GONDWANA UNIVERSITY,GADCHIROLI

Ordinance NO. 95 of 2017

EXAMINATIONS LEADING TO THE DEGREE OF B.E. (FOUR YEARS DEGREE COURSE WITH SEMESTER PATTERN AND CREDIT GRADE SYSTEM) IN THE FACULTY OF ENGINEERING AND TECHNOLOGY ORDINANCE, 2017.

Whereas it is expedient to provide an Ordinance regarding Examination Leading to the Degree of B.E (Four year Degree Course with Semester Pattern and Credit Grade System) in the Faculty of Engineering and Technology, for the purpose hereafter appearing, the Management Council is hereby pleased to make the following Ordinance:-

1. This ordinance may be called "Examinations Leading to the Degree of B.E. (Four Year Degree Course with Semester Pattern and Credit Grade System) in the Faculty of Engineering and Technology Ordinance, 2017.
2. This Ordinance shall come into force w.e.f. the date of its making by the Management Council.
3. Subject to the conditions prescribed by the Government from time to time, for admission to First Year B.E. courses, the candidate shall be considered eligible:-

Passed 12th Standard Examination of the Maharashtra State Board of Secondary and Higher Secondary Education, with subjects:

i) English (Higher or Lower)
ii) Modern Indian Language (Higher or Lower)
iii) Mathematics and Statistics.
iv) Chemistry.
v) Physics.
vi) Any other optional subject from out of the list prescribed by the said Secondary and Higher Secondary Education Board.

OR

i) English (Higher or lower)
ii) Mathematics and Statistics.
iii) Chemistry
iv) Physics
v) Vocational subject (Defined by the said Board as a Technical Subject)

4. Subject to the conditions prescribed by the Govt. from time to time for direct admission to the Third Semester B.E. the candidates shall be considered eligible:
    a) that any one, who holds a Diploma with at least 50% marks in appropriate branch of Engineering / Technologyfrom any one of the Polytechnic in Maharashtra State shall be eligible for admission to the 3rd (III) Semester of the B.E. Degree course under this Ordinance, in the faculty of Engineering and Technology.
    b) that any one, who holds a B. Sc Degree with Mathematics as a compulsory subject from a recognized University as defined by UGC, with at least 50% marks and passed XII standard with mathematics as one of the subject shall be eligible for admission to the 3rd (III) Semester of the B E Degree course under this Ordinance, in the faculty of Engineering and Technology.

Provided firstly that in case of students belonging to B. Sc. Degree with Mathematics as a compulsory subject, he/she shall clear the subjects of Engineering Graphics / Engineering Drawing, Electrical Engineering and Engineering Mechanics of the Ist and IInd Semester ofEngineering program along with the IIIrd Semester subjects.

Provided secondly further that, the students belonging to B.Sc. stream shall be considered only after filling the supernumerary seats in this category with students belonging to the Diploma stream.

provided thirdly further that students, who have passed Diploma in Engineering & Technology from an AICTE approved institution or B. Sc Degree with Mathematics as a compulsory subject from a recognized University as defined by UGC, shall also be eligible for admission to the Ist semester of Engineering Degree courses subject to vacancies in the Ist Semester class in case the vacancies at lateral entry are exhausted. However the admissions shall be based strictly on the eligibility criteria as mentioned inthe clause (a) and (b).

The above admission entertained under paragraphs (a), (b), and third provision are subject to change as per G.R./Notification issued by the D.T.E./Govt. of Maharashtra, from time to time.

5. The Degree of Bachelor of Engineering (B.E.) shall be awarded to examinee who in accordance with the provisions of this Ordinance qualifies for the award in any of the following branches.

(i) Civil Engineering (Scheme of teaching Examination shall be as provided under Appendix-A,B& C appended with this Ordinance)
(ii) Computer Science & Engineering (Scheme of teaching and Examination shall be as provided and Appendices -A,B,and D appended with this ordinance)
(iii) Computer Technology (appendices'-A,B And E)
(iv) Electrical (Electronics & Power) Engineering (Appendices'-A,B And F)
(v) Electronics Engineering (Appendices-A,B And G)
(vi) Electronics and Communication Engineering(Appendices-A,B And H)
(vii) Electronics and Telecommunication Engineering (Appendices-A,B And I)
(viii) Information Technology (Appendices-A,B And J)
(ix) Instrumentation Engineering(Appendices-A,B And K)
(x) Mechanical Engineering (Appendices-A,B And L)
(xi) Mining Engineering (Appendices-A,B And M)

6. (i) There shall be eight semester examinations leading to the Degree of B.E (First, Second, Third, Fourth, Fifth, Sixth, Seventh &Eight Semester)

(ii) The First & Second Semester B.E. Examinations shall be common for all the branches mentioned under para 5 above.

7. The period of Academic Session shall be such, as may be notified by the University.
8. The End Semester examination of first, third, fifth and seventh semester shall be held by the University in winter & supplementary examination in summer every year. Further end semester examination of second, fourth, sixth & eighth semester will be held in summer & the supplementary examination in winter every year.
9. The internal and external assessment of student performnce incorporates a suitable evaluation scheme based on their performance in different methodological tests/examinations as mentioned below:-

(1) For Theory Courses, continuous assessment shall have various components of evaluation as given below:

a) Mid Semester Examination(MSE) will be carrying 10% weightage and shall be conducted independently by each of the college on the dates notified by the affiliating university. The weightage for MSE in each subject shall be a maximum of 10 (ten) marks only. Usually two such MSEs should be conducted for the given theory course.

b) Internal Evaluation (IE) will be carrying 10% weightage to the subjects and shall be monitored based on the following parameters.The weightage for IE in each subject shall be limited to maximum of 10 (ten) marks only. It is broken further as given below:-

Assignments/quizzes/GDs -	03 marks
Project*/Seminar/Viva voce -	05 marks
Response in classes (CR) -	02 marks

These two components i.e. MSE and IE put together will form the internal sessional components carrying a weightage subject to a maximum of 20 (twenty) marks only.

*Project – Every student shall be required to submit a printed project report or deliver a seminar, highlighting the current engineering/technology/trend on any topic included in the syllabus of the given subject. This will be evaluated by the concerned subject teacher or alternatively viva voce shall be conducted to award the marks allotted to this parameter.

c) End Semester Examination (ESE) carrying 80% weightage shall be conducted for each of the theory course/subject by the institute through Affiliating University, as per the related scheme of examination appended with this Ordinance in the form of Appendix.

(2) Pattern of End Semester Examination (Theory Course) –

i) The prescribed syllabi for each of the theory courses have been divided into *FIVE* units.

ii) Syllabus has been divided into units equal to the number of question to be answered / attempted in the theory question paper. On each unit there will be a question.

iii) Number of question/s will be in accordance with the unit/s prescribed in the syllabi for the given subject/paper, i.e. there will be a full question from every unit.

iv) For every question, there will be internal choice from the same unit.

v) The question will be either long answer type or short answer type containing number of sub questions with no internal choice.

(3) For Laboratory Courses, continuous assessment shall have various components of evaluation as given below:-

a) Term Work (TW)as internal assessment carrying 50% weightage shall comprise of 8-10 number of experiments/practical's to be performed by each of the students and a written test/viva voce. The weightage for TW which forms the sessional component for each of the laboratory course shall be of 25 (Twenty five) marks only and are distributed as follows.

Performance of experiments and journal submission – 10 marks

One Written test on practical topics/viva voce - 10 marks
Attendance (Theory and practical both) - 05 marks

The final certification and acceptance of the term work ensures the satisfactory performance in the given laboratory course and minimum passing in the term work.

b) Performance and Oral Examination (POE) - External laboratory examination will be assessed based on POE carrying 50% weightage. Herein every examinee has to perform one experiment/practical. This experiment/practical shall be only from the aforesaid list, which the examinee is deemed to have performed during his/her term work. Wherein the performance of experiment is not possible, a written examination shall be conducted. The oral questions i.e. viva-voce shall also be from the related topics. The weightage for POE in each subject shall be limited to a maximum of 25 (Twenty five) marks only and the break-up shall be as follows:-

Performance of experiment/written test: 15 marks
Oral examination/Viva-voce: 10 marks

10. Subject to his/her compliance with the provisions of this Ordinance & other Ordinances pertaining to Examination in force from time to time, the applicant for admission, at the end of the course of study of a particular semester/session, to an Examination specified in column (1) of the **Table 1**given below, shall be eligible to appear if;

a) he/she satisfies with the conditions in the table and the provisions there under;
b) he/she complies with the provisions of the ordinance pertaining to the Examinations in general;
c) he/she has prosecuted a regular course of study in a college affiliated to the University;
d) he/she has in the opinion of the Principal shown satisfactory progress in his/her studies.

Table 1: ATKT Rules as applicable to B.E. Program

Name of the Examination B.E.	Students should have passed in all the subjects/courses of the following examination/s	Students should have satisfactorily completed the term work and appeared for at least one theory course of the following examination	Students should have passed in all the subjects except in ***Four or less*** number of passing heads of the following examination taken together
1	2	3	4
I Semester	XII Std or equivalent	------	------
II Semester	-------	I Semester	------
III Semester		II Semester	I and II Semester

IV Semester	-------	III Semester	------
V Semester	I and II Semester	IV Semester	III and IVSemester
VI Semester	-------	V Semester	------
VII Semester	III and IV Semester	VI Semester	V and VI Semester
VIII Semester	-------	VII Semester	------

*As specified in third provision of para 4 **As specified in para 4(a) and 4(b) of this Ordinance.

Provided,

(a) that an examinee who has secured pass grade in any subject (theory or laboratory) or subjects shall, at his option, be exempted from appearing in that subject at the subsequent examination.

Examination means the 'Theory' and the 'Laboratory' with their respective institutional evaluation/assessment being considered as separate heads of passing (though of the same subject), an examinee passing under any one of these, but failing in another, shall at his option, be entitled to get 'Exemption" in that part of the subject (either theory or laboratory), in which he has secured the pass grade.

11. The fees for the examination shall be as prescribed by the University from time to time and whenever any change is made in the fees prescribed for any particular examination that shall be notified through a notification for information to the examinees concerned.

12. As per the adopted Model of Credit Grade System (CGS), the computation of Semester Grade Point Score (SGPS) and Cumulative Grade Point Score (CGPS) of an examinee shall follow the steps given below:

The marks will be given in all examinations which will include college assessment and university assessment marks. The total marks thus obtained for each Theory / Laboratory shall be converted into Grades as per **Table 2 below**.

SGPS shall be calculated based on Grade Points corresponding to Grade as given in **Table 2** and the Credits allotted to respective Theory / Laboratory shown in the Teaching and Examination scheme for respective semester.

$$\boldsymbol{SGPS} = \frac{\{C_1 \times G_1 + C_2 \times G_2 \ldots\ldots\ldots\ldots C_n \times G_n\}}{C_1 + C_2 \ldots\ldots\ldots\ldots C_n}$$

Where, $C_{1\ldots n}$ – No of Credits of individual course
$G_{1\ldots n}$ – Grade points obtained in the respective course.

Cumulative Grade Point Score (CGPS) is indicative of the overall academic performance of a student in the given program, Bachelor of Engineering (B.E.). It shall be computed as cumulative total of the products of actual grade point scores and its weightage in terms credits of VII and VIII semester divided by total No. of credits of VII and VIII semester.

$$\boldsymbol{CGPS} = \frac{(SGPS_{VII} \times C_{VII} + SGPS_{VIII} \times C_{VIII})}{C_{VII} + C_{VIII}}$$

Where, $SGPS_{VII\ \&\ VIII}$ – Corresponding grade point scores obtained in VII & VIII Semester $C_{VII\ \&\ VIII}$ – Total No. of Credits of VII & VIII Semester

13. (i) The theory and laboratory courses in which an examinee is to be examined, the maximum grade for these and the minimum grade which an examinee must obtain in order to secure exemption in the aforesaid course(s) and the examination are detailed in **Table 2 below**.

Table 2: Conversion of Marks to Grades in Credit System

Percentage score, X(Theory)	**Percentage score, X(Laboratory)**	**Grade**	**Grade Points**
80≤ X ≤100	85≤ X ≤100	**A^+**	**10**
70≤X <80	80≤X <85	**A**	**9**
60≤X <70	75≤X <80	**B^+**	**8**
55≤X<60	70≤X<75	**B**	**7**
50≤ X <55	65≤ X <70	**C^+**	**6**
45≤ X <50	60≤ X <65	**C**	**5**
40≤X <45	50≤X <60	**D**	**4**
00 X <40	00 X <50	**F**	**0**
Absent in Examination	Absent in Examination	**Z**	**---**

(ii) The minimum grade required to be secured for passing at the I/II/III/IV/V/VI/VII and VIII semester examinations shall be **'D'** indicating a percentage score of more than or equal to 40 (and less than 45) for the theory course/s and a percentage score of more than or equal to 50 (and less than 60) for the laboratory course/s.

(iii) The internal and external component of evaluation for a given theory/laboratory course are not considered as separate passing heads instead they together form a single passing head i.e. the qualifying marks to be secured by a student in the given course either theory or laboratory are sum of internal and external components of its evaluation.

14. (i) The scope of the subjects shall be as indicated in the syllabus.
(ii) The medium of instruction and examination shall be 'English'.

15.Provisions of Ordinance to provide grace marks for passing in a particular head getting Distinction in the subject and Condonation of Deficiency of Marks in a course in the faculty of engineering and technology shall apply to each examination under this Ordinance.

16.An examinee who does not pass, or who fails to present himself/herself for the examination shall be eligible for 'Readmission' to the same examination, on payment of a fresh fee and such other fees as may be prescribed from time to time.

17.An unsuccessful examinee, at any of the above examination, shall have an option to carry his/her sessional/term work marks for theory/laboratory examination to his/her successive attempt at the examination. The examinee, however can forego his/her sessional/term work

marks in a subject or subjects, in which case he/she shall be examined for a total of marks comprising the ESE/POE examination and MSE & IE/TW together to form the 'Grade', at his/her successive attempts at the examination. Such an option may be availed by the examinee by indicating the same in his/her "Application Form for Examination" and the option once exercised, it shall be "Final and Binding" on the concerned examinee.

18.As soon as possible after the examinations, the Board of Examinations shall publish a list of successful examinees. The result of all examinations shall be classified on the basis of Semester Grade Point Score **'SGPS'** evaluated as specified in the adopted model of Credit-Grade System and shall be notified in accordance with the provisions specified in the concerned Ordinance.

19.Notwithstanding anything to the contrary in this Ordinance, no one shall be admitted to an examination under this Ordinance, if he/she has already passed the same examination or an equivalent examination hitherto of any Statutory University.

20.One who has passed the Final B.E. examination of the University in one branch and who desires to take B.E. Degree in another branch, shall be admitted to the Third semester of that branch and shall be governed by this Ordinance for all other purposes.

21.(i) The examinees who have secured pass grade in all the 'Subjects' prescribed for all the "Examinations" shall be eligible for the award of the Degree of Bachelor of Engineering in the given discipline/branch in the Faculty of Engineering and Technology.

(ii) The classification of 'Grade' of Examinees for the award of the Degree of Bachelor of Engineering shall be on the basis of CGPS Interval as shown in the Table-3 below wherein Cumulative Grade Point Score **'CGPS'**shall be evaluated by accounting **SGPS** of **VII and VIII Semester** only.

TABLE - 3

Grade	**CGPS Interval**
A^+	9.50 - 10
A	8.50 – 9.49
B^+	7.50 – 8.49
B	6.50 – 7.49
C^+	5.50 – 6.49
C	4.50 – 5.49
D	4.0 – 4.49

(iii) The Degree, in the prescribed form shall, be signed by the Hon'ble Vice-Chancellor.

(Statement of object and reasons)

Direction No.101 of 2012 was issued by the Vice-Chancellor of the University under provision of section 14(8) of the Maharashtra University Act,1994 to regulate the course and Examinations in eleven branches in the Faculty of Engineering and Technology for the degree of Bachelor of Engineering (Four year Degree Course) (Semester pattern) Based on Credit Grade System.

The Said Direction is required to be covered in an ordinance as provided under the provision of the Act, here. This Draft Ordinance is prepared for consideration of the Academic Council and the Management Council of the University.

Description about New First Year B.E. Scheme with Group A & B Subjects

1. The sanctioned intake and / or the number of candidates admitted to First Year Engineering (semester pattern) shall be divided into two groups as **A** &**B** in multiples of 60 preferably at the institute level.

2. Group A candidates shall register for Group A subjects in First (I) Semester and Group B candidates shall register for Group B subjects in First (I) Semester.

3. Applied Mathematics-I (Code No 101) will be a common paper to both the Groups A and B duringI Semester only.

4. The candidates shall be examined for their subjects from the respective groups as shown in the scheme during the First Semester Examination.

5. In the Second Semester, candidates from Group B shall register for subjects of Group A. Similarly, candidates from Group A shall register for subjects of Group B.

6. During II Semester, Applied Mathematics -II (Code No 102) will replace Applied Mathematics -I (Code No 101) as a common paper to both the Groups A and B.

7. The candidates shall be examined for their subjects from the other groups as shown in the scheme during the Second Semester Examination.

8. Thus, at the end of the First Year, all the subjects shall be studied by the candidates from both the Groups i.e. A and B.

9. The Grade Sheet issued by the Affiliate University shall show only the Group obtained in respective Semester by a student, like First Semester Group A, Second Semester Group B.

10. The exercise on the part of the college shall be to ensure that the candidates fill up the examination forms correctly according to the subjects Group he / she has registered in both I and II Semesters of First Year B.E. Curriculum.

Gondwana University, Gadchiroli – 442 605 (M.S.)

Faculty of Engineering and Technology

Discipline wise Code List for B.E.

(Undergraduate program)

Name of the Programme	Sr No	Disciplines offered	Code
Four Year Degree Course –**B. E.** (Bachelor of Engineering)	1	Civil Engineering	CL
	2	Computer Science & Engineering	CS
	3	Computer Technology	CT
	4	Electrical (Electronics & Power) Engineering	EP
	5	Electronics Engineering	EN
	6	Electronics & Communication Engineering	EC
	7	Electronics & Telecommunication Engineering	ET
	8	Information Technology	IT
	9	Instrumentation Engineering	IN
	10	Mechanical Engineering	ME
	11	Mining Engineering	MN

Appendix - A

Bachelor of Engineering (Four Year Degree Course) in the faculty of Engineering & Technology

Teaching and Examination Scheme with credit Grade system.

I Semester B.E. Group – A (Common to all branches)

Code-IA8

-IAES

No.	Title	Teaching Scheme				Examination Scheme									
		Hrs. per week			No. of Credits	Theory						Practical			
		L	T	P		Duration of Paper (Hrs.)	Max. Marks ESE	Max. Marks Sessional		Total	Min. Passing Marks	Max. Marks TW	Max. Marks POE	Total	Min. Passing Marks
								MSE	IE						
IA 101	Applied Mathematics -I	5	1	0	6	3	80	10	10	100	40	--	--	--	--
IA 103	Applied Physics	3	1	0	4	3	80	10	10	100	40	--	--	--	--
IA 104	Engineering Mechanics	3	1	0	4	3	80	10	10	100	40	--	--	--	--
IA 105	Communication Skills	1	0	2	2	3	80	10	10	100	40	--	--	--	--
Laboratories															
IA 106	Applied Physics Laboratory	0	0	3	2	--	--	--	--	--	--	25	25	50	25

IA 107	Engineering Mechanics Laboratory	0	0	3	2	--	--	--	--	--	--	25	25	50	25
IA 108	Workshop Practice – I	0	0	3	3	--	--	--	--	--	--	25	25	50	25
IA 109	Computer Programming	0	1	2	3	--	--	--	--	--	--	25	25	50	25
IA ES	Environmental Studies	0	0	2	--	**Audit Course**									
Total		**12**	**4**	**15**	**--**	**--**	**--**	**--**	**--**	**400**	**--**	**--**	**--**	**200**	**--**
Semester Total		**31**			**26**	**600**									

*****Note: One Lecture/Tutorial of one hour equal to one Credit, One Practical/Lab. of Two hours equal to one Credit, One Practical/Lab. without theory paper of one hour equal to one Credit.

***Applied Mathematics-I (101) is a common paper to both Group A and B during I Semester only.**

***During II Semester, Group A students will register for Group B subjects with Applied Mathematics-II (102) replacing Applied Mathematics-I (101) as a commonpaper to both Group A and B.**

Appendix - B

Bachelor of Engineering (Four Year Degree Course) in the faculty of Engineering & Technology

Teaching and Examination Scheme with credit Grade system

I Semester B.E. Group – B (Common to all branches)

Code- IB

No.	Title	Teaching Scheme				Examination Scheme									
		Hrs. per week			No. of Credits	Theory						Practical			
		L	T	P		Duration of Paper (Hrs.)	Max. Marks ESE	Max. Marks Sessional		Total	Min. Passing Marks	Max. Marks TW	Max. Marks POE	Total	Min. Passing Marks
								MSE	IE						
IB 101	Applied Mathematics -I	5	1	0	6	3	80	10	10	100	40	--	--	--	--
IB 110	Applied Chemistry	3	1	0	4	3	80	10	10	100	40	--	--	--	--
IB 111	Basic Electrical Engineering	3	1	0	4	3	80	10	10	100	40	--	--	--	--
IB 112	Engineering Graphics	3	1	0	4	4	80	10	10	100	40	--	--	--	--
IB 113	Ethical Science	1	1	0	2	2	40	05	05	50	20	--	--	--	--
Laboratories															

IB 114	Applied Chemistry Laboratory	0	0	3	2	--	--	--	--	--	--	25	25	50	25
IB 115	Basic Electrical Engineering Laboratory	0	0	3	2	--	--	--	--	--	--	25	25	50	25
IB 116	Engineering Graphics Laboratory	0	0	3	2	--	--	--	--	--	--	25	25	50	25
IB 117	Workshop Practice – II	0	0	2	2	--	--	--	--	--	--	25	25	50	25
Total		**15**	**5**	**11**	**--**	**--**	**--**	**--**	**--**	**450**	**--**	**--**	**--**	**200**	**--**
Semester Total		**31**			**28**	**650**									

*****Note: One Lecture/Tutorial of one hour equal to one Credit, One Practical/Lab. of Two hours equal to one Credit, One Practical/Lab. without theory paper of one hour equal to one Credit.

***Applied Mathematics-I (101) is a common paper to both Group A and B during I Semester only.**

***During II Semester, Group B students will register for Group A subjects with App. Mathematics-II (102) replacing Applied Maths-I (101) as common paper to both Group A and**

Appendix - C

Bachelor of Engineering (Four Year Degree Course) in the faculty of Engineering & Technology
Teaching and Examination Scheme with credit Grade system
I Semester B.E. Group – B (Common to all branches)

Code- CE

No.	Title	Teaching Scheme				Examination Scheme									
		Hrs. per week			No. of Credits	Theory						Practical			
		L	T	P		Duration of Paper (Hrs.)	Max. Marks ESE	Max. Marks Sessional		Total	Min. Passing Marks	Max. Marks TW	Max. Marks POE	Total	Min. Passing Marks
								MSE	IE						
MAT-301	Engg. Mathematics III	4	0	0	4	3 hrs	80	10	10	100	40	--	--	--	--
CE-301	Engg. Geology	3	1	0	4	3	80	10	10	100	40	--	--	--	--
CE-302	Strenth of Material	3	1	0	4	3	80	10	10	100	40	--	--	--	--
CE-303	Fluid Mechanics-I	3	1	0	4	4	80	10	10	100	40	--	--	--	--
CE-304	Geotechnical Engg.-I	1	1	0	2	2	40	05	05	50	20	--	--	--	--
Laboratories															
CE-305	Engg. Geology	0	0	3	2	--	--	--	--	--	--	25	25	50	25
CE-306	Strenth of Matarial	0	0	3	2	--	--	--	--	--	--	25	25	50	25
CE-307	Fluid Machanics-I	0	0	3	2	--	--	--	--	--	--	25	25	50	25

CE-308	Geotechnical Engg.-I	0	0	2	2	--	--	--	--	--	--	25	25	50	25
Total		**15**	**5**	**11**	**--**	**--**	**--**	**--**	**--**	**450**	**--**	**--**	**--**	**200**	**--**
Semester Total		**31**			**28**	**650**									

*****Note: One Lecture/Tutorial of one hour equal to one Credit, One Practical/Lab. of Two hours equal to one Credit, One Practical/Lab. without theory paper of one hour equal to one Credit.

***Applied Mathematics-I (101) is a common paper to both Group A and B during I Semester only.**

***During II Semester, Group B students will register for Group A subjects with App. Mathematics-II (102) replacing Applied Maths-I (101) as common paper to both Group A and**