30	40	3
2	2	ET3916	**Lab:** Advanced Antenna Theory	P	0	0	2	2	1		60	40	
3	2	ET3917	VLSI Signal Processing	T	3	0	0	3	3	30	30	40	3
4	2	ET3918	Digital Image processing	T	3	0	0	3	3	30	30	40	3
5	2	ET3919	**Lab:** Digital Image processing	P	0	0	2	2	1		60	40	
6	2	ET3920	Wireless Communications & Networks	T	3	0	0	3	3	30	30	40	3
7	2		**Professional Elective -III**	T	3	0	0	3	3	30	30	40	3
8	2		**Professional Elective -IV**	T	3	0	0	3	3	30	30	40	3
9	2	ET3928	Seminar	P	0	0	2	2	1		100		
Total					**18**	**0**	**6**	**24**	**21**				

List of Professional Electives-III		
2	ET3921	PE III: Selected Topics in Communication Systems
2	ET3922	PE III: Speech Processing
2	ET3923	PE III: Detection & Estimation Theory
2	ET3924	PE III: Real Time Operating System

List of Professional Electives-IV		
2	ET3925	PE IV: High Speed Networks
2	ET3926	PE IV: Wireless Sensor Networks
2	ET3927	PE IV: Micro Electro Mechanical Systems

III SEMESTER													
1	3	ET3939	Project Phase-I	P	0	0	16	16	8		100		
Total					**0**	**0**	**16**	**16**	**8**				

IV SEMESTER													
1	4	ET3940	Project Phase-II	P	0	0	24	24	12		60	40	
Total					**0**	**0**	**24**	**24**	**12**				
Total of Credits									62				

MSEs* = Three MSEs of 15 Marks each will conducted and marks of better 2 of these 3 MSEs will be considered for Continuous Assessment

TA ** = for Theory : 20 marks on lecture quizzes, 8 marks on assignments, 2 marks on class performance

TA** = for Practical : MSPA will be 15 marks each

		Jan,20	1.00	Applicable for Sem 1 & 2 AY 2020-21 & Sem 3 & 4 AY 2021-22 Onwards
Chairperson	Dean (Acad. Matters)	Date of Release	Version	

Nagar Yuwak Shikshan Sanstha's

Yeshwantrao Chavan College of Engineering

(An Autonomous Institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)

SoE No. PG-301

M. Tech. SCHEME OF EXAMINATION 2020

Department of Electrical Engineering

Integrated Power Systems (IPS)

Sl. No.	Sem	Course Code	Course Title	T/P	Contact Hours				Credits	% Weightage			ESE Duration Hours
					L	T	P	Total Contact Hrs.		MSEs*	TA**	ESE	
I SEMESTER													
1	1	EL3901	Advanced Power Electronics	T	3	0	0	3	3	30	30	40	3
2	1	EL3902	Lab: Advance Power Electronics	P	0	0	4	4	2		60	40	
3	1	EL3903	Analog & Digital Protection	T	3	0	0	3	3	30	30	40	3
4	1	EL3904	Lab: Analog & Digital Protection	P	0	0	4	4	2		60	40	
5	1	EL3905	Digital Control System	T	3	0	0	3	3	30	30	40	3
6	1	EL3906	HVDC Power Transmission	T	3	0	0	3	3	30	30	40	3
7	1	EL3907	Power System Modelling	T	3	0	0	3	3	30	30	40	3
8	1		**Professional Elective- I**	**T**	3	0	0	3	3	30	30	40	3
9	1		**Lab: Professional Elective I**	**P**	0	0	4	4	2		60	40	
			Total		**18**	**0**	**12**	**30**	**24**				

List of Professional Electives-I

EL3914	PE I: Electrical Drives and Controls
EL3915	PE I: Lab: Electrical Drives and Controls
EL3916	PE I: Renewable Energy System
EL3917	PE I: Lab: Renewable Energy System

II SEMESTER													
1	2	EL3911	Power System Planning	T	3	0	0	3	3	30	30	40	3
2	2	EL3912	Application of Power Electronics to Power System	T	3	0	0	3	3	30	30	40	3
3	2	EL3913	Power Quality	T	3	0	0	3	3	30	30	40	3
4	2		**Professional Elective II**	T	3	0	0	3	3	30	30	40	3
5	2		**Professional Elective - III**	T	3	0	0	3	3	30	30	40	3
6	2		**Professional Elective - IV**	T	3	0	0	3	3	30	30	40	3
7	2	EL3921	Lab:Power System Simulation	L	0	0	4	4	2		60	40	
8	2	EL3938	Lab.: Power System Design		0	0	4	4	2		60	40	
			Total		**18**	**0**	**8**	**26**	**22**				

Professional Elective II

EL3918	PE II: Advanced Digital Signal Processing
EL3919	PE II: EHV Power Transmission
EL3920	PE II: Restructuring of Power System

Professional Elective - III

EL3931	Power System Stability
EL3932	Electrical Distribution Systems
EL3933	Power System Operation and Control
EL3934	Transients in Power Systems

Professional Elective - IV

EL3935	Distribtuted Automation
EL3936	Power Electronics for Renewable Energy Systems
EL3937	Control System Design

III SEMESTER													
1	3	EL3939	Project Phase -I		0	0	16	16	8		100		
			Total		**0**	**0**	**16**	**16**	**8**				
IV SEMESTER													
1	4	EL3940	Project Phase-II		0	0	24	24	12		60	40	
			Total		**0**	**0**	**20**	**24**	**12**				
			Total of Credits						**66**				

MSEs* = Three MSEs of 15 Marks each will conducted and marks of better 2 of these 3 MSEs will be considered for Continuous Assessment

8 marks on assignments, 2 marks on class performance

MSPA will be 15 marks each

		Jan,20	1.00	Applicable for Sem 1 & 2 AY 2020-21 & Sem 3 & 4 AY 2021-22 Onwards
Chairperson	Dean (Acad. Matters)	Date of Release	Version	

Nagar Yuwak Shikshan Sanstha's

Yeshwantrao Chavan College of Engineering

(An Autonomous Institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)

SoE No. PG-301

M. Tech. SCHEME OF EXAMINATION 2020

Department of Mechanical Engineering

(CAD / CAM)

Sl. No.	Sem	Course Code	Course Title	T/P	Contact Hours				Credits	% Weightage			ESE Duration Hrs.
					L	T	P	Total Contact Hrs.		MSEs*	TA**	ESE	
I SEMESTER													
1	1	ME3901	Stress Analysis	T	3	0	0	3	3	30	30	40	3
2	1	ME3902	Computer Integrated Manufacturing	T	3	0	0	3	3	30	30	40	3
3	1	**Professional Elective- I**		T	3	0	0	3	3	30	30	40	3
		ME3907	Project Engineering										
		ME3908	Tool Design										
		ME3909	Object Oriented Programmings										
		ME3910	Reliability Engineering										
4	1	ME3903	Computer Graphics and Solid Modeling	T	3	0	0	3	3	30	30	40	3
5	1	ME3904	Lab: Computer Graphics and Solid Modeling	P	0	0	2	2	1	60		40	
6	1	ME3905	CNC Technologies	T	3	0	0	3	3	30	30	40	3
7	1	ME3906	Lab: CNC Technologies	P	0	0	2	2	1	60		40	
8	1	ME3921	Product Design & Development	T	3	0	0	3	3	30	30	40	3
					18	**0**	**4**	**22**	**20**				
II SEMESTER													
1	2	ME3911	Robotics	T	3	0	0	3	3	30	30	40	3
2	2	ME3912	Modelling & Simulation	T	3	0	0	3	3	60	30	40	3
3	2	ME3913	Finite Element Method	T	3	0	0	3	3	60	30	40	3
4	2	ME3914	Lab: Finite Element Method	P	0	0	2	2	1	60		40	
5	2	ME3915	Artificial Intelligence	T	3	0	0	3	3	60	30	40	3
6	2	**Professional Elective-II**		T	3	0	0	3	3	30	30	40	3
		ME3917	Product Data Management										
		ME3918	Mechatronics										
		ME3919	Machine Tool Design										
		ME3920	Plant Design										
7	2	ME3916	Seminar		0	0	2	2	1	100			
8	2	**Professional Elective - III**		T	3	0	0	3	3	30	30	40	3
		ME3923	Computational Fluid Dynamics										
		ME3924	Design Optimization Techniques										
		ME3925	Rapid Prototyping										
		ME3926	Design for Manufacturing and Assembly										
					18	**0**	**4**	**22**	**20**				
III SEMESTER													
1	3	ME3922	Project Phase -I		0	0	16	16	8	100			
					0	**0**	**16**	**16**	**8**				
IV SEMESTER													
1	4	ME3931	Project Phase-II		0	0	24	24	12	60		40	
					0	**0**	**24**	**24**	**12**				
Total of Credits									**60**				

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TA = for Practical : MSPA will be 15 marks each**

		Jan,20	1.00
Chairperson	Dean (Acad. Matters)	Date of Release	Version

Applicable for Sem 1 & 2 AY 2020-21 & Sem 3 & 4 AY 2021-22 Onwards

Nagar Yuwak Shikshan Sanstha's

Yeshwantrao Chavan College of Engineering

(An Autonomous Institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)

SoE No. PG-301

M. Tech. SCHEME OF EXAMINATION 2020

Department of Computer Technology

(Computer Science and Engineering)

Sl. No.	Sem	Course Code	Course Title	T/P	Contact Hours				Credits	% Weightage			ESE Duration Hrs.
					L	T	P	Total Contact Hrs.		MSEs*	TA**	ESE	
I SEMESTER													
1	1	CSE3901	High Performance Computer Architecture	T	3	0	0	3	3	30	30	40	3
2	1	CSE3902	Real Time Systems	T	3	0	0	3	3	30	30	40	3
3	1	CSE3903	Network Security & Cryptography	T	3	0	0	3	3	30	30	40	3
4	1	CSE3904	Lab: Network Security & Cryptography	P	0	0	2	2	1	60		40	
5	1	CSE3905	Algorithm Design Techniques	T	3	0	0	3	3	30	30	40	3
6	1	CSE3906	Lab: Algorithm Design Techniques	P	0	0	2	2	1	60		40	
7	1		**Professional Elective-I**	T	3	0	0	3	3	30	30	40	3
8	1		**Professional Elective- II**	T	3	0	0	3	3	30	30	40	3
9	1	CSE3915	Software Lab 1	P	0	0	2	2	2	60		40	
Total					**18**	**0**	**6**	**24**	**22**				
List of Professional Electives-I													
1	1	CSE3907	PE I: Advanced Digital Image Processing										
2	1	CSE3908	PE I: Ethical Hacking										
3	1	CSE3909	PE I: Machine Learning										
4	1	CSE3910	PE I: Grid and Cloud Computing										
List of Professional Elective- II													
1	1	CSE3911	PE II: Soft Computing Techniques										
2	1	CSE3912	PE II: Natural Language Processing										
3	1	CSE3913	PE II: Optimization Techniques										
4	1	CSE3914	PE II: Wireless Sensor Network										
II SEMESTER													
1	2	CSE3916	Data Mining	T	3	0	0	3	3	30	30	40	3
2	2	CSE3917	Distributed Systems	T	3	0	0	3	3	30	30	40	3
3	2	CSE3918	Optimizing Compilers	T	3	0	0	3	3	30	30	40	3
4	2	CSE3919	Lab: Optimizing Compilers	P	0	0	2	2	1	60		40	
5	2	CSE3920	Software Architecture	T	3	0	0	3	3	30	30	40	3
6	2	CSE3921	Lab: Software Architecture	P	0	0	2	2	1	60		40	
7	2	CSE3922	Seminar (Technical Writing and Publishing)	P	0	0	2	2	1		100		1
8	2		**Professional Elective-III**	T	3	0	0	3	3	30	30	40	3
9	2		**Professional Elective-IV**	T	3	0	0	3	3	30	30	40	3
10	2	CSE3931	Software Lab 2	P	0	0	2	2	2	60		40	
					18	**0**	**8**	**26**	**23**				
List of Professional Electives-III													
1	2	CSE3923	PE III: Computer Vision										
2	2	CSE3924	PE III: Data Warehousing										
3	2	CSE3925	PE III:Research Methodology & Statistics										
4	2	CSE3926	PE III: Information Retrieval Systems										
List of Professional Elective- IV													
1	2	CSE3927	PE IV: Cyber Forensics										
2	2	CSE3928	PE IV: Deep Learning										
3	2	CSE3929	PE IV: Fundamentals of Bioinformatics										
4	2	CSE3930	PE IV: Semantic Web and Social Networks										
III SEMESTER													
1	3	CSE3939	Project Phase -I		0	0	16	16	8	100			
					0	**0**	**16**	**16**	**8**				
IV SEMESTER													
1	4	CSE3940	Project Phase-II		0	0	24	24	12	60		40	
					0	**0**	**24**	**24**	**12**				
Total of Credits									**65**				

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