VINAYAKA MISSION'S RESEARCH FOUNDATION
(DEEMED TO BE UNIVERSITY)

SALEM, TAMILNADU, INDIA

BACHELOR OF ENGINEERING/TECHNOLOGY (BE / B.Tech.)

DEGREE PROGRAMME - PART TIME

UNDER FACULTY OF ENGINEERING AND TECHNOLOGY

REGULATIONS 2017

STRUCTURED CHOICE BASED CREDIT SYSTEM

(SCBCS)

(FOR THE STUDENTS ADMITTED FROM 2017-18 ONWARDS)

Index – Regulations 2017 (SCBCS)

VINAYAKA MISSION'S RESEARCH FOUNDATION
(Deemed to be University), Salem, Tamil Nadu, India

BACHELOR OF ENGINEERING / TECHNOLOGY (BE/B.Tech.)
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(For the Students Admitted from 2017-18 Onwards)

In exercise of the powers conferred by the Revised Memorandum of Association rules of the Vinayaka Mission's Research Foundation, Deemed to be University Salem, the Board of Management of the University hereby issues the following regulations pertaining to the undergraduate Programme and the award of the Degree of Bachelor of Engineering/Technology (BE / B.Tech.).

1. TITLE AND COMMENCEMENT

These regulations shall be called "**Bachelor of Engineering / Technology (BE / B.Tech.) - Part Time Degree Programme – Regulations 2017 (SCBCS)"**. These regulations **comes into force with effect from Academic year 2017-18** and are subject to such modifications as may be approved by the apex bodies of the University from time to time.

2. PREAMBLE

The Degree of Bachelor of Engineering/Technology (BE / B.Tech.) in Faculty of Engineering and Technology shall be awarded to a candidate who, as per these regulations, has successfully undergone the Programme, passed the prescribed examinations and thereby qualified to receive the degree.

3. DEFINITIONS AND NOMENCLATURE

In the Regulations, unless the context otherwise requires, certain terms used in the form of abbreviation and their meanings are as under.

3.1	AC	Academic Council, the highest academic body of the University, headed by the Vice Chancellor.
3.2	AICTE	All India Council for Technical Education, New Delhi.
3.3	BE / B.Tech.	Bachelor of Engineering/Technology
3.4	BoM	Board of the Management- the highest governing body of the University.
3.5	BoS	Board of Studies of the University under the Faculty of Engineering and Technology.
3.6	Branch	Discipline of BE/B.Tech. Degree Programme, such as Mechanical Engineering, Electronics and Communication Engineering etc.
3.7	CBCS	Choice Based Credit System
3.8	COs	Course Outcomes
3.9	CoE	Controller of Examinations of the University.
3.10	Course	Subjects of study offered by various departments.
3.11	Credit	Course work measured in units, based on hours conducted/week and content of course.
3.12	Curriculum and Syllabus	Courses studied in each Programme that provides appropriate knowledge in the chosen branch. The curriculum and syllabus for study is as prescribed by the Board of Studies (BoS) with the approval of the concerned Academic Council (AC) based on the UGC / AICTE regulations.
3.13	Dean	Dean for the Faculty of Engineering and Technology of the University.
3.14	HoD	Head of the Department of the Institution.
3.15	HoI	Head of the Institution or Principal of the Constituent Engineering College of the University.
3.16	Institution	Constituent Engineering Colleges affiliated to the University.
3.17	MHRD	Ministry of Human Resources Development.
3.18	MOOCs	Massive Open Online Courses
3.19	NCC	National Cadet Corps
3.20	NITTTR	National Institute of Technical Teachers Training and Research
3.21	NPTEL	National Programme on Technology Enhanced Learning
3.22	NSS	National Service Scheme
3.23	OBE	Outcome Based Education
3.24	PEO	Programme Educational Objectives
3.25	POs	Programme Outcomes

3.26	Programme	Under Graduate Programme leading to the award of Degree BE/B.TECH. approved by UGC, AICTE and University.
3.27	PSOs	Programme Specific Outcomes
3.28	RRC	Red Ribbon Club of the Institution.
3.29	SCBCS	Structured Choice Based Credit System
3.30	SWAYAM	Study Webs of Active Learning for Young Aspiring Minds is a programme of the MHRD, Government of India.
3.31	Teacher	Professors, Associate Professors, Assistant Professors, Pro-term Lecturers and other persons engaged in teaching of the students and assisting the students in the conduct of studies and Research in the College/University.
3.32	UGC	University Grants Commission.
3.33	University	Vinayaka Mission's Research Foundation, Deemed to be University, Salem, Tamil Nadu, India.
3.34	VC	Vice Chancellor of the University.
3.35	YRC	Youth Red Cross of the Institution.

4. DURATION OF THE PROGRAMME

4.1 BE / B.Tech. – PART TIME

The duration for the Bachelor of Engineering/Technology (BE / B.Tech.) Part Time Degree Programmes shall extend **over a period of 3 and half years (7 semesters) and not more than 7 years (14 semesters).**

4.2 The total duration for completion of the Programme reckoned from the commencement of the first semester to which the student was admitted shall not exceed the maximum duration specified.

4.4 The academic year is divided into **two Semesters**, **odd semester normally starts from July to December and the even semester from January to June.**

5. MEDIUM OF INSTRUCTION

The medium of instruction for lectures, examinations and project work is English, except for language courses other than English.

6. FEE STRUCTURE

The fee structure for the Programmes shall be fixed by the committee constituted for this purpose by the University from time to time.

7. ADMISSION ELIGIBILITY

7.1 First year Admission

The candidate seeking admission to the first semester of BE / B.Tech. Part Time Degree Programme should have passed Diploma in the relevant Discipline / Field / Programme.

7.2 The candidate seeking admission to the first semester of BE / B.Tech. Part Time Degree Programme should have minimum two years full time work experience in a registered firm / Company / Industry / Educational / Government or Autonomous organizations in the relevant field in which admission is sought.

8. SELECTION OF STUDENTS

Guidelines issued from time to time for selection of students for admission in educational institutions are followed for admission of eligible students to various Under Graduate Programmes. Applications received are checked for completeness and a merit list based on the marks obtained in qualifying examination is prepared. The students are admitted as per the merit list.

9. REGISTRATION

A candidate admitted in the Under Graduate Programme in the constituent Engineering Colleges of the University shall register with the University by remitting the prescribed fees along with the application form for registration duly filled in and forwarded to the University through the Head of the Institution within the stipulated date.

10. COMMENCEMENT OF THE PROGRAMME

The academic year for the Programme shall commence in the month of July every year except first year. The first year classes shall commence in the month of August.

11. WORKING DAYS IN AN ACADEMIC YEAR

Each semester normally consists of **90 working days** including Tests, Model exams, Practicals and end semester examinations.

12. MIGRATION

Migration / Transfer of students from one Engineering College / University to engineering colleges part of this university may be admissible on any genuine ground subjected to the availability of vacancy in the college where migration is sought and fulfilling the requirements of the University. The eligibility criteria decided by equivalence committee constituted for this purpose shall be applicable for such students.

13. BREAK OF STUDY

Two semesters or One Year break of study may be allowed in the entire duration of the course for genuine reasons beyond the control of individual like natural calamity, serious health problems, parents demise etc. At a time only one semester break will be admissible. **If a student is declared not eligible for appearing in examination for lack of minimum attendance percentage or due to any misconduct, the period spent in that semester will not be considered as Break of Study.**

14. PROCEDURES FOR REJOINING / DISCONTINUING THE PROGRAMME

The VC is vested with the power to permit the break or discontinuation and rejoining the course for which the candidate must apply in the prescribed form enclosing necessary supporting documents and fees duly recommended through HoD and HoI.

15. READMISSION AFTER EXTENSION

The student after permitted break of study may apply in prescribed format for readmission in the discontinued course with all supporting documents to the Head of the concerned Department. HoD will forward the application after verification of details and documents enclosed to HoI with mapping of the courses already passed before discontinuation and to be passed in forthcoming semesters and the same will be forwarded by HoI to the university for approval.

16. PROGRAMME STRUCTURE

The structure of curriculum related to each Programme complying with the Structured Choice Based Credit System (SCBCS) and Outcome Based Education (OBE) framework shall be submitted to the Academic Council for approval based on the recommendation of concerned Board of Studies for different Programmes as mentioned in **Annexure I**.

Each Programme shall have a curriculum comprising of Theory, Theory cum Practical and Practical courses with well defined POs as stated in **Annexure II** and PSOs in accordance with OBE framework. The content of each course and COs are well mapped with POs and Programme PSOs.

The details of structure of courses and range of credits (Minimum and Maximum Credits to be earned by students) for each category are as described below.

CREDIT STRUCTURE OF COURSE CATEGORY

Sl. No.	Category of Courses	Credits to be earned Min – Max.
01	**A. Foundation Courses (FC)**	**12 - 18**
	i. Humanities and Sciences (English and Management Courses)	3 – 6
	ii. Basic Sciences (Maths, Physics and Chemistry Courses)	9– 12
02	**B. Core courses (CC) relevant to the chosen programme of study.**	**77**
03	**C. Elective Courses (EC)**	**12 - 18**
	i. Programme Specific (Class Room or Online)	9 – 12
	ii. Open Elective (Class Room or Online)	3 - 6
04	**D. Project**	**6**
Minimum Credits to be earned for awarding of Degree		**107**
Credits earned in categories A to D would be mentioned in Mark sheets and will be used for overall CGPA Calculations.		

16.1 Components of Curriculum

16.1.1 Category A - Foundation Courses (FC) (Min – 12 & Max 18 Credits)

The courses in this category belong to Humanities and Sciences (English and Management, Basic Sciences (Maths, Physics and Chemistry Subjects and Engineering Sciences (Basic Engineering Courses) fulfilling the criteria of minimum and maximum credits to be earned as mentioned in credit structure. The credits earned in this category will be used for overall CGPA calculation.

16.1.2 Category B - Core Courses relevant to the Programme (77Credits)

The courses related to the Programme specific are called core courses and the same has to be chosen by the students in every semester in consultation and guidance of their mentor (Faculty Advisor). A student may opt for core courses offered through MOOCs (Massive Open Online Courses), SWAYAM, NPTEL etc. and the credits earned after successful completion of the courses will be recommended by HoI for transfer of credits and endorsement in marks statement. The credits earned in this category will be used for overall CGPA calculation.

16.1.3 Category C - Elective Courses (EC) (Min 12 & Max 18 Credits)

16.1.3.1 Programme Specific Elective (Min 9 & Max 12 Credits)

Programme Specific electives are courses related to the Programme and are not offered under core courses. These courses may or

may not have any prerequisites and can be chosen as and when required by students. A student may opt for Programme Specific Elective courses offered through MOOCs (Massive Open Online Courses), SWAYAM, NPTEL etc. and the credits earned after successful completion of the courses will be recommended by HoI for transfer of credits and endorsement in marks statement. The credits earned in this category will be used for overall CGPA calculation.

16.1.3.2 Open Elective (Min 03 & Max 06 Credits)

Open electives are courses not related to the Programme core or elective and are not offered by the core department. These courses include all interdisciplinary courses and do not have any prerequisite condition and can be chosen as and when required by students. A student may opt for Open Elective courses offered through MOOCs (Massive Open Online Courses), SWAYAM, NPTEL etc. and the credits earned after successful completion of the courses will be recommended by HoI for transfer of credits and endorsement in marks statement. The credits earned in this category will be used for overall CGPA calculation.

16.1.4 Category D - Project (6 Credits)

The student must represent his earned knowledge in the engineering Programme by doing a quality project in 7th Semester. Project work cannot be undertaken before and has to be completed in 7th semester or final semester of the studies (if it is after 7th semester). The credits earned in this category will be used for overall CGPA calculation.

17. CHANGE OF PROGRAMME

In order to provide flexibility in selection of programme as per choice and interest after admission and undergoing some classes, the student may exercise option for change of programme of study to another programme. This option can be exercised and is admissible up to commencement of 3rd semester only with proper mapping of courses studied in previous semesters and to be studied further in forthcoming semesters. This mapping of courses will be completed by the equivalence committee constituted for this purpose by the university.

18.   EXAMINATIONS

18.1   REGISTRATION OF COURSES – EVEN / ODD SEMESTER

18.1.1 The students will register courses to be studied in a semester (Even / Odd) in their department in first week of commencement of semester or whenever it is asked for. The selection of courses should satisfy the credit structure of courses as per the components of curriculum. Mentor (Faculty Advisor) will assist and provide necessary guidance to the students for planning and selection of courses.

18.1.2 In a semester (Even / Odd), a student can register new courses for minimum 14 credits and maximum 30 credits. The criteria for registration of courses for minimum 14 credits will not be applicable for those students who are having less than 14 credits to be earned for awarding of degree. In such cases, the students will be allowed to register for the remaining courses for less than 14 credits. The limit of Maximum 30 credits do not include courses of reappearance i.e. courses in which 'RA' grade is obtained. The students can register any number of courses in which 'RA' grade is obtained.

18.1.3 The students are at liberty to drop the course (except pre-requisite courses) in which reappear "RA" grade is obtained and can choose a new course. The student has to attend the classes of the new course but for the same course in which "RA" or "AB" grades are obtained and is willing to appear again in such courses, attending classes again is optional and not mandatory.

18.1.4 The courses in which the student is declared not eligible to appear in internal assessment tests and university examinations due to lack of minimum attendance percentage has to be registered afresh in the semester in which the course is offered.

18.2   ASSESSMENT - INTERNAL AND EXTERNAL

18.2.1 University Examinations
The Controller of Examinations would notify the dates of university examinations to the institution well in advance for preparation of the academic calendar consisting of one odd and one even semester in the academic year. The examinations may be conducted in the months of April - May and Nov – Dec.

18.2.2 The duration of the Examination should be 3 hours. The maximum marks for each and every question paper is 100 marks. The Evaluation will be for 100 marks for each course, followed by conversion of marks for out of 50 as external assessment and will be added with IA Mark (out of 50) and result will be declared by CoE as per the grades specified.

18.3 Condonation

18.3.1 A student who has an attendance between 65% and 75% will be allowed to write the semester ending university examinations provided the student pays the condonation fees as prescribed by the University from time-to-time.

18.3.2 Condonation for lack of attendance shall be taken up for consideration under the following circumstances:

18.3.2.1 Any illness causing the candidate to be absent from the regular classes. The candidate should inform about his illness to his/her HoD and HoI and submit Medical Certificate and fitness certificate to continue his regular classes from a registered Medical Practitioner to the HoD after treatment and cure.

18.3.2.2 Any unforeseen tragedy in the family. This will include absence due to natural calamity, demise of parent/guardian etc. The parent/guardian should submit in writing the reason for the ward's absence to the HoI.

18.3.2.3 Any other reason the Head of Institution considers reasonable for Condonation.

18.4 Eligibility to register for examinations

18.4.1 The student shall not be permitted to register for the university examination unless the requirement of minimum 75% attendance under normal circumstances or minimum 65% attendance with condonation for each course offered in that semester is satisfied for each course. If a student fails to satisfy the requirement of minimum attendance, he/she is required to repeat the course(s) whenever offered.

18.4.2 The days of suspension of a student on disciplinary grounds will be considered as days of absence for calculating the percentage of attendance. For students suspended

for misconduct must have minimum 75% attendance percentage for registration of courses for university examinations and they will not be considered for condonation.

18.4.3 Examination applications completed in all respect will be forwarded by HoI of constituent colleges to office of Controller of Examinations for further necessary action.

18.5 Submission of Attendance percentage, List of Eligible and Not Eligible Students to Controller of Examinations

The Head of the Institutions of the Constituent Colleges has to submit attendance percentage of students for each course registered in the semester to the Controller of Examinations of the University twice - once after 45 days of commencement of semester and another final attendance percentage at least two weeks prior to the commencement of university examination. Along with final attendance percentage, HoI will also submit list of courses in which students are eligible and not eligible for appearing in university examinations. Based on eligibility in courses, hall ticket will be issued to the students.

18.6 Monitoring of Progress of the Student

18.6.1 The Institution shall ensure that the required number of hours for lecture / practical / seminar etc., in the courses of BE/B.Tech. are completed and examinations are to be conducted as specified.

18.6.2 The Institution shall ensure that the students who do not fulfil the minimum requirements of admissions to the examinations are not permitted to appear in the end semester university examinations.

18.6.3 Theory and practical paper examinations will be of three hours duration each.

18.6.4 Methods of Assessment

Assessment of students will be done by conducting written tests, practicals, mini projects, seminars, viva voce etc. Two independent assessment procedures are followed.

18.6.4.1 Formative or Internal Assessment (IA) is done through Continuous Assessment Tests (CATs) and Model examination conducted by the institution. Minimum Passing Marks – 35% i.e. 18 out of 50 Marks.

18.6.4.2 Summative or External Assessment (EA) is done by evaluation of performance in end semester university examinations conducted by CoE. Minimum Passing Marks – 45% i.e. 23 out of 50 Marks.

18.7 Internal Assessment

18.7.1 The IA Marks shall be based on day to day assessment, evaluation of student assignment, continuous assessment tests, model examinations etc.

18.7.2 The continuing assessment tests / examinations for theory may be held periodically, at least three times in a given semester and the marks of tests/examinations shall be taken into consideration for the award of Internal Assessment (IA) marks. It is mandatory for a student to fulfil the requirement of 75% minimum attendance percentage for appearing in continuing assessment tests / examinations for theory as well as practical courses.

18.7.3 It is mandatory for a student to secure minimum 18 marks i.e. 35% out of 50 marks as Internal Assessment Marks in all courses registered in that semester. Students who fail to secure minimum 18 marks have to repeat the course again in forthcoming semesters and will not be allowed to appear in university examinations.

18.7.4 The students have to register new as well as courses in which "RA" or "AB" grades are obtained in earlier examinations afresh in every semester. **Internal Assessment (IA) Marks already awarded for the courses studied in previous semesters will be taken into consideration and valid for three attempts only. The students, if they wish, can apply for the improvement of IA Marks of the courses to CoE through HoI by paying required fee.** The student will be awarded with improved IA by faculty in-charge for that particular course. Improved IA marks with required fee should be forwarded to CoE through HoI for updation of marks.

18.8 Calculation of Internal Assessment (IA) Marks

18.8.1 Attendance, Record and Marks for attendance

Every teacher is required to maintain an **'ATTENDANCE AND ASSESSMENT RECORD'** for each course handled, which consists of students attendance in each lecture / practical / project work classes, test marks and the record of class work (topics covered).

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This should be submitted to the Head of the Department periodically (at least 3 times in a semester) for checking the syllabus coverage and the records of test marks and attendance. The HoD after due verification will sign the above record. At the end of the s e m e s t e r, the Record should be verified by the Principal.

18.8.2 To encourage students to have maximum attendance percentage, there is a provision to award maximum 5 marks to students having more than 75% attendance as per the criteria mentioned below and is added in Internal Assessment (IA) marks.

Marks for Attendance Percentage

Attendance %	Marks
Less than and Equal to 75	0
75 - 80	1
80 - 85	2
85 - 90	3
90 - 95	4
95 - 100	5

18.8.3 IA MARKS CALCULATION

18.8.3.1 Theory Course

Internal Assessment for Theory Course

Sl. No.	Components for Internal Assessment Marks	Duration (in minutes)	Maximum Marks
i.	Two Continuous Assessment Tests (CAT) I, II	90	20
ii.	Model Exam	180	15
iii.	Assignment / Seminar/ Mini Project	-	10
iv.	Attendance	-	05
	Total Marks		50

18.8.3.2 Practical Courses

Practicals will be conducted in the laboratories. The objective is to assess proficiency in skills to conduct experiment, interpretation of data and logical conclusion. Every experiment in practical courses will be evaluated based on the conduct of experiment and records maintained by the students. There will be at least one model practical examination.

University Practical examination will be evaluated jointly by one internal examiner and one external examiner appointed by the Controller of Examinations. The Evaluation will be for 50 marks.

Internal Assessment for Practical Course

Sl. No.	Components for Internal Assessment Marks	Duration (in minutes)	Maximum Marks
i.	Observation & Record		20
ii.	Model Practical	180 Minutes	25
iii.	Attendance		05
	Total Marks		**50**

18.8.4 Project Work

The evaluation of the project work completed in 8th Semester will be submitted to the review committee constituted by the HoI for each Programme. The review committee consists of three senior faculty members including Supervisor/Guide of the student.

The student shall make a presentation at least three times in the semester on the progress made by him/her before the review committee. Accordingly internal assessment marks out of 50 can be awarded to the student.

18.9 Question Paper Pattern for Theory Courses

18.9.1 Theory Courses

18.9.1.1 The examinations and question papers are to be designed to cover Bloom's taxonomy with a view to ascertain whether the candidate has acquired necessary knowledge and skills with clarity in concepts at levels prescribed.

18.9.1.2 The **question paper should** consist of questions in proportion as an assessment of performance of student in different levels. Questions with choice in **EITHER–OR** should be of same level.

18.9.1.3 The Question paper setter may use the distribution mentioned below for setting the question paper for a course.

Sl. No.	Cognition Level (Bloom's Taxonomy)	Description	Percentage distribution recommended
i.	LOCQ – Lower order cognitive questions	Covering questions for testing the remembering and understanding of the concepts by the students.	20-30%
ii.	IOCQ – Intermediate order cognitive questions	Covering questions that test the applying and analyzing skills of students.	40-50%
iii.	Psychomotor Level	Covering questions that test the evaluating and creating abilities of the students with respect to their knowledge.	30-40%

18.9.1.4 HoI may provide set of questions on each level for a course prepared by respective course handler to CoE if requested for. A common pattern will be followed for each theory course except some industrial electives for which multiple choice questions (MCQ) are prescribed by respective industry.

18.9.2 Passing Requirements – Theory and Practical

A candidate securing not less than 50% of total marks (IA + EA) prescribed for the course in both theory and practical courses including project work will be declared to have passed the Examination.

19. CRITERIA FOR AWARD OF DEGREE

A student shall be declared to be eligible for the award of the BE./B.Tech. Degree provided the student has successfully completed the course requirements by earning minimum 107 credits and has passed all the prescribed examinations in all the Seven semesters within a maximum period of 7 years reckoned from the commencement of the first semester to which the candidate was admitted.

19.1   'HONOURS' IN BE / B.Tech. DEGREE PROGRAMME

If a student earns 20 credits in Programme specific electives as specified in curriculum beyond the minimum requirements of 107 credits for the award of the BE / B.Tech. Degree, he / she shall be awarded with BE / B.Tech. degree in parent   discipline with **HONOURS**. An additional Certificate of Recognition will be issued by University along with the Degree Certificate. For example, BE / B.Tech. (Hons.) Mechanical Engineering.

19.2   'SPECIALIZATION' IN BE / B.Tech. DEGREE PROGRAMME

If a student earns 15 credits in Programme specific specialization electives as specified in curriculum within the minimum requirement of 107 credits for the award of the BE / B.Tech. Degree, he / she shall be awarded with BE / B.Tech. Degree with **SPECIALIZATION** in respective parent programme**.** For example, BE / B.Tech. Mechanical Engineering (Spln. – Aeronautical Engineering).

19.3   'MINOR' IN BE / B.Tech. DEGREE PROGRAMME

If a student earns 20 extra credits beyond the minimum requirements of 107 credits for the award of BE/ B.Tech. Degree, he / she shall be awarded BE / B.Tech. Degree in parent discipline with **MINOR**. These credits can also be earned through MOOCs (Massive Open Online Courses) in addition to the courses offered and studied in other departments. **15 hours of academic engagement will be considered as equivalent to 1 credit**. For example, BE / B.Tech. Mechanical Engineering (Minor – Electronics and Communication).

19.4   Classification of performance

Classification of performance of students in the examinations pertaining to the courses in a Programme is done on the basis of numerical value of Cumulative Grade Point Average (CGPA). The concept of CGPA is based on Marks, Credits, Grade and Grade points assigned for different mark ranges.

19.4.1 Semester Grade Point Average (SGPA)

Each student is assigned a Semester Grade Point Average (SGPA) on completion and declaration of result of a semester.

$$SGPA = \frac{\Sigma(Ci * Gi)}{\Sigma Ci}$$

where C_i is the credit for a course in that semester and G_i is the Grade Point earned by the student for that course. The SGPA is rounded off to two decimal numbers and calculated on all courses appeared including courses in which 'RA' grade is obtained.

19.4.2 Cumulative Grade Point Average (CGPA)

The overall performance of a student at any stage of the Degree Programme is evaluated by the Cumulative Grade Point Average (CGPA) up to that point of time and is calculated on the courses which are successfully completed.

$$CGPA = \sum_j \left\{ \frac{\sum_i (C_{ij} * G_{ij})}{\sum_i C_{ij}} \right\}$$

19.4.3 Range of Marks, Grades and Grade Points

Grade	Grade Points(GP)	Range of percentage of Marks	Class
O + +	10	95 – 100	FIRST CLASS WITH DISTINCTION
O +	9.5	90 – 94	FIRST CLASS WITH DISTINCTION
O	9	85 - 89	FIRST CLASS WITH DISTINCTION
A + +	8.5	80 – 84	FIRST CLASS WITH DISTINCTION
A +	8	70 – 79	FIRST CLASS WITH DISTINCTION
A	7	60 - 69	FIRST CLASS
B +	6	55 - 59	SECOND CLASS
B	5.5	50 - 54	SECOND CLASS
C	5	50	MINIMUM PASS
RA		< 50	REAPPEAR
AB			ABSENT

19.4.3.1 A student is declared to have passed in a particular course and earned credits if he/she has obtained any one of the following grades: **'O + +', 'O +', 'O', 'A + +', 'A + ', 'A', 'B +', 'B'** and **'C'** as mentioned above with a minimum **aggregate percentage of 50 for MINIMUM PASS**.

19.4.3.2 If the student is absent in any of the university examinations grade **'AB'** will be awarded in that particular course.

19.4.3.3 If the student has not passed the course after appearing in university examinations, grade **'RA'** will be awarded in that particular course.

20. CLASSIFICATION OF SUCCESSFUL CANDIDATES FOR AWARD OF DEGREE

20.1 First class with Distinction

20.1.1 A student who qualifies for the award of degree and passed the examination in all registered courses in his / her first appearance within 3 and half years and securing a CGPA of not less than 8.00 shall be declared to have passed in First class with distinction.

20.1.2 A student who qualifies for the award of degree and passed the examination in all registered courses in his / her first appearance within 4 and half years including the authorized Break of Study of one year and securing a CGPA of not less than 8.00 shall be declared to have passed in First class with distinction.

20.2 First Class

20.2.1 A student who qualifies for the award of degree and passed the examination in all registered courses in his / her first appearance within 3 and half years and securing a CGPA of not less than 7.0 shall be declared to have passed in First class.

20.2.2 A student who qualifies for the award of degree and passed the examination in all registered courses in his / her first appearance within 4 and half years including the authorized Break of Study of one year and securing a CGPA of not less than 7.0 shall be declared to have passed in First class.

20.3 Second Class

All other students not covered above and who qualifies for the award of BE / B.Tech. Degree and passed the examination in all the registered courses shall be declared to have passed in Second Class.

21. RANKING

Students obtaining top 3 positions in CGPA ranking in a Programme at the university level will be considered as a rank holder. They should have passed all the prescribed courses in the first appearance and should have obtained a CGPA of 8.0 and above. The student should also have a clean record of discipline during the period of study. Special certificates will be given to rank holders.

22. ADOPTION OF MOOCs / SWAYAM

The students are provided with ample opportunities to extend their scope of learning by undergoing online courses offered through AICTE Web Portal SWAYAM, NPTEL, NITTTR, and other platforms providing MOOCs. On submission of certificates as proof of successful completion of online courses by the students, credits earned through online courses will be verified for its

equivalence as per prescribed curriculum and syllabus by the committee constituted for this purpose and on recommendation by the committee, the credits will be transferred to their mark statements. Depending on the nature of courses as per the credit structure of course category specified under program structure, the credits may or may not be used for calculation of overall CGPA.

23. MODIFICATIONS OF REGULATIONS

These regulations are subject to modifications from time to time as per the decisions of the apex bodies of the University.

ANNEXURES

PROGRAMMES OF STUDY – BE / B.Tech. DEGREE

1.   BE / B.Tech.   Computer Science and Engineering

2.   BE / B.Tech.   Civil Engineering

3.   BE / B.Tech.   Electronics and Communication Engineering

4.   BE / B.Tech.   Electrical and Electronics Engineering

5.   BE / B.Tech.   Mechanical Engineering

PROGRAMME OUTCOMES (POs) OR GRADUATE ATTRIBUTES

On completion of Programme of Engineering, Graduates will be able to:

Sl. No.	Outcome	Description
PO 1	**Engineering knowledge**	Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
PO 2	**Problem analysis**	Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
PO 3	**Design / Development of solutions**	Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
PO 4	**Conduct investigations of complex problems**	Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
PO 5	**Modern tool usage**	Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.
PO 6	**The engineer and society**	Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
PO 7	**Environment and sustainability**	Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
PO 8	**Ethics**	Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
PO 9	**Individual and team work**	Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
PO 10	**Communication**	Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
PO 11	**Project management and finance**	Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
PO 12	**Life-long learning**	Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.