



JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

(Established by State Act No. 30 of 2008)

Kukatpally, Hyderabad, Telangana (India).

ACADEMIC REGULATIONS FOR B.TECH. REGULAR STUDENTS

WITH EFFECT FROM

ACADEMIC YEAR 2016-17 (R-16)

1.0 Under-Graduate Degree Programme in Engineering & Technology (UGP in E&T)

- 1.1** JNTUH offers a 4-year (8 semesters) **Bachelor of Technology (B.Tech.)** degree programme, under Choice Based Credit System (CBCS) at its non-autonomous constituent and affiliated colleges with effect from the academic year 2016-17 in the following branches of Engineering:

Branch
Civil Engineering
Electrical and Electronics Engineering
Mechanical Engineering
Electronics and Communication Engineering
Computer Science and Engineering
Chemical Engineering
Electronics and Instrumentation Engineering
Bio-Medical Engineering
Information Technology
Mechanical Engineering (Mechatronics)
Electronics and Telematics Engineering
Metallurgy and Material Technology
Electronics and Computer Engineering
Mechanical Engineering (Production)
Aeronautical Engineering
Instrumentation and Control Engineering
Biotechnology
Automobile Engineering
Mining Engineering
Petroleum Engineering
Civil and Environmental Engineering
Mechanical Engineering (Nano Technology)
Computer Science & Technology
Pharmaceutical Engineering

2.0 Eligibility for admission

- 2.1** Admission to the under graduate programme shall be made either on the basis of the merit rank obtained by the qualified student in entrance test conducted by the Telangana State Government (EAMCET) or the University or on the basis of any other order of merit approved by the University, subject to reservations as prescribed by the government from time to time.
- 2.2** The medium of instructions for the entire under graduate programme in E&T will be **English** only.

3.0 B.Tech. Programme structure

- 3.1** A student after securing admission shall pursue the under graduate programme in B.Tech. in a minimum period of **four** academic years (8 semesters), and a maximum period of **eight** academic years (16 semesters) starting from the date of commencement of first year first semester, failing which student shall forfeit seat in B.Tech course.

Each semester is structured to provide 24 credits, totaling to 192 credits for the entire B.Tech. programme.

Each student shall secure 192 credits (with CGPA ≥ 5) required for the completion of the under graduate programme and award of the B.Tech. degree.

- 3.2** UGC/ AICTE specified definitions/ descriptions are adopted appropriately for various terms and abbreviations used in these academic regulations/ norms, which are listed below.

3.2.1 Semester scheme

Each under graduate programme is of 4 academic years (8 semesters) with the academic year being divided into two semesters of 22 weeks (≥ 90 instructional days) each, each semester having - 'Continuous Internal Evaluation (CIE)' and 'Semester End Examination (SEE)'. Choice Based Credit System (CBCS) and Credit Based Semester System (CBSS) as indicated by UGC and curriculum / course structure as suggested by AICTE are followed.

3.2.2 Credit courses

All subjects/ courses are to be registered by the student in a semester to earn credits which shall be assigned to each subject/ course in an L: T: P: C (lecture periods: tutorial periods: practical periods: credits) structure based on the following general pattern.

- One credit for one hour/ week/ semester for theory/ lecture (L) courses.
- One credit for two hours/ week/ semester for laboratory/ practical (P) courses or Tutorials (T).

Courses like Environmental Science, Professional Ethics, Gender Sensitization lab and other student activities like NCC/NSO and NSS are identified as mandatory courses. These courses will not carry any credits.

3.2.3 Subject Course Classification

All subjects/ courses offered for the under graduate programme in E&T (B.Tech. degree programmes) are broadly classified as follows. The university has followed almost all the guidelines issued by AICTE/UGC.

S. No.	Broad Course Classification	Course Group/ Category	Course Description
1	Foundation Courses (FnC)	BS – Basic Sciences	Includes mathematics, physics and chemistry subjects
2		ES - Engineering Sciences	Includes fundamental engineering subjects
3		HS – Humanities and Social sciences	Includes subjects related to humanities, social sciences and management
4	Core Courses (CoC)	PC – Professional Core	Includes core subjects related to the parent discipline/ department/ branch of Engineering.
5	Elective Courses (ElC)	PE – Professional Electives	Includes elective subjects related to the parent discipline/ department/ branch of Engineering.
6		OE – Open Electives	Elective subjects which include inter-disciplinary subjects or subjects in an area outside the parent discipline/ department/ branch of Engineering.
7	Core Courses	Project Work	B.Tech. project or UG project or UG major project
8		Industrial training/ Mini- project	Industrial training/ Internship/ UG Mini-project/ Mini-project
9		Seminar	Seminar/ Colloquium based on core contents related to parent discipline/ department/ branch of Engineering.
10	Minor courses	-	1 or 2 Credit courses (subset of HS)
11	Mandatory Courses (MC)	-	Mandatory courses (non-credit)

4.0 Course registration

- 4.1 A 'faculty advisor or counselor' shall be assigned to a group of 15 students, who will advise student about the under graduate programme, its course structure and curriculum, choice/option for subjects/ courses, based on their competence, progress, pre-requisites and interest.
- 4.2 The academic section of the college invites 'registration forms' from students before the beginning of the semester through 'on-line registration', ensuring 'date and time stamping'. The on-line registration requests for any 'current semester' shall be **completed before the commencement of SEEs (Semester End Examinations) of the 'preceding semester'**.
- 4.3 A student can apply for **on-line** registration, **only after** obtaining the '**written approval**' from faculty advisor/counselor, which should be submitted to the college academic section through the Head of the Department. A copy of it shall be retained with Head of the Department, faculty advisor/ counselor and the student.
- 4.4 A student may be permitted to register for the subjects/ courses of **choice** with a total of 24 credits per semester (minimum of 20 credits and maximum of 28 credits per semester and permitted deviation of $\pm 17\%$), based on **progress** and SGPA/ CGPA, and completion of the '**pre-requisites**' as indicated for various subjects/ courses, in the department course structure and syllabus contents. However, a **minimum** of 20 credits per semester must be registered to ensure the '**studentship**' in any semester.
- 4.5 Choice for '**additional subjects/ courses**' to reach the maximum permissible limit of 28 credits (above the typical 24 credit norm) must be clearly indicated, which needs the specific approval and signature of the faculty advisor/ counselor.
- 4.6 If the student submits ambiguous choices or multiple options or erroneous entries during **on-line** registration for the subject(s) / course(s) under a given/ specified course group/ category as listed in the course structure, only the first mentioned subject/ course in that category will be taken into consideration.
- 4.7 Subject/ course options exercised through **on-line** registration are final and **cannot** be changed or inter-changed; further, alternate choices also will not be considered. However, if the subject/ course that has already been listed for registration by the Head of the Department in a semester could not be offered due to any unforeseen or unexpected reasons, then the student shall be allowed to have alternate choice either for a new subject (subject to offering of such a subject), or for another existing subject (subject to availability of seats). Such alternate arrangements will be made by the head of the department, with due notification and time-framed schedule, within the **first week** after the commencement of class-work for that semester.

- 4.8 Dropping of subjects/ courses may be permitted, only after obtaining prior approval from the faculty advisor/ counselor (subject to retaining a minimum of 20 credits), **‘within a period of 15 days’** from the beginning of the current semester.
- 4.9 **Open electives:** The students have to choose one open elective (OE-I) during III year I semester, one (OE-II) during III year II semester, and one (OE-III) in IV year II semester, from the list of open electives given. However, the student cannot opt for an open elective subject offered by their own (parent) department, if it is already listed under any category of the subjects offered by parent department in any semester.
- 4.10 **Professional electives:** students have to choose professional elective (PE-I) in III year II semester, Professional electives II, III, and IV (PE-II, III and IV) in IV year I semester, Professional electives V, and VI (PE-V and VI) in IV year II semester, from the list of professional electives given. However, the students may opt for professional elective subjects offered in the related area.
- 5.0 **Subjects/ courses to be offered**
- 5.1 A typical section (or class) strength for each semester shall be 60.
- 5.2 A subject/ course may be offered to the students, **only if** a minimum of 20 students (1/3 of the section strength) opt for it. The maximum strength of a section is limited to 80 (60 + 1/3 of the section strength).
- 5.3 More than **one faculty member** may offer the **same subject** (lab/ practical may be included with the corresponding theory subject in the same semester) in any semester. However, selection of choice for students will be based on - **‘first come first serve** basis and CGPA criterion’ (i.e. the first focus shall be on early **on-line entry** from the student for registration in that semester, and the second focus, if needed, will be on CGPA of the student).
- 5.4 If more entries for registration of a subject come into picture, then the Head of Department concerned shall decide, whether or not to offer such a subject/ course for **two (or multiple) sections**.
- 5.5 In case of options coming from students of other departments/ branches/ disciplines (not considering **open electives**), first **priority** shall be given to the student of the **‘parent department’**.
- 6.0 **Attendance requirements:**
- 6.1 A student shall be eligible to appear for the semester end examinations, if student acquires a minimum of 75% of attendance in aggregate of all the subjects/ courses (excluding attendance in mandatory courses Environmental Science, Professional Ethics, Gender Sensitization Lab, NCC/NSO and NSS) for that semester.

- 6.2** Shortage of attendance in aggregate up to 10% (65% and above, and below 75%) in each semester may be condoned by the college academic committee on genuine and valid grounds, based on the student's representation with supporting evidence.
- 6.3** A stipulated fee shall be payable towards condoning of shortage of attendance.
- 6.4** Shortage of attendance below 65% in aggregate shall in **no** case be condoned.
- 6.5** **Students whose shortage of attendance is not condoned in any semester are not eligible to take their end examinations of that semester. They get detained and their registration for that semester shall stand cancelled. They will not be promoted to the next semester.** They may seek re-registration for all those subjects registered in that semester in which student was detained, by seeking re-admission into that semester as and when offered; in case if there are any professional electives and/ or open electives, the same may also be re-registered if offered. However, if those electives are not offered in later semesters, then alternate electives may be chosen from the **same** set of elective subjects offered under that category.
- 6.6** A student fulfilling the attendance requirement in the present semester shall not be eligible for readmission into the same class.

7.0 Academic requirements

The following academic requirements have to be satisfied, in addition to the attendance requirements mentioned in item no.6.

- 7.1** A student shall be deemed to have satisfied the academic requirements and earned the credits allotted to each subject/ course, if student secures not less than 35% marks (26 out of 75 marks) in the semester end examination, and a minimum of 40% of marks in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together; in terms of letter grades, this implies securing 'C' grade or above in that subject/ course.
- 7.2** A student shall be deemed to have satisfied the academic requirements and earned the credits allotted to UG Mini Project and seminar, if student secures not less than 40% marks (i.e. 40 out of 100 allotted marks) in each of them. The student would be treated as failed, if student (i) does not submit a report on UG Mini Project, or does not make a presentation of the same before the evaluation committee as per schedule, or (ii) does not present the seminar as required in the IV year I Semester, or (iii) secures less than 40% marks in industry UG Mini Project / seminar evaluations.

Student may reappear once for each of the above evaluations, when they are scheduled again; if student fails in such 'one reappearance' evaluation also, student has to reappear for the same in the next subsequent semester, as and when it is scheduled.

7.3 Promotion Rules

S. No.	Promotion	Conditions to be fulfilled
1	First year first semester to first year second semester	Regular course of study of first year first semester.
2	First year second semester to second year first semester	(i) Regular course of study of first year second semester. (ii) Must have secured at least 24 credits out of 48 credits i.e., 50% credits up to first year second semester from all the relevant regular and supplementary examinations, whether the student takes those examinations or not.
3.	Second year first semester to second year second semester	Regular course of study of second year first semester.
4	Second year second semester to third year first semester	(i) Regular course of study of second year second semester. (ii) Must have secured at least 58 credits out of 96 credits i.e., 60% credits up to second year second semester from all the relevant regular and supplementary examinations, whether the student takes those examinations or not.
5	Third year first semester to third year second semester	Regular course of study of third year first semester.
6	Third year second semester to fourth year first semester	(i) Regular course of study of third year second semester. (ii) Must have secured at least 86 credits out of 144 credits i.e., 60% credits up to third year second semester from all the relevant regular and supplementary examinations, whether the student takes those examinations or not.
7	Fourth year first semester to fourth year second semester	Regular course of study of fourth year first semester.

- 7.4** A student shall register for all subjects covering 192 credits as specified and listed in the course structure, fulfills all the attendance and academic requirements for 192 credits,

‘earn all 192 credits by securing SGPA ≥ 5.0 (in each semester), and CGPA (at the end of each successive semester) ≥ 5.0 , to successfully complete the under graduate programme.

- 7.5** After securing the necessary 192 credits as specified for the successful completion of the entire under graduate programme, the student can avail exemption of two subjects up to 6 credits, that is, one open elective and one professional elective subject or two professional elective subjects for optional drop out from these 192 credits earned; resulting in 186 credits for under graduate programme performance evaluation, i.e., the performance of the student in these 186 credits shall alone be taken into account for the calculation of ‘the final CGPA (at the end of under graduate programme, which takes the SGPA of the IV year II semester into account)’ , and shall be indicated in the grade card of IV year II semester. However, the performance of student in the earlier individual semesters, with the corresponding SGPA and CGPA for which grade cards have already been given will not be altered.
- 7.6** If a student registers for some more ‘**extra subjects**’ (in the parent department or other departments/branches of engg.) other than those listed subjects totaling to 192 credits as specified in the course structure of his department, the performances in those ‘**extra subjects**’ (although evaluated and graded using the same procedure as that of the required 192 credits) will not be taken into account while calculating the SGPA and CGPA. For such ‘**extra subjects**’ registered, % of marks and letter grade alone will be indicated in the grade card as a performance measure, subject to completion of the attendance and academic requirements as stated in regulations 6 and 7.1 – 7.5 above.
- 7.7** A student eligible to appear in the end semester examination for any subject/ course, but absent from it or failed (thereby failing to secure ‘C’ grade or above) may reappear for that subject/ course in the supplementary examination as and when conducted. In such cases, internal marks (CIE) assessed earlier for that subject/ course will be carried over, and added to the marks to be obtained in the SEE supplementary examination for evaluating performance in that subject.
- 7.8** A student **detained in a semester due to shortage of attendance may be re-admitted when the same semester is offered in the next academic year for fulfillment of academic requirements.** The academic regulations under which student has been readmitted shall be applicable. However, no grade allotments or SGPA/ CGPA calculations will be done for the entire semester in which student has been detained.
- 7.9** A student **detained due to lack of credits, shall be promoted to the next academic year only after acquiring the required academic credits.** The academic regulations under which student has been readmitted shall be applicable to him.
- 8.0** **Evaluation - Distribution and Weightage of marks**

- 8.1 The performance of a student in every subject/course (including practicals and UG major project) will be evaluated for 100 marks each, with 25 marks allotted for CIE (Continuous Internal Evaluation) and 75 marks for SEE (Semester End-Examination).
- 8.2 For theory subjects, during a semester, there shall be two mid-term examinations. Each mid-term examination consists of one objective paper, one descriptive paper and one assignment. The objective paper and the descriptive paper shall be for 10 marks each with a total duration of 1 hour 20 minutes (20 minutes for objective and 60 minutes for descriptive paper). The objective paper is set with 20 bits of multiple choice, fill-in the blanks and matching type of questions for a total of 10 marks. The descriptive paper shall contain 4 full questions out of which, the student has to answer 2 questions, each carrying 5 marks. While the first mid-term examination shall be conducted on 50% of the syllabus, the second mid-term examination shall be conducted on the remaining 50% of the syllabus. Five marks are allocated for assignments (as specified by the subject teacher concerned). The first assignment should be submitted before the conduct of the first mid-examination, and the second assignment should be submitted before the conduct of the second mid-examination. The total marks secured by the student in each mid-term examination are evaluated for 25 marks, and the average of the two mid-term examinations shall be taken as the final marks secured by each student in internals/sessionals. If any student is absent from any subject of a mid-term examination, an on-line test will be conducted for him by the university. The details of the question paper pattern are as follows,
- The end semester examinations will be conducted for 75 marks consisting of two parts viz. i) **Part- A** for 25 marks, ii) **Part - B** for 50 marks.
 - Part-A is compulsory question which consists of ten sub-questions. The first five sub-questions are from each unit and carry 2 marks each. The next five sub-questions are one from each unit and carry 3 marks each.
 - Part-B consists of five questions (numbered from 2 to 6) carrying 10 marks each. Each of these questions is from one unit and may contain sub-questions. For each question there will be an “either” “or” choice, which means that there will be two questions from each unit and the student should answer either of the two questions.
- 8.3 For practical subjects there shall be a continuous internal evaluation during the semester for 25 sessional marks and 75 semester end examination marks. Out of the 25 marks for internal evaluation, day-to-day work in the laboratory shall be evaluated for 15 marks and internal practical examination shall be evaluated for 10 marks conducted by the laboratory teacher concerned. The semester end examination shall be conducted with an external examiner and the laboratory teacher. The external examiner shall be appointed

from the clusters of colleges which are decided by the examination branch of the university.

- 8.4** For the subject having design and/or drawing, (such as engineering graphics, engineering drawing, machine drawing) and estimation, the distribution shall be 25 marks for continuous internal evaluation (15 marks for day-to-day work and 10 marks for internal tests) and 75 marks for semester end examination. There shall be two internal tests in a semester and the average of the two shall be considered for the award of marks for internal tests.
- 8.5** There shall be an UG mini-project, in collaboration with an industry of their specialization. Students will register for this immediately after III year II semester examinations and pursue it during summer vacation. The UG mini-project shall be submitted in a report form and presented before the committee in IV year I semester. It shall be evaluated for 100 marks. The committee consists of an external examiner, Head of the Department, supervisor of the UG mini-project and a senior faculty member of the department. There shall be no internal marks for UG mini-project.
- 8.6** There shall be a seminar presentation in IV year I semester. For the seminar, the student shall collect the information on a specialized topic, prepare a technical report, and submit it to the department. It shall be evaluated by the departmental committee consisting of Head of the Department, seminar supervisor and a senior faculty member. The seminar report shall be evaluated for 100 marks. There shall be no semester end examination for the seminar.
- 8.7** Out of a total of 100 marks for the UG major Project, 25 marks shall be allotted for internal evaluation and 75 marks for the end semester examination (viva voce). The end semester examination of the UG major Project shall be conducted by the same committee as appointed for the UG mini-project. In addition, the UG major Project supervisor shall also be included in the committee. The topics for UG mini project, seminar and UG major Project shall be different from one another. The evaluation of UG major Project shall be made at the end of IV year II semester. The internal evaluation shall be on the basis of two seminars given by each student on the topic of UG major Project.
- 8.8** The laboratory marks and the sessional marks awarded by the college are subject to scrutiny and scaling by the university wherever necessary. In such cases, the sessional and laboratory marks awarded by the college will be referred to a committee. The committee will arrive at a scaling factor and the marks will be scaled accordingly. The recommendations of the committee are final and binding. The laboratory records and internal test papers shall be preserved in the respective institutions as per the university rules and produced before the committees of the university as and when asked for.

- 8.9** For mandatory courses Environmental Science, Professional Ethics and gender sensitization lab, a student has to secure 40 marks out of 100 marks (i.e. 40% of the marks allotted) in the continuous internal evaluation for passing the subject/course.
- 8.10** For mandatory courses NCC/ NSO and NSS, a ‘satisfactory participation certificate’ shall be issued to the student from the authorities concerned, only after securing $\geq 65\%$ attendance in such a course.
- 8.11** No marks or letter grade shall be allotted for all mandatory/non-credit courses.
- 9.0 Grading procedure**
- 9.1** Marks will be awarded to indicate the performance of student in each theory subject, laboratory / practicals, seminar, UG mini project, UG major project. Based on the percentage of marks obtained (Continuous Internal Evaluation plus Semester End Examination, both taken together) as specified in item 8 above, a corresponding letter grade shall be given.
- 9.2** As a measure of the performance of student, a 10-point absolute grading system using the following letter grades (as per UGC/AICTE guidelines) and corresponding percentage of marks shall be followed:

% of Marks Secured in a Subject/Course (Class Intervals)	Letter Grade (UGC Guidelines)	Grade Points
Greater than or equal to 90%	O (Outstanding)	10
80 and less than 90%	A⁺ (Excellent)	9
70 and less than 80%	A (Very Good)	8
60 and less than 70%	B⁺ (Good)	7
50 and less than 60%	B (Average)	6
40 and less than 50%	C (Pass)	5
Below 40%	F (FAIL)	0
Absent	Ab	0

- 9.3** A student obtaining ‘F’ grade in any subject shall be deemed to have ‘**failed**’ and is required to reappear as a ‘supplementary student’ in the semester end examination, as and

when offered. In such cases, internal marks in those subjects will remain the same as those obtained earlier.

- 9.4** A student who has not appeared for examination in any subject, ‘**Ab**’ grade will be allocated in that subject, and student shall be considered ‘**failed**’. Student will be required to reappear as a ‘supplementary student’ in the semester end examination, as and when offered.
- 9.5** A letter grade does not indicate any specific percentage of marks secured by the student, but it indicates only the range of percentage of marks.
- 9.6** A student earns grade point (GP) in each subject/ course, on the basis of the letter grade secured in that subject/ course. The corresponding ‘credit points’ (CP) are computed by multiplying the grade point with credits for that particular subject/ course.

Credit points (CP) = grade point (GP) x credits For a course

- 9.7** The student passes the subject/ course only when **GP ≥ 5 (‘C’ grade or above)**
- 9.8** The semester grade point average (SGPA) is calculated by dividing the sum of credit points (ΣCP) secured from all subjects/ courses registered in a semester, by the total number of credits registered during that semester. SGPA is rounded off to **two** decimal places. SGPA is thus computed as

$$\text{SGPA} = \{ \sum_{i=1}^N C_i G_i \} / \{ \sum_{i=1}^N C_i \} \dots \text{For each semester,}$$

where ‘i’ is the subject indicator index (takes into account all subjects in a semester), ‘N’ is the no. of subjects ‘**registered**’ for the semester (as specifically required and listed under the course structure of the parent department), C_i is the no. of credits allotted to the i^{th} subject, and G_i represents the grade points (GP) corresponding to the letter grade awarded for that i^{th} subject.

- 9.9** The cumulative grade point average (CGPA) is a measure of the overall cumulative performance of a student in all semesters considered for registration. The CGPA is the ratio of the total credit points secured by a student in **all** registered courses in **all** semesters, and the total number of credits registered in **all** the semesters. CGPA is rounded off to **two** decimal places. CGPA is thus computed from the I year II semester onwards at the end of each semester as per the formula

$$\text{CGPA} = \{ \sum_{j=1}^M C_j G_j \} / \{ \sum_{j=1}^M C_j \} \dots \text{for all S semesters registered}$$

(i.e., up to and inclusive of S semesters, $S \geq 2$),

where ‘M’ is the **total** no. of subjects (as specifically required and listed under the course structure of the parent department) the student has ‘**registered**’ i.e., from the 1st semester onwards up to and inclusive of the 8th semester, ‘j’ is the subject indicator index (takes into account all subjects from 1 to 8 semesters), C_j is the no. of credits allotted to the j^{th}

subject, and G_j represents the grade points (GP) corresponding to the letter grade awarded for that j^{th} subject. After registration and completion of I year I semester, the SGPA of that semester itself may be taken as the CGPA, as there are no cumulative effects.

Illustration of calculation of SGPA

Course/Subject	Credits	Letter Grade	Grade Points	Credit Points
Course 1	4	A	8	$4 \times 8 = 32$
Course 2	4	O	10	$4 \times 10 = 40$
Course 3	4	C	5	$4 \times 5 = 20$
Course 4	3	B	6	$3 \times 6 = 18$
Course 5	3	A+	9	$3 \times 9 = 27$
Course 6	3	C	5	$3 \times 5 = 15$
	21			152

$$\text{SGPA} = 152/21 = 7.23$$

Illustration of calculation of CGPA:

Semester	Credits	SGPA	Credits x SGPA
Semester I	24	7	$24 \times 7 = 168$
Semester II	24	6	$24 \times 6 = 144$
Semester III	24	6.5	$24 \times 6.5 = 156$
Semester IV	24	6	$24 \times 6 = 144$
Semester V	24	7.5	$24 \times 7.5 = 180$
Semester VI	24	8	$24 \times 8 = 192$
Semester VII	24	8.5	$24 \times 8.5 = 204$
Semester VIII	24	8	$24 \times 8 = 192$
	192		1380

$$\text{CGPA} = 1380/192 = 7.18$$

- 9.10** For merit ranking or comparison purposes or any other listing, **only** the ‘**rounded off**’ values of the CGPAs will be used.
- 9.11** For calculations listed in regulations 9.6 to 9.9, performance in failed subjects/ courses (securing **F** grade) will also be taken into account, and the credits of such subjects/ courses will also be included in the multiplications and summations. After passing the failed subject(s) newly secured letter grades will be taken into account for calculation of SGPA and CGPA. However, mandatory courses will not be taken into consideration.

10.0 Passing standards

- 10.1** A student shall be declared successful or 'passed' in a semester, if student secures a GP ≥ 5 ('C' grade or above) in every subject/course in that semester (i.e. when student gets an SGPA ≥ 5.00 at the end of that particular semester); and a student shall be declared successful or 'passed' in the entire under graduate programme, only when gets a CGPA ≥ 5.00 for the award of the degree as required.
- 10.2** After the completion of each semester, a grade card or grade sheet (or transcript) shall be issued to all the registered students of that semester, indicating the letter grades and credits earned. It will show the details of the courses registered (course code, title, no. of credits, and grade earned etc.), credits earned, SGPA, and CGPA.

11.0 Declaration of results

- 11.1** Computation of SGPA and CGPA are done using the procedure listed in 9.6 to 9.9.
- 11.2** For final percentage of marks equivalent to the computed final CGPA, the following formula may be used.

$$\% \text{ of Marks} = (\text{final CGPA} - 0.5) \times 10$$

12.0 Award of degree

- 12.1** A student who registers for all the specified subjects/ courses as listed in the course structure and secures the required number of 192 credits (with CGPA ≥ 5.0), within 8 academic years from the date of commencement of the first academic year, shall be declared to have '**qualified**' for the award of the B.Tech. degree in the chosen branch of Engineering as selected at the time of admission.
- 12.2** A student who qualifies for the award of the degree as listed in item 12.1 shall be placed in the following classes.
- 12.3** Students with final CGPA (at the end of the under graduate programme) ≥ 8.00 , and fulfilling the following conditions -
- (i) Should have passed all the subjects/courses in '**first appearance**' within the first 4 academic years (or 8 sequential semesters) from the date of commencement of first year first semester.
 - (ii) Should have secured a CGPA ≥ 8.00 , at the end of each of the 8 sequential semesters, starting from I year I semester onwards.
 - (iii) Should not have been detained or prevented from writing the end semester examinations in any semester due to shortage of attendance or any other reason, shall be placed in '**first class with distinction**'.
- 12.4** Students with final CGPA (at the end of the under graduate programme) ≥ 6.50 but < 8.00 , shall be placed in '**first class**'.

12.5 Students with final CGPA (at the end of the under graduate programme) ≥ 5.50 but < 6.50 , shall be placed in '**second class**'.

12.6 All other students who qualify for the award of the degree (as per item 12.1), with final CGPA (at the end of the under graduate programme) ≥ 5.00 but < 5.50 , shall be placed in '**pass class**'.

12.7 A student with final CGPA (at the end of the under graduate programme) < 5.00 will not be eligible for the award of the degree.

12.8 Students fulfilling the conditions listed under item 12.3 alone will be eligible for award of '**university rank**' and '**gold medal**'.

13.0 Withholding of results

13.1 If the student has not paid the fees to the university/ college at any stage, or has dues pending due to any reason whatsoever, or if any case of indiscipline is pending, the result of the student may be withheld, and student will not be allowed to go into the next higher semester. The award or issue of the degree may also be withheld in such cases.

14.0 Transitory regulations

A. For students detained due to shortage of attendance:

1. A Student who has been detained in I year of R09/R13/R15 Regulations due to lack of attendance, shall be permitted to join I year I Semester of R16 Regulations and he is required to complete the study of B.Tech./B. Pharmacy programme within the stipulated period of eight academic years from the date of first admission in I Year.
2. A student who has been detained in any semester of II, III and IV years of R09/R13/R15 regulations for want of attendance, shall be permitted to join the corresponding semester of R16 regulations and is required to complete the study of B.Tech./B. Pharmacy within the stipulated period of eight academic years from the date of first admission in I Year. The R16 Academic Regulations under which a student has been readmitted shall be applicable to that student from that semester.

See rule (C) for further Transitory Regulations.

B. For students detained due to shortage of credits:

3. A student of R09/R13/R15 Regulations who has been detained due to lack of credits, shall be promoted to the next semester of R16 Regulations only after acquiring the required credits as per the corresponding regulations of his/her first admission. The student is required to complete the study of B.Tech./B. Pharmacy within the stipulated period of eight academic years from the year of first admission. The R16 Academic Regulations are applicable to a student from the year of readmission onwards.

See rule (C) for further Transitory Regulations.

C. For readmitted students in R16 Regulations:

4. A student who has failed in any subject under any regulation has to pass those subjects in the same regulations.
5. The maximum credits that a student acquires for the award of degree, shall be the sum of the total number of credits secured in all the regulations of his/her study including R16 Regulations. The performance evaluation of the student will be done after the exemption of two subjects if total credits acquired are ≤ 206 , three subjects if total credits acquired are > 206 (see R16 Regulations for exemption details).
6. If a student readmitted to R16 Regulations, has any subject with 80% of syllabus common with his/her previous regulations, that particular subject in R16 Regulations will be substituted by another subject to be suggested by the University.

Note: If a student readmitted to R16 Regulations, has not studied any subjects/topics in his/her earlier regulations of study which is prerequisite for further subjects in R16 Regulations, the College Principals concerned shall conduct remedial classes to cover those subjects/topics for the benefit of the students.

15.0 Student transfers

- 15.1 There shall be no branch transfers after the completion of admission process.
- 15.2 There shall be no transfers from one college/stream to another within the constituent colleges and units of Jawaharlal Nehru Technological University Hyderabad.
- 15.3 The students seeking transfer to colleges affiliated to JNTUH from various other Universities/institutions have to pass the failed subjects which are equivalent to the subjects of JNTUH, and also pass the subjects of JNTUH which the students have not studied at the earlier institution. Further, though the students have passed some of the subjects at the earlier institutions, if the same subjects are prescribed in different semesters of JNTUH, the students have to study those subjects in JNTUH in spite of the fact that those subjects are repeated.
- 15.4 The transferred students from other Universities/institutions to JNTUH affiliated colleges who are on rolls to be provide one chance to write the CBT (internal marks) in the **failed subjects and/or subjects not studied** as per the clearance letter issued by the university.
- 15.5 The autonomous affiliated colleges have to provide one chance to write the internal examinations in the **failed subjects and/or subjects not studied**, to the students transferred from other universities/institutions to JNTUH autonomous affiliated colleges who are on rolls, as per the clearance (equivalence) letter issued by the University.

16.0 Scope

- 16.1 The academic regulations should be read as a whole, for the purpose of any interpretation.

- 16.2** In case of any doubt or ambiguity in the interpretation of the above rules, the decision of the vice-chancellor is final.
- 16.3** The university may change or amend the academic regulations, course structure or syllabi at any time, and the changes or amendments made shall be applicable to all students with effect from the dates notified by the university authorities.



JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

(Established by State Act No. 30 of 2008)

Kukatpally, Hyderabad, Telangana (India).

Academic Regulations for B.Tech. (Lateral Entry Scheme) from the AY 2017-18

1. Eligibility for award of B. Tech. Degree (LES)

The LES students after securing admission shall pursue a course of study for not less than three academic years and not more than six academic years.

2. The student shall register for 144 credits and secure 144 credits with CGPA ≥ 5 from II year to IV year B.Tech. programme (LES) for the award of B.Tech. degree. **Out of the 144 credits secured, the student can avail exemption up to 6 credits**, that is, one open elective subject and one professional elective subject or two professional elective subjects resulting in 138 credits for B.Tech programme performance evaluation.

3. The students, who fail to fulfil the requirement for the award of the degree in six academic years from the year of admission, shall forfeit their seat in B.Tech.

4. The attendance requirements of B. Tech. (Regular) shall be applicable to B.Tech. (LES).

5. Promotion rule

S. No	Promotion	Conditions to be fulfilled
1	Second year first semester to second year second semester	Regular course of study of second year first semester.
2	Second year second semester to third year first semester	(i) Regular course of study of second year second semester. (ii) Must have secured at least 29 credits out of 48 credits i.e., 60% credits up to second year second semester from all the relevant regular and supplementary examinations, whether the student takes those examinations or not.
3	Third year first semester to third year second semester	Regular course of study of third year first semester.
4	Third year second semester to fourth year first semester	(i) Regular course of study of third year second semester. (ii) Must have secured at least 58 credits out of 96 credits i.e., 60% credits up to

		third year second semester from all the relevant regular and supplementary examinations, whether the student takes those examinations or not.
5	Fourth year first semester to fourth year second semester	Regular course of study of fourth year first semester.

6. All the other regulations as applicable to B. Tech. 4-year degree course (Regular) will hold good for B. Tech. (Lateral Entry Scheme).

MALPRACTICES RULES

DISCIPLINARY ACTION FOR / IMPROPER CONDUCT IN EXAMINATIONS

	Nature of Malpractices/Improper conduct	Punishment
	If the student:	
1. (a)	Possesses or keeps accessible in examination hall, any paper, note book, programmable calculators, cell phones, pager, palm computers or any other form of material concerned with or related to the subject of the examination (theory or practical) in which student is appearing but has not made use of (material shall include any marks on the body of the student which can be used as an aid in the subject of the examination)	Expulsion from the examination hall and cancellation of the performance in that subject only.
(b)	Gives assistance or guidance or receives it from any other student orally or by any other body language methods or communicates through cell phones with any student or persons in or outside the exam hall in respect of any matter.	Expulsion from the examination hall and cancellation of the performance in that subject only of all the students involved. In case of an outsider, he will be handed over to the police and a case is registered against him.
2.	Has copied in the examination hall from any paper, book, programmable calculators, palm computers or any other form of material relevant to the subject of the examination (theory or practical) in which the student is appearing.	Expulsion from the examination hall and cancellation of the performance in that subject and all other subjects the student has already appeared including practical examinations and project work and shall not be permitted to appear for the remaining examinations of the subjects of that semester/year.

		The hall ticket of the student is to be cancelled and sent to the university.
3.	Impersonates any other student in connection with the examination.	The student who has impersonated shall be expelled from examination hall. The student is also debarred and forfeits the seat. The performance of the original student who has been impersonated, shall be cancelled in all the subjects of the examination (including practicals and project work) already appeared and shall not be allowed to appear for examinations of the remaining subjects of that semester/year. The student is also debarred for two consecutive semesters from class work and all university examinations. The continuation of the course by the student is subject to the academic regulations in connection with forfeiture of seat. If the imposter is an outsider, he will be handed over to the police and a case is registered against him.
4.	Smuggles in the answer book or additional sheet or takes out or arranges to send out the question paper during the examination or answer book or additional sheet, during or after the examination.	Expulsion from the examination hall and cancellation of performance in that subject and all the other subjects the student has already appeared including practical examinations and project work and shall not be permitted for the remaining examinations of the subjects of that semester/year. The student is also debarred for two consecutive semesters from class work and all university examinations. The continuation of the course by the student is subject to the academic regulations in connection with forfeiture of seat.
5.	Uses objectionable, abusive or offensive language in the answer paper or in letters to the examiners or writes to the examiner requesting him to award pass marks.	Cancellation of the performance in that subject.
6.	Refuses to obey the orders of the chief superintendent/assistant – superintendent / any officer on duty or misbehaves or creates disturbance of any kind in and around the examination hall or organizes a walk out or instigates others to walk out, or threatens the officer-in charge or any person on duty	In case of students of the college, they shall be expelled from examination halls and cancellation of their performance in that subject and all other subjects the student(s) has (have) already appeared and shall not be permitted to appear for the remaining examinations of the subjects of that semester/year. The students also are debarred

	in or outside the examination hall of any injury to his person or to any of his relations whether by words, either spoken or written or by signs or by visible representation, assaults the officer-in-charge, or any person on duty in or outside the examination hall or any of his relations, or indulges in any other act of misconduct or mischief which result in damage to or destruction of property in the examination hall or any part of the college campus or engages in any other act which in the opinion of the officer on duty amounts to use of unfair means or misconduct or has the tendency to disrupt the orderly conduct of the examination.	and forfeit their seats. In case of outsiders, they will be handed over to the police and a police case is registered against them.
7.	Leaves the exam hall taking away answer script or intentionally tears of the script or any part thereof inside or outside the examination hall.	Expulsion from the examination hall and cancellation of performance in that subject and all the other subjects the student has already appeared including practical examinations and project work and shall not be permitted for the remaining examinations of the subjects of that semester/year. The student is also debarred for two consecutive semesters from class work and all university examinations. The continuation of the course by the student is subject to the academic regulations in connection with forfeiture of seat.
8.	Possess any lethal weapon or firearm in the examination hall.	Expulsion from the examination hall and cancellation of the performance in that subject and all other subjects the student has already appeared including practical examinations and project work and shall not be permitted for the remaining examinations of the subjects of that semester/year. The student is also debarred and forfeits the seat.
9.	If student of the college, who is not a student for the particular examination or any person not connected with the college indulges in any malpractice or improper conduct mentioned in clause 6 to 8.	Student of the colleges expulsion from the examination hall and cancellation of the performance in that subject and all other subjects the student has already appeared including practical examinations and project work and shall not be permitted for the remaining examinations of the subjects of that semester/year. The student is also debarred and

		forfeits the seat. Person(s) who do not belong to the college will be handed over to police and, a police case will be registered against them.
10.	Comes in a drunken condition to the examination hall.	Expulsion from the examination hall and cancellation of the performance in that subject and all other subjects the student has already appeared including practical examinations and project work and shall not be permitted for the remaining examinations of the subjects of that semester/year.
11.	Copying detected on the basis of internal evidence, such as, during valuation or during special scrutiny.	Cancellation of the performance in that subject and all other subjects the student has appeared including practical examinations and project work of that semester/year examinations.
12.	If any malpractice is detected which is not covered in the above clauses 1 to 11 shall be reported to the university for further action to award suitable punishment.	

Malpractices identified by squad or special invigilators

1. Punishments to the students as per the above guidelines.
2. Punishment for institutions : (if the squad reports that the college is also involved in encouraging malpractices)
 - a. A show cause notice shall be issued to the college.
 - b. Impose a suitable fine on the college.
 - c. Shifting the examination centre from the college to another college for a specific period of not less than one year.

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JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

(Established by State Act No. 30 of 2008)

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ACADEMIC REGULATIONS FOR B.TECH. REGULAR STUDENTS

WITH EFFECT FROM ACADEMIC YEAR 2018-19 (R-18)

1.0 Under-Graduate Degree Programme in Engineering & Technology (UGP in E&T)

Jawaharlal Nehru Technological University Hyderabad (JNTUH) offers a 4-year (8 semesters) **Bachelor of Technology** (B.Tech.) degree programme, under Choice Based Credit System (CBCS) at its non-autonomous constituent and affiliated colleges with effect from the academic year 2018-19.

2.0 Eligibility for admission

2.1 Admission to the under graduate (UG) programme shall be made either on the basis of the merit rank obtained by the qualified student in entrance test conducted by the Telangana State Government (EAMCET) or the University or on the basis of any other order of merit approved by the University, subject to reservations as prescribed by the government from time to time.

2.2 The medium of instructions for the entire under graduate programme in Engineering & Technology will be **English** only.

3.0 B.Tech. Programme structure

3.1 A student after securing admission shall complete the B.Tech. programme in a minimum period of **four** academic years (8 semesters), and a maximum period of **eight** academic years (16 semesters) starting from the date of commencement of first year first semester, failing which student shall forfeit seat in B.Tech course. Each student shall secure 160 credits (with CGPA ≥ 5) required for the completion of the under graduate programme and award of the B.Tech. degree.

3.2 UGC/ AICTE specified definitions/ descriptions are adopted appropriately for various terms and abbreviations used in these academic regulations/ norms, which are listed below.

3.2.1 Semester scheme

Each under graduate programme is of 4 academic years (8 semesters) with the academic year divided into two semesters of 22 weeks (≥ 90 instructional days) each, each

semester having - ‘Continuous Internal Evaluation (CIE)’ and ‘Semester End Examination (SEE)’ under Choice Based Credit System (CBCS) and Credit Based Semester System (CBSS) indicated by UGC, and curriculum/course structure as suggested by AICTE are followed.

3.2.2 Credit courses

All subjects/ courses are to be registered by the student in a semester to earn credits which shall be assigned to each subject/ course in an L: T: P: C (lecture periods: tutorial periods: practical periods: credits) structure based on the following general pattern.

- One credit for one hour/ week/ semester for theory/ lecture (L) courses or Tutorials.
- One credit for two hours/ week/ semester for laboratory/ practical (P) courses.

Courses like Environmental Science, Constitution of India, Intellectual Property Rights, and Gender Sensitization lab are mandatory courses. These courses will not carry any credits.

3.2.3 Subject Course Classification

All subjects/ courses offered for the under graduate programme in E&T (B.Tech. degree programmes) are broadly classified as follows. The University has followed almost all the guidelines issued by AICTE/UGC.

S. No.	Broad Course Classification	Course Group/ Category	Course Description
1	Foundation Courses (FnC)	BS – Basic Sciences	Includes mathematics, physics and chemistry subjects
2		ES - Engineering Sciences	Includes fundamental engineering subjects
3		HS – Humanities and Social sciences	Includes subjects related to humanities, social sciences and management
4	Core Courses (CoC)	PC – Professional Core	Includes core subjects related to the parent discipline/ department/ branch of Engineering.
5	Elective Courses (ElC)	PE – Professional Electives	Includes elective subjects related to the parent discipline/ department/ branch of Engineering.
6		OE – Open Electives	Elective subjects which include inter-disciplinary subjects or subjects in an area outside the parent discipline/ department/ branch of Engineering.
7	Core Courses	Project Work	B.Tech. project or UG project or UG major project or Project Stage I & II
8		Industrial training/ Mini- project	Industrial training/ Summer Internship/ Industrial Oriented Mini-project/ Mini-project

9		Seminar	Seminar/ Colloquium based on core contents related to parent discipline/ department/ branch of Engineering.
10	Minor courses	-	1 or 2 Credit courses (subset of HS)
11	Mandatory Courses (MC)	-	Mandatory courses (non-credit)

4.0 Course registration

- 4.1 A ‘faculty advisor or counselor’ shall be assigned to a group of 20 students, who will advise the students about the under graduate programme, its course structure and curriculum, choice/option for subjects/ courses, based on their competence, progress, pre-requisites and interest.
- 4.2 The academic section of the college invites ‘registration forms’ from students before the beginning of the semester through ‘on-line registration’, ensuring ‘date and time stamping’. The on-line registration requests for any ‘current semester’ shall be **completed before the commencement of SEEs (Semester End Examinations) of the ‘preceding semester’**.
- 4.3 A student can apply for **on-line** registration, **only after** obtaining the ‘**written approval**’ from faculty advisor/counselor, which should be submitted to the college academic section through the Head of the Department. A copy of it shall be retained with Head of the Department, faculty advisor/ counselor and the student.
- 4.4 A student may be permitted to register for all the subjects/ courses in a semester as specified in the course structure with maximum additional subject(s)/course(s) limited to 4 credits, based on **progress** and SGPA/ CGPA, and completion of the ‘**pre-requisites**’ as indicated for various subjects/ courses, in the department course structure and syllabus contents.
- 4.5 Choice for ‘**additional subjects/ courses**’ must be clearly indicated, which needs the specific approval and signature of the faculty advisor/ counselor.
- 4.6 If the student submits ambiguous choices or multiple options or erroneous entries during **on-line** registration for the subject(s) / course(s) under a given/ specified course group/ category as listed in the course structure, only the first mentioned subject/ course in that category will be taken into consideration.
- 4.7 Subject/ course options exercised through **on-line** registration are final and **cannot** be changed or inter-changed; further, alternate choices also will not be considered. However, if the subject/ course that has already been listed for registration by the Head of the Department in a semester could not be offered due to any unforeseen or unexpected reasons, then the student shall be allowed to have alternate choice either for a new subject (subject to offering of such a subject), or for another existing subject (subject to availability of seats). Such alternate arrangements will be made by the head

of the department, with due notification and time-framed schedule, within the **first week** after the commencement of class-work for that semester.

4.8 Dropping of subjects/ courses may be permitted, only after obtaining prior approval from the faculty advisor/ counselor 'within a period of 15 days' from the beginning of the current semester.

4.9 Open electives: The students have to choose three open electives (OE-I, II & III) from the list of open electives given. However, the student cannot opt for an open elective subject offered by his own (parent) department, if it is already listed under any category of the subjects offered by parent department in any semester.

4.10 Professional electives: The students have to choose six professional electives (PE-I to VI) from the list of professional electives given.

5.0 Subjects/ courses to be offered

5.1 A typical section (or class) strength for each semester shall be 60.

5.2 A subject/ course may be offered to the students, **only if** a minimum of 20 students (1/3 of the section strength) opt for it. The maximum strength of a section is limited to 80 (60 + 1/3 of the section strength).

5.3 More than **one faculty member** may offer the **same subject** (lab/ practical may be included with the corresponding theory subject in the same semester) in any semester. However, selection of choice for students will be based on - '**first come first serve** basis and CGPA criterion' (i.e. the first focus shall be on early **on-line entry** from the student for registration in that semester, and the second focus, if needed, will be on CGPA of the student).

5.4 If more entries for registration of a subject come into picture, then the Head of the Department concerned shall decide, whether or not to offer such a subject/ course for **two (or multiple) sections**.

5.5 In case of options coming from students of other departments/ branches/ disciplines (not considering **open electives**), first **priority** shall be given to the student of the '**parent department**'.

6.0 Attendance requirements:

6.1 A student shall be eligible to appear for the semester end examinations, if the student acquires a minimum of 75% of attendance in aggregate of all the subjects/ courses (excluding attendance in mandatory courses like Environmental Science, Constitution of India, Intellectual Property Rights, and Gender Sensitization lab) for that semester. Two periods of attendance for each theory subject shall be considered, if the student appears for the mid-term examination of that subject. **This attendance should also be included in the fortnightly upload of attendance to the University.**

The attendance of Mandatory Non-Credit courses should be uploaded separately to the University.

- 6.2 Shortage of attendance in aggregate up to 10% (65% and above, and below 75%) in each semester may be condoned by the college academic committee on genuine and valid grounds, based on the student's representation with supporting evidence.
- 6.3 A stipulated fee shall be payable for condoning of shortage of attendance.
- 6.4 Shortage of attendance below 65% in aggregate shall in **no** case be condoned.
- 6.5 **Students whose shortage of attendance is not condoned in any semester are not eligible to take their end examinations of that semester. They get detained and their registration for that semester shall stand cancelled. They will not be promoted to the next semester.** They may seek re-registration for all those subjects registered in that semester in which the student is detained, by seeking re-admission into that semester as and when offered; if there are any professional electives and/ or open electives, the same may also be re-registered if offered. However, if those electives are not offered in later semesters, then alternate electives may be chosen from the **same** set of elective subjects offered under that category.
- 6.6 A student fulfilling the attendance requirement in the present semester shall not be eligible for readmission into the same class.

7.0 Academic requirements

The following academic requirements have to be satisfied, in addition to the attendance requirements mentioned in item no.6.

- 7.1 A student shall be deemed to have satisfied the academic requirements and earned the credits allotted to each subject/ course, if student secures not less than 35% (26 marks out of 75 marks) in the semester end examination, and a minimum of 40% (40 marks out of 100 marks) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together; in terms of letter grades, this implies securing 'C' grade or above in that subject/ course.
- 7.2 A student shall be deemed to have satisfied the academic requirements and earned the credits allotted to Industrial Oriented Mini Project/Summer Internship and seminar, if the student secures not less than 40% marks (i.e. 40 out of 100 allotted marks) in each of them. The student is deemed to have failed, if he (i) does not submit a report on Industrial Oriented Mini Project/Summer Internship, or does not make a presentation of the same before the evaluation committee as per schedule, or (ii) does not present the seminar as required in the IV year I Semester, or (iii) secures less than 40% marks in Industrial Oriented Mini Project/Summer Internship and seminar evaluations.

A student may reappear once for each of the above evaluations, when they are scheduled again; if the student fails in such 'one reappearance' evaluation also, the student has to reappear for the same in the next subsequent semester, as and when it is scheduled.

7.3 Promotion Rules

S. No.	Promotion	Conditions to be fulfilled
1	First year first semester to first year second semester	Regular course of study of first year first semester.
2	First year second semester to second year first semester	(i) Regular course of study of first year second semester. (ii) Must have secured at least 18 credits out of 37 credits i.e., 50% credits up to first year second semester from all the relevant regular and supplementary examinations, whether the student takes those examinations or not.
3.	Second year first semester to second year second semester	Regular course of study of second year first semester.
4	Second year second semester to third year first semester	(i) Regular course of study of second year second semester. (ii) Must have secured at least 47 credits out of 79 credits i.e., 60% credits up to second year second semester from all the relevant regular and supplementary examinations, whether the student takes those examinations or not.
5	Third year first semester to third year second semester	Regular course of study of third year first semester.
6	Third year second semester to fourth year first semester	(i) Regular course of study of third year second semester. (ii) Must have secured at least 73 credits out of 123 credits i.e., 60% credits up to third year second semester from all the relevant regular and supplementary examinations, whether the student takes those examinations or not.
7	Fourth year first semester to fourth year second semester	Regular course of study of fourth year first semester.

- 7.4 A student (i) shall register for all courses/subjects covering 160 credits as specified and listed in the course structure, (ii) fulfills all the attendance and academic requirements for 160 credits, (iii) earn all 160 credits by securing SGPA ≥ 5.0 (in each semester), and CGPA (at the end of each successive semester) ≥ 5.0 , (iv) **passes all the mandatory courses**, to successfully complete the under graduate programme. The performance of the student in these 160 credits shall be taken into account for the calculation of 'the final CGPA (at the end of under graduate programme)', and shall be indicated in the grade card of IV year II semester.
- 7.5 If a student registers for '**extra subjects**' (in the parent department or other departments/branches of Engg.) other than those listed subjects totaling to 160 credits as specified in the course structure of his department, the performances in those '**extra subjects**' (although evaluated and graded using the same procedure as that of the required 160 credits) will not be taken into account while calculating the SGPA and CGPA. For such '**extra subjects**' registered, percentage of marks and letter grade alone will be indicated in the grade card as a performance measure, subject to completion of the attendance and academic requirements as stated in regulations 6 and 7.1 – 7.4 above.
- 7.6 A student eligible to appear in the semester end examination for any subject/ course, but absent from it or failed (thereby failing to secure '**C**' grade or above) may reappear for that subject/ course in the supplementary examination as and when conducted. In such cases, internal marks (CIE) assessed earlier for that subject/ course will be carried over, and added to the marks to be obtained in the SEE supplementary examination for evaluating performance in that subject.
- 7.7 A student **detained in a semester due to shortage of attendance may be re-admitted in the same semester in the next academic year for fulfillment of academic requirements**. The academic regulations under which a student has been readmitted shall be applicable. However, no grade allotments or SGPA/ CGPA calculations will be done for the entire semester in which the student has been detained.
- 7.8 A student detained **due to lack of credits, shall be promoted to the next academic year only after acquiring the required academic credits**. The academic regulations under which the student has been readmitted shall be applicable to him.
- 8.0 **Evaluation - Distribution and Weightage of marks**
- 8.1 The performance of a student in every subject/course (including practicals and Project Stage – I & II) will be evaluated for 100 marks each, with 25 marks allotted for CIE (Continuous Internal Evaluation) and 75 marks for SEE (Semester End-Examination).
- 8.2 For theory subjects, during a semester, there shall be two mid-term examinations. Each mid-term examination consists of one objective paper, one descriptive paper and one assignment. The objective paper and the descriptive paper shall be for 10 marks each with a total duration of 1 hour 20 minutes (20 minutes for objective and 60 minutes for descriptive paper). The objective paper is set with 20 multiple choice, fill-

in the blanks and matching type of questions for a total of 10 marks. The descriptive paper shall contain 4 full questions out of which, the student has to answer 2 questions, each carrying 5 marks. While the first mid-term examination shall be conducted on 50% of the syllabus, the second mid-term examination shall be conducted on the remaining 50% of the syllabus. Five marks are allocated for assignments (as specified by the subject teacher concerned). The first assignment should be submitted before the conduct of the first mid-term examination, and the second assignment should be submitted before the conduct of the second mid-term examination. The total marks secured by the student in each mid-term examination are evaluated for 25 marks, and the average of the two mid-term examinations shall be taken as the final marks secured by each student in Continuous Internal Evaluation. If any student is absent from any subject of a mid-term examination, an on-line test will be conducted for him by the University. The details of the end semester question paper pattern are as follows:

- 8.2.1** The semester end examinations (SEE) will be conducted for 75 marks consisting of two parts viz. i) **Part- A** for 25 marks, ii) **Part - B** for 50 marks.
- Part-A is a compulsory question consisting of ten sub-questions. The first five sub-questions are from each unit and carry 2 marks each. The next five sub-questions are one from each unit and carry 3 marks each.
 - Part-B consists of five questions (numbered from 2 to 6) carrying 10 marks each. Each of these questions is from one unit and may contain sub-questions. For each question there will be an “either” “or” choice, which means that there will be two questions from each unit and the student should answer either of the two questions.
- 8.2.2** For subjects like **Engineering Graphics/Engineering Drawing**, the SEE shall consist of five questions. For each question there will be an “either” “or” choice, which means that there will be two questions from each unit and the student should answer either of the two questions. There shall be no Part – A, and Part – B system.
- 8.2.3** For subjects like **Machine Drawing Practice/Machine Drawing**, the SEE shall be conducted for 75 marks consisting of two parts viz. (i) Part – A for 30 marks. 3 out of 4 questions must be answered, (ii) Part – B for 45 marks. Part – B is compulsory.
- 8.2.4** For the Subject **Estimation, Costing and Project Management**, the SEE paper should consist of Part- A, Part-B and Part C. (i) Part – A – 1 out of 2 questions from Unit – I for 30 Marks, (ii) Part – B – 1 out of 2 questions from Unit – II for 15 Marks, (iii) Part – C – 3 out of 5 questions from Units – III, IV, V for 30 Marks.
- 8.2.5** For subjects **Structural Engineering – I & II (RCC & STEEL)**, the SEE will be conducted for 75 marks consisting of 2 parts viz. (i) Part – A for 15 marks and, (i) Part – B for 60 marks. Part – A is a compulsory question consisting of ten sub-questions. The first five sub-questions are from each unit relating to design theory and codal provisions and carry 2 marks each. The next five sub-questions are from each unit and carry 1 mark each. Part – B consists of 5 questions (numbered 2 to 6)

carrying 12 marks each. Each of these questions is from one unit and may contain sub-questions. For each question there is either or choice, which means that there will be two questions from each unit and the student should answer either of the two questions.

- 8.3** For practical subjects there shall be a continuous internal evaluation during the semester for 25 marks and 75 marks for semester end examination. Out of the 25 marks for internal evaluation, day-to-day work in the laboratory shall be evaluated for 15 marks and internal practical examination shall be evaluated for 10 marks conducted by the laboratory teacher concerned. The semester end examination shall be conducted with an external examiner and the laboratory teacher. The external examiner shall be appointed from the clusters of colleges which are decided by the examination branch of the University.
- 8.4** For the subject having design and/or drawing, (such as engineering graphics, engineering drawing, machine drawing, machine drawing practice and estimation), the distribution shall be 25 marks for continuous internal evaluation (15 marks for day-to-day work and 10 marks for internal tests) and 75 marks for semester end examination. There shall be two internal tests in a semester and the average of the two shall be considered for the award of marks for internal tests.
- 8.5** There shall be an Industrial Oriented Mini Project/Summer Internship, in collaboration with an industry of their specialization. Students will register for this immediately after III year II semester examinations and pursue it during summer vacation. Industrial Oriented Mini Project/Summer Internship shall be submitted in a report form and presented before the committee in IV year I semester. It shall be evaluated for 100 external marks. The committee consists of an external examiner, Head of the Department, supervisor of the Industrial Oriented mini project/Summer Internship and a senior faculty member of the department. There shall be no internal marks for Industrial Oriented Mini Project/Summer Internship.
- 8.6** There shall be a seminar presentation in IV year I semester. For the seminar, the student shall collect the information on a specialized topic, prepare a technical report, and submit it to the department. It shall be evaluated by the departmental committee consisting of Head of the Department, seminar supervisor and a senior faculty member. The seminar report shall be evaluated for 100 internal marks. There shall be no semester end examination for the seminar.
- 8.7** UG project work shall be carried out in two stages: Project Stage – I during IV Year I Semester, Project Stage – II during IV Year II Semester. Each stage will be evaluated for 100 marks. Student has to submit project work report at the end of each semester. First report includes project work carried out in IV Year I semester and second report includes project work carried out in IV Year I & II Semesters. SEE for both project stages shall be completed before the commencement of SEE Theory examinations.
- 8.8** For Project Stage – I, the departmental committee consisting of Head of the Department, project supervisor and a senior faculty member shall evaluate the project

work for 75 marks and project supervisor shall evaluate for 25 marks. The student is deemed to have failed, if he (i) does not submit a report on Project Stage - I or does not make a presentation of the same before the evaluation committee as per schedule, or (ii) secures less than 40% marks in the sum total of the CIE and SEE taken together.

A student who has failed may reappear once for the above evaluation, when it is scheduled again; if he fails in such 'one reappearance' evaluation also, he has to reappear for the same in the next subsequent semester, as and when it is scheduled.

- 8.9** For Project Stage – II, the external examiner shall evaluate the project work for 75 marks and the project supervisor shall evaluate it for 25 marks. The topics for industrial oriented mini project, seminar and Project Stage – I shall be different from one another. The student is deemed to have failed, if he (i) does not submit a report on Project Stage - II, or does not make a presentation of the same before the external examiner as per schedule, or (ii) secures less than 40% marks in the sum total of the CIE and SEE taken together.

For conducting viva-voce of project stage – II, University selects an external examiner from the list of experts in the relevant branch submitted by the Principal of the College.

A student who has failed may reappear once for the above evaluation, when it is scheduled again; if student fails in such 'one reappearance' evaluation also, he has to reappear for the same in the next subsequent semester, as and when it is scheduled.

- 8.10** The laboratory marks and the internal marks awarded by the college are subject to scrutiny and scaling by the University wherever necessary. In such cases, the internal and laboratory marks awarded by the college will be referred to a committee. The committee will arrive at a scaling factor and the marks will be scaled accordingly. The recommendations of the committee are final and binding. The laboratory records and internal test papers shall be preserved in the respective institutions as per the University rules and produced before the committees of the University as and when asked for.
- 8.11** For mandatory courses of Environmental Science, Constitution of India, Intellectual Property Rights, and Gender Sensitization lab, a student has to secure 40 marks out of 100 marks (i.e. 40% of the marks allotted) in the continuous internal evaluation for passing the subject/course. **These marks should also be uploaded along with the internal marks of other subjects.**
- 8.12** No marks or letter grades shall be allotted for mandatory/non-credit courses. Only Pass/Fail shall be indicated in Grade Card.

9.0 Grading procedure

- 9.1** Grades will be awarded to indicate the performance of students in each theory subject, laboratory / practicals, seminar, Industry Oriented Mini Project, and project Stage - I & II. Based on the percentage of marks obtained (Continuous Internal Evaluation plus

Semester End Examination, both taken together) as specified in item 8 above, a corresponding letter grade shall be given.

- 9.2** As a measure of the performance of a student, a 10-point absolute grading system using the following letter grades (as per UGC/AICTE guidelines) and corresponding percentage of marks shall be followed:

% of Marks Secured in a Subject/Course (Class Intervals)	Letter Grade (UGC Guidelines)	Grade Points
Greater than or equal to 90%	O (Outstanding)	10
80 and less than 90%	A⁺ (Excellent)	9
70 and less than 80%	A (Very Good)	8
60 and less than 70%	B⁺ (Good)	7
50 and less than 60%	B (Average)	6
40 and less than 50%	C (Pass)	5
Below 40%	F (FAIL)	0
Absent	Ab	0

- 9.3** A student who has obtained an ‘F’ grade in any subject shall be deemed to have ‘failed’ and is required to reappear as a ‘supplementary student’ in the semester end examination, as and when offered. In such cases, internal marks in those subjects will remain the same as those obtained earlier.
- 9.4** To a student who has not appeared for an examination in any subject, ‘Ab’ grade will be allocated in that subject, and he is deemed to have ‘failed’. A student will be required to reappear as a ‘supplementary student’ in the semester end examination, as and when offered next. In this case also, the internal marks in those subjects will remain the same as those obtained earlier.
- 9.5** A letter grade does not indicate any specific percentage of marks secured by the student, but it indicates only the range of percentage of marks.
- 9.6** A student earns grade point (GP) in each subject/ course, on the basis of the letter grade secured in that subject/ course. The corresponding ‘credit points’ (CP) are computed by multiplying the grade point with credits for that particular subject/ course.

Credit points (CP) = grade point (GP) x credits For a course

- 9.7** A student passes the subject/ course only when **GP ≥ 5** (‘C’ grade or above)

- 9.8** The Semester Grade Point Average (SGPA) is calculated by dividing the sum of credit points (ΣCP) secured from all subjects/ courses registered in a semester, by the total number of credits registered during that semester. SGPA is rounded off to **two** decimal places. SGPA is thus computed as

$$SGPA = \{ \sum_{i=1}^N C_i G_i \} / \{ \sum_{i=1}^N C_i \} \dots \text{For each semester,}$$

where 'i' is the subject indicator index (takes into account all subjects in a semester), 'N' is the no. of subjects '**registered**' for the semester (as specifically required and listed under the course structure of the parent department), C_i is the no. of credits allotted to the i^{th} subject, and G_i represents the grade points (GP) corresponding to the letter grade awarded for that i^{th} subject.

- 9.9** The Cumulative Grade Point Average (CGPA) is a measure of the overall cumulative performance of a student in all semesters considered for registration. The CGPA is the ratio of the total credit points secured by a student in **all** registered courses in **all** semesters, and the total number of credits registered in **all** the semesters. CGPA is rounded off to **two** decimal places. CGPA is thus computed from the I year II semester onwards at the end of each semester as per the formula

$$CGPA = \{ \sum_{j=1}^M C_j G_j \} / \{ \sum_{j=1}^M C_j \} \dots \text{for all S semesters registered}$$

(i.e., up to and inclusive of S semesters, $S \geq 2$),

where '**M**' is the **total** no. of subjects (as specifically required and listed under the course structure of the parent department) the student has '**registered**' i.e., from the 1st semester onwards up to and inclusive of the 8th semester, 'j' is the subject indicator index (takes into account all subjects from 1 to 8 semesters), C_j is the no. of credits allotted to the j^{th} subject, and G_j represents the grade points (GP) corresponding to the letter grade awarded for that j^{th} subject. After registration and completion of I year I semester, the SGPA of that semester itself may be taken as the CGPA, as there are no cumulative effects.

Illustration of calculation of SGPA:

Course/Subject	Credits	Letter Grade	Grade Points	Credit Points
Course 1	4	A	8	$4 \times 8 = 32$
Course 2	4	O	10	$4 \times 10 = 40$
Course 3	4	C	5	$4 \times 5 = 20$
Course 4	3	B	6	$3 \times 6 = 18$
Course 5	3	A+	9	$3 \times 9 = 27$
Course 6	3	C	5	$3 \times 5 = 15$
	21			152

$$SGPA = 152/21 = 7.24$$

Illustration of calculation of CGPA up to 3rd semester:

Semester	Course/Subject Title	Credits Allotted	Letter Grade Secured	Corresponding Grade Point (GP)	Credit Points (CP)
I	Course 1	3	A	8	24
I	Course 2	3	O	10	30
I	Course 3	3	B	6	18
I	Course 4	4	A	8	32
I	Course 5	3	A+	9	27
I	Course 6	4	C	5	20
II	Course 7	4	B	6	24
II	Course 8	4	A	8	32
II	Course 9	3	C	5	15
II	Course 10	3	O	10	30
II	Course 11	3	B+	7	21
II	Course 12	4	B	6	24
II	Course 13	4	A	8	32
II	Course 14	3	O	10	30
III	Course 15	2	A	8	16
III	Course 16	1	C	5	5
III	Course 17	4	O	10	40
III	Course 18	3	B+	7	21
III	Course 19	4	B	6	24
III	Course 20	4	A	8	32
III	Course 21	3	B+	7	21
	Total Credits	69		Total Credit Points	518

$$\text{CGPA} = 518/69 = 7.51$$

The above illustrated calculation process of CGPA will be followed for each subsequent semester until 8th semester. The CGPA obtained at the end of 8th semester will become the final CGPA secured for entire B.Tech. Programme.

- 9.10** For merit ranking or comparison purposes or any other listing, **only** the ‘**rounded off**’ values of the CGPAs will be used.
- 9.11** SGPA and CGPA of a semester will be mentioned in the semester Memorandum of Grades if all subjects of that semester are passed in first attempt. Otherwise the SGPA and CGPA shall be mentioned only on the Memorandum of Grades in which sitting he passed his last exam in that semester. However, mandatory courses will not be taken into consideration.

10.0 Passing standards

- 10.1 A student shall be declared successful or 'passed' in a semester, if he secures a GP ≥ 5 ('C' grade or above) in every subject/course in that semester (i.e. when the student gets an SGPA ≥ 5.00 at the end of that particular semester); and he shall be declared successful or 'passed' in the entire under graduate programme, only when gets a CGPA ≥ 5.00 for the award of the degree as required.
- 10.2 After the completion of each semester, a grade card or grade sheet shall be issued to all the registered students of that semester, indicating the letter grades and credits earned. It will show the details of the courses registered (course code, title, no. of credits, grade earned, etc.), credits earned.

11.0 Declaration of results

- 11.1 Computation of SGPA and CGPA are done using the procedure listed in 9.6 to 9.9.
- 11.2 For final percentage of marks equivalent to the computed final CGPA, the following formula may be used.

$$\% \text{ of Marks} = (\text{final CGPA} - 0.5) \times 10$$

12.0 Award of degree

- 12.1 A student who registers for all the specified subjects/ courses as listed in the course structure and secures the required number of 160 credits (with CGPA ≥ 5.0), within 8 academic years from the date of commencement of the first academic year, shall be declared to have '**qualified**' for the award of B.Tech. degree in the chosen branch of Engineering selected at the time of admission.
- 12.2 A student who qualifies for the award of the degree as listed in item 12.1 shall be placed in the following classes.
- 12.3 A student with final CGPA (at the end of the under graduate programme) ≥ 8.00 , and fulfilling the following conditions - shall be placed in '**first class with distinction**'. However, he
- (i) Should have passed all the subjects/courses in '**first appearance**' within the first 4 academic years (or 8 sequential semesters) from the date of commencement of first year first semester.
 - (ii) Should have secured a CGPA ≥ 8.00 , at the end of each of the 8 sequential semesters, starting from I year I semester onwards.
 - (iii) Should not have been detained or prevented from writing the semester end examinations in any semester due to shortage of attendance or any other reason.

A student not fulfilling any of the above conditions with final CGPA > 8 shall be placed in '**first class**'.

- 12.4 Students with final CGPA (at the end of the under graduate programme) ≥ 6.50 but < 8.00 shall be placed in '**first class**'.
- 12.5 Students with final CGPA (at the end of the under graduate programme) ≥ 5.50 but < 6.50 , shall be placed in '**second class**'.
- 12.6 All other students who qualify for the award of the degree (as per item 12.1), with final CGPA (at the end of the under graduate programme) ≥ 5.00 but < 5.50 , shall be placed in '**pass class**'.
- 12.7 A student with final CGPA (at the end of the under graduate programme) < 5.00 will not be eligible for the award of the degree.
- 12.8 Students fulfilling the conditions listed under item 12.3 alone will be eligible for award of '**Gold Medal**'.
- 13.0 **Withholding of results**
- 13.1 If the student has not paid the fees to the University at any stage, or has dues pending due to any reason whatsoever, or if any case of indiscipline is pending, the result of the student may be withheld, and the student will not be allowed to go into the next higher semester. The award or issue of the degree may also be withheld in such cases.
- 14.0 **Student transfers**
- 14.1 There shall be no branch transfers after the completion of admission process.
- 14.2 There shall be no transfers from one college/stream to another within the constituent colleges and units of Jawaharlal Nehru Technological University Hyderabad.
- 14.3 The students seeking transfer to colleges affiliated to JNTUH from various other Universities/institutions have to pass the failed subjects which are equivalent to the subjects of JNTUH, and also pass the subjects of JNTUH which the students have not studied at the earlier institution. Further, though the students have passed some of the subjects at the earlier institutions, if the same subjects are prescribed in different semesters of JNTUH, the students have to study those subjects in JNTUH in spite of the fact that those subjects are repeated.
- 14.4 The transferred students from other Universities/institutions to JNTUH affiliated colleges who are on rolls are to be provided one chance to write the CBT (internal marks) in the **equivalent subject(s)** as per the clearance letter issued by the University.
- 14.5 The autonomous affiliated colleges have to provide one chance to write the internal examinations in the **equivalent subject(s)** to the students transferred from other universities/institutions to JNTUH autonomous affiliated colleges who are on rolls, as per the clearance (equivalence) letter issued by the University.
- 15.0 **Scope**
- 15.1 The academic regulations should be read as a whole, for the purpose of any interpretation.

- 15.2** In case of any doubt or ambiguity in the interpretation of the above rules, the decision of the Vice-Chancellor is final.
- 15.3** The University may change or amend the academic regulations, course structure or syllabi at any time, and the changes or amendments made shall be applicable to all students with effect from the dates notified by the University authorities.
- 15.4** Where the words “he”, “him”, “his”, occur in the regulations, they include “she”, “her”, “hers”.



JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

(Established by State Act No. 30 of 2008)

Kukatpally, Hyderabad, Telangana (India).

ACADEMIC REGULATIONS FOR B.TECH. (LATERAL ENTRY SCHEME) FROM THE AY 2019-20

1. Eligibility for award of B. Tech. Degree (LES)

The LES students after securing admission shall pursue a course of study for not less than three academic years and not more than six academic years.

2. The student shall register for 123 credits and secure 123 credits with CGPA ≥ 5 from II year to IV year B.Tech. programme (LES) for the award of B.Tech. degree.
3. The students, who fail to fulfil the requirement for the award of the degree in six academic years from the year of admission, shall forfeit their seat in B.Tech.
4. The attendance requirements of B. Tech. (Regular) shall be applicable to B.Tech. (LES).

5. Promotion rule

S. No	Promotion	Conditions to be fulfilled
1	Second year first semester to second year second semester	Regular course of study of second year first semester.
2	Second year second semester to third year first semester	(i) Regular course of study of second year second semester. (ii) Must have secured at least 25 credits out of 42 credits i.e., 60% credits up to second year second semester from all the relevant regular and supplementary examinations, whether the student takes those examinations or not.
3	Third year first semester to third year second semester	Regular course of study of third year first semester.
4	Third year second semester to fourth year first semester	(i) Regular course of study of third year second semester.

		(ii) Must have secured at least 51 credits out of 86 credits i.e., 60% credits up to third year second semester from all the relevant regular and supplementary examinations, whether the student takes those examinations or not.
5	Fourth year first semester to fourth year second semester	Regular course of study of fourth year first semester.

6. All the other regulations as applicable to B. Tech. 4-year degree course (Regular) will hold good for B. Tech. (Lateral Entry Scheme).

MALPRACTICES RULES

DISCIPLINARY ACTION FOR / IMPROPER CONDUCT IN EXAMINATIONS

	Nature of Malpractices/Improper conduct	Punishment
	If the student:	
1. (a)	Possesses or keeps accessible in examination hall, any paper, note book, programmable calculators, cell phones, pager, palm computers or any other form of material concerned with or related to the subject of the examination (theory or practical) in which student is appearing but has not made use of (material shall include any marks on the body of the student which can be used as an aid in the subject of the examination)	Expulsion from the examination hall and cancellation of the performance in that subject only.
(b)	Gives assistance or guidance or receives it from any other student orally or by any other body language methods or communicates through cell phones with any student or persons in or outside the exam hall in respect of any matter.	Expulsion from the examination hall and cancellation of the performance in that subject only of all the students involved. In case of an outsider, he will be handed over to the police and a case is registered against him.
2.	Has copied in the examination hall from any paper, book, programmable calculators, palm computers or any other form of material relevant to the subject of the examination (theory or	Expulsion from the examination hall and cancellation of the performance in that subject and all other subjects the student has already appeared including practical examinations and project work and shall not be permitted to

	practical) in which the student is appearing.	appear for the remaining examinations of the subjects of that semester/year. The hall ticket of the student is to be cancelled and sent to the University.
3.	Impersonates any other student in connection with the examination.	The student who has impersonated shall be expelled from examination hall. The student is also debarred and forfeits the seat. The performance of the original student who has been impersonated, shall be cancelled in all the subjects of the examination (including practicals and project work) already appeared and shall not be allowed to appear for examinations of the remaining subjects of that semester/year. The student is also debarred for two consecutive semesters from class work and all University examinations. The continuation of the course by the student is subject to the academic regulations in connection with forfeiture of seat. If the imposter is an outsider, he will be handed over to the police and a case is registered against him.
4.	Smuggles in the answer book or additional sheet or takes out or arranges to send out the question paper during the examination or answer book or additional sheet, during or after the examination.	Expulsion from the examination hall and cancellation of performance in that subject and all the other subjects the student has already appeared including practical examinations and project work and shall not be permitted for the remaining examinations of the subjects of that semester/year. The student is also debarred for two consecutive semesters from class work and all University examinations. The continuation of the course by the student is subject to the academic regulations in connection with forfeiture of seat.
5.	Uses objectionable, abusive or offensive language in the answer paper or in letters to the examiners or writes to the examiner requesting him to award pass marks.	Cancellation of the performance in that subject.
6.	Refuses to obey the orders of the chief superintendent/assistant – superintendent / any officer on duty or	In case of students of the college, they shall be expelled from examination halls and cancellation of their performance in that

	<p>misbehaves or creates disturbance of any kind in and around the examination hall or organizes a walk out or instigates others to walk out, or threatens the officer-in charge or any person on duty in or outside the examination hall of any injury to his person or to any of his relations whether by words, either spoken or written or by signs or by visible representation, assaults the officer-in-charge, or any person on duty in or outside the examination hall or any of his relations, or indulges in any other act of misconduct or mischief which result in damage to or destruction of property in the examination hall or any part of the college campus or engages in any other act which in the opinion of the officer on duty amounts to use of unfair means or misconduct or has the tendency to disrupt the orderly conduct of the examination.</p>	<p>subject and all other subjects the student(s) has (have) already appeared and shall not be permitted to appear for the remaining examinations of the subjects of that semester/year. The students also are debarred and forfeit their seats. In case of outsiders, they will be handed over to the police and a police case is registered against them.</p>
7.	<p>Leaves the exam hall taking away answer script or intentionally tears off the script or any part thereof inside or outside the examination hall.</p>	<p>Expulsion from the examination hall and cancellation of performance in that subject and all the other subjects the student has already appeared including practical examinations and project work and shall not be permitted for the remaining examinations of the subjects of that semester/year. The student is also debarred for two consecutive semesters from class work and all University examinations. The continuation of the course by the student is subject to the academic regulations in connection with forfeiture of seat.</p>
8.	<p>Possesses any lethal weapon or firearm in the examination hall.</p>	<p>Expulsion from the examination hall and cancellation of the performance in that subject and all other subjects the student has already appeared including practical examinations and project work and shall not be permitted for the remaining examinations of the subjects of that semester/year. The student is also debarred and forfeits the seat.</p>

9.	If student of the college, who is not a student for the particular examination or any person not connected with the college indulges in any malpractice or improper conduct mentioned in clause 6 to 8.	Expulsion from the examination hall and cancellation of the performance in that subject and all other subjects the student has already appeared including practical examinations and project work and shall not be permitted for the remaining examinations of the subjects of that semester/year. The student is also debarred and forfeits the seat. Person(s) who do not belong to the college will be handed over to the police and, a police case will be registered against them.
10.	Comes in a drunken condition to the examination hall.	Expulsion from the examination hall and cancellation of the performance in that subject and all other subjects the student has already appeared for including practical examinations and project work and shall not be permitted for the remaining examinations of the subjects of that semester/year.
11.	Copying detected on the basis of internal evidence, such as, during valuation or during special scrutiny.	Cancellation of the performance in that subject and all other subjects the student has appeared for including practical examinations and project work of that semester/year examinations.
12.	If any malpractice is detected which is not covered in the above clauses 1 to 11 shall be reported to the University for further action to award a suitable punishment.	

Malpractices identified by squad or special invigilators

1. Punishments to the students as per the above guidelines.
2. Punishment for institutions : (if the squad reports that the college is also involved in encouraging malpractices)
 - a. A show cause notice shall be issued to the college.
 - b. Impose a suitable fine on the college.
 - c. Shifting the examination centre from one college to another college for a specific period of not less than one year.

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BALAJI INSTITUTE OF TECHNOLOGY & SCIENCE

Laknepally, Mdl. Narsampet, Dist. Warangal Rural - 506 331.

Accredited by NBA, NAAC & ISO 9001:2015 Certified Institution

(Affiliated to JNTUH, Hyderabad and approved by the AICTE, New Delhi)

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II BTECH.I Sem. (R18) II-Mid Examination Nov. 2019

PROBABILITY THEORY AND STOCHASTIC PROCESS (Only for ECE)

Date: 21.11.2019 - FN

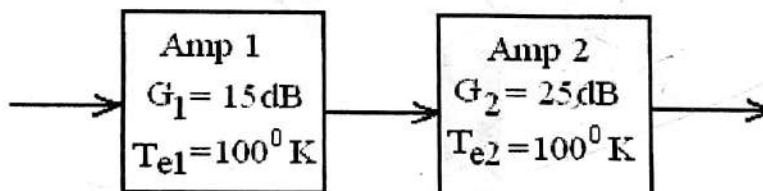
Time: 1 hour.

H.T.No.:

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Note: Answer Any TWO Questions. Each Question Carries 5 marks.

- a) Define the auto correlation function and explain its properties
b) a random process is defined as $X(t) = A \cos(\omega t + \theta)$ where A , ω are constants and θ is uniformly distributed random variable over $(0, \pi/2)$, check whether $X(t)$ is wide sense stationary or not.
- a) Define the cross correlation function and explain its properties
b) A Random Process $X(t) = A \cos(\omega t + \theta)$ where A , ω are constants and θ is a random variable uniformly distributed in the interval $(-\pi, \pi)$. calculate the time mean and time autocorrelation of the random process
- a) Define power spectral density of random process and obtain an expression for it.
b) The auto correlation function of Random Process $X(t)$ is $R_{xx}(\tau) = A_0^2 \cos(\omega_0 \tau)$, where A_0 , ω_0 are constants. Find power spectral density $S_{xx}(\omega)$
- a) Using Shanon-Fano algorithm find the code words for six messages occurring with probabilities $1/3, 1/3, 1/6, 1/12, 1/24$ and $1/24$. Obtain efficiency
b) Find the overall noise figure and equivalent input noise temperature of the circuit shown in figure.



Take room temperature = 27^0 C

*** ALL THE BEST***


Principal

Balaji Institute of Technology & Science
Laknepally (V), Narsampet (M)
Warangal (Dt) - 506 331 (T.S)

Set No. 4

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
III B.Tech I Sem., II Mid-Term Examinations, November – 2019
ELECTROMAGNETIC THEORY AND TRANSMISSION LINES

Objective Exam

Name: _____

Hall Ticket No. _____

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Answer All Questions. All Questions Carry Equal Marks. Time: 20 Min. Marks: 10.

I. Choose the correct alternative:

1. Characteristic impedance of open wire system is []
a) $276 \log\left(\frac{d}{r}\right)$ b) $276 \log\left(\frac{d}{2r}\right)$ c) $276 \log\left(\frac{2r}{d}\right)$ d) 0
2. the velocity at which the envelope of the complex wave propagates along the line is called []
a) Group velocity b) Phase velocity c) complex velocity d) guide velocity
3. the phenomenon of setting up a reflected wave at the load due to improper termination or due to impedance irregularity in the load is called []
a) refraction b) diffraction c) reflection d) None
4. the magnitude of the voltage when the incident and reflected voltages are in phase is []
a) Minimum b) Maximum c) 0 d) None
5. In the case reflection by a perfect conductor with normal incidence, the value of the electric field strength of quarter wavelengths from the surface is []
a) Minimum b) Maximum c) Zero d) None
6. Parallel polarization is also known as []
a) Horizontal polarization b) Vertical polarization
c) Both (a) and (b) d) None
7. stub matching used for fixed frequency is []
a) single stub b) double stub c) both a and b d) None
8. for a lossless line the characteristic impedance $Z_0 = 50$ ohms and load impedance $Z_R = 60 + j 75 \Omega$. the normalised load admittance is []
a) $1.2 - j 1.5$ b) $0.32 - j0.4$ c) $12 - j15$ d) $0.016 - j0.013$
9. Various frequency components of a signal undergoing different attenuation is called []
a) frequency distortion b) Delay distortion
c) Both a and b d) None
10. transmission line will neither Delay distortion nor frequency distortion if only []
a) α is independent of ω b) β is constant multiplied by ω
c) both a and b d) None

II. FILL IN THE BLANKS

11. in the transmission line inserting the inductance in series with the line(to increase inductance) is termed as _____
12. the type of loading employing sections of continuously loaded cable separated by sections of unloaded cable are _____
13. On the smith chart, one full rotation on the smith chart gives a distance of _____ wave lengths
14. for a given transmission line the relation between Z_{SC} , Z_{OC} and Z_0 is _____
15. The electric field vector parallel to the boundary surface or perpendicular to the plane of incidence is called _____
16. In the case of reflected by a perfect dielectric, normal incidence, the ratio of the reflected electric field to the incident electric field is given by _____
17. for a lossless line the characteristic impedance is 100 ohms and VSWR is 20. Then the minimum impedance on the line is _____
18. the standing wave ratio of transmission line is _____
19. the condition for a lossless transmission line is _____
20. the secondary constants are _____

-oOo-

H.T.No.:

1	9	C	3	1	A	0	3	0	5
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No. Addl. Used

0

08

10

Course : B.Tech/MBA/M.Tech. Year: I/II/III/IV Sem: I/II

Name of the Student: D. Saikumar

Date: 18/12/19

Name of the Subject: MATHEMATICS - I

Sign. of Invigilator

Sign. of Examiner

Q.No.	I			II			III			IV			V			VI			Total
	a	b	c	a	b	c	a	b	c	a	b	c	a	b	c	a	b	c	
Marks Secured	2			4			2			4									08

INTERNAL EXAM: I/II/III

Start writing from here

1. Given: $\sum \frac{1}{n^n}$

$u_n = \sum \frac{1}{n^n} = \frac{1}{n}$

$\lim_{n \rightarrow \infty} \frac{1}{n} \Rightarrow \frac{1}{\infty} = 0 < 1$

Let u_n
 $n \rightarrow \infty$

By Cauchy's root test $\sum u_n$ is convergent.

3. Given $-ay^2 = x(x-3)^2$

$x = t^2$ $y = t - \frac{t^3}{3}$

Satisfies the given equation \rightarrow

How?

differentiating with respect to t

$\frac{dx}{dt} = 2t$

$\frac{dy}{dt} = 1 - t^2$

Put $y=0$; $2 \cdot t = 0$

$0 \cdot t = \sqrt{3}$

Surface Area of the solid generated by

revolving the loop of the curve is $-ay^2 = x(x-3)^2$

$$\Rightarrow 2\pi \int_0^{\sqrt{3}} y \cdot \sqrt{\left(\frac{dx}{dt}\right)^2 + \left(\frac{dy}{dt}\right)^2} dt$$

$$\Rightarrow 2\pi \int_0^{\sqrt{3}} t - \frac{t^3}{3} \sqrt{(2t)^2 + (1-t^2)^2} dt$$

$$\Rightarrow 2\pi \int_0^{\sqrt{3}} t - \frac{t^3}{3} \sqrt{4t^2 + (1-t^2)^2} dt$$

$$\Rightarrow 2\pi \int_0^{\sqrt{3}} t - \frac{t^3}{3} - \frac{t^5}{3} dt$$

$$\Rightarrow 2\pi \int_0^{\sqrt{3}} t + \frac{2t^3}{3} - \frac{t^5}{3} dt$$

$$\Rightarrow 2\pi \left(\frac{t^2}{2} + \frac{2t^4}{12} + \frac{t^6}{18} \right) \Big|_0^{\sqrt{3}}$$

$$\Rightarrow 2\pi \left(\frac{t}{2} \right)^3$$

$$\Rightarrow 3\pi$$

4. $\beta(m, n) = \beta(m+1, n) + \beta(m, n+1)$

RHS.

$$\beta(m+1, n) + \beta(m, n+1) =$$

$$= \int_0^1 x^{m+1} (1-x)^n dx + \int_0^1 x^m (1-x)^{n+1} dx$$

$$= \int_0^1 x^{m+1} (1-x)^n \cdot (1 + (1-x)) dx$$

$$= \int_0^1 x^{m+1} (1-x)^n dx$$

$$\beta(m, n) = \int_0^1 x^{m+1} (1-x)^n dx$$

$$\beta(m, n) = \beta(m+1, n) + \beta(m, n+1)$$

\therefore Hence proved.

$$\beta(4,5) = \frac{\Gamma_m \Gamma_n}{\Gamma_{m+n}} \Rightarrow \frac{\Gamma_4 \Gamma_5}{\Gamma_{4+5}} \Rightarrow \frac{\sqrt{4} \sqrt{5}}{\sqrt{9}}$$

$$\Rightarrow \frac{\sqrt{3} \sqrt{4}}{\sqrt{8}}$$

$$\Rightarrow \frac{\cancel{6} \times \cancel{2} \times 4}{\cancel{3} \times \cancel{2} \times \cancel{1} \times \cancel{4} \times \cancel{3} \times \cancel{2} \times 1} \times \frac{1}{8 \times 7 \times \cancel{6} \times 5 \times \cancel{4} \times \cancel{3} \times \cancel{2} \times 1}$$

$$\Rightarrow \frac{1}{280}$$

$$\frac{4}{35} \times \frac{1}{8} = \frac{1}{280}$$

Given function

$$x^4 + y^4 - 2x^2 + 4xy - 2y^2$$

$$\frac{\partial f}{\partial x} = 4x^3 - 4x + 4y \quad (1)$$

$$\frac{\partial f}{\partial y} = 4y^3 + 4x - 4y \quad (2)$$

Solve (1) & (2)

$$\begin{array}{r} 4x^3 - 4x + 4y \\ 4y^3 + 4x - 4y \\ \hline 4x^3 + 4y^3 = 0 \end{array}$$

$$4(x^3 + y^3) = 0$$

$$x^3 = -y^3$$

$$\boxed{x = -y} \quad \text{Sub in (1)}$$

$$4(-y)^3 - 4(-y) + 4y$$

$$-4y^3 + 4y + 4y$$

$$-4y^3 + 8y = 0$$

$$4y(-y^2 + 2) = 0$$

$$y = 0 \quad , \quad y = \pm\sqrt{2}$$

$$(x, y) = (0, 0)$$

$$(x, y) = (+\sqrt{2}, -\sqrt{2})$$

$$(x, y) = (-\sqrt{2}, +\sqrt{2})$$

$$l = \frac{\partial f}{\partial x^2} \Rightarrow \frac{\partial}{\partial x} \left(\frac{\partial f}{\partial x} \right) \Rightarrow \frac{\partial}{\partial x} (4x^3 - 4x + 4y) \\ \Rightarrow 6x^2 - 4$$

$$m = \frac{\partial f}{\partial y^2} \Rightarrow \frac{\partial}{\partial y} \left(\frac{\partial f}{\partial y} \right) \Rightarrow \frac{\partial}{\partial y} (4y^3 + 4x - 4y) \\ \Rightarrow 6y^2 - 4$$

$$\frac{\partial f}{\partial x \partial y} \Rightarrow \frac{\partial}{\partial x} \left(\frac{\partial f}{\partial y} \right) \Rightarrow \frac{\partial}{\partial x} (3y^3 + 4x - 4y) \\ \Rightarrow 4 = m$$

when $(x, y) = (0, 0)$

$$ln - m^2 \Rightarrow (6x - 4)^2 - 16 > 0 \quad \neq < 0$$

maximum value is 4

when $(x, y) = (\sqrt{2}, -\sqrt{2})$

$$ln - m^2 \Rightarrow (6x - 4)^2 - 16 \quad \underline{l} > 0 \quad l = (6x - 4)^2$$

maximum value is 4

when $(+\sqrt{2}, +\sqrt{2}) =$

$$ln - m^2 \Rightarrow (6x - 4)^2 - 16$$

It has extreme values.

4 -

Name: B. Manisai Reddy

Hall Ticket No.

1 9 C 3 1 A 0 3 0 4

Answer All Questions. All Questions Carry Equal Marks. Time: 20 Min. Marks: 10.

I. Choose the correct alternative:

1. $f(x, y) = x^2 + xyz + z$ Find $\frac{\partial f}{\partial x}$ at (1,1,1) [c]
 a) 0 b) 1 c) 3 d) -1
2. In euler theorem $x \frac{\partial z}{\partial x} + y \frac{\partial z}{\partial y} = nz$, here 'n' indicates [b]
 a) order of z b) degree of z c) neither order nor degree d) constant of z
3. The degree of the Homogeneous function $Z = \frac{(x^2 + y^2)}{(x+y)}$ [c]
 a) 0 b) 1 c) 2 d) 3
4. If $x = r \cos \theta, y = r \sin \theta$ then $\frac{\partial x}{\partial r} =$ and $\frac{\partial y}{\partial \theta} =$ [a]
 a) $\cos \theta, r \cos \theta$ b) $\cos \theta, \sin \theta$ c) $\cos \theta, \sec \theta$ d) none
5. Lagrange's mean value theorem is verified for the function $f(x) = 2x^2 - 7x + 10$ in [2,5] is [d]
 a) 5/2 b) 1/2 c) 0 d) 7/2
6. The value of $\Gamma\left(\frac{1}{2}\right) =$ [c]
 a) 1 b) 0 c) $\sqrt{\pi}$ d) ∞
7. Is Rolle's theorem applicable to the function $f(x) = x^2$ in [1,2] [b]
 a) yes b) not applicable due to $f(1) \neq f(2)$
 c) both d) neither a nor b
8. $\Gamma(n)$ is defined when n is [a]
 a) > 0 b) < 0 c) $= 0$ d) ≤ 0
9. $\sum \frac{1}{(\log n)^n}$ is [a]
 a) Divergent b) Convergent c) Oscillating d) None
10. The series $\sum \frac{1}{n \log n}$ and the series $\sum \frac{1}{n^2}$ is [b]
 a) Both converges b) both diverges
 c) the first converges and the second diverges
 d) the first diverges and the second converges

II. FILL IN THE BLANKS

11. If $u = x^3 + y^3 - 3axy$ then $\frac{\partial^2 u}{\partial x \partial y} =$ -3a
12. $\frac{\partial(u,v)}{\partial(u,v)} =$ 1
13. If $u = x+y$ and $v = xy$ then $\frac{\partial(u,v)}{\partial(x,y)} =$ y-x
14. If $U = \frac{\partial(u,v)}{\partial(x,y)}$ then $\frac{\partial(x,y)}{\partial(u,v)} =$ $\frac{1}{U}$
15. The value of c of the Rolle's theorem for the function $f(x) = \frac{x^3}{3} - 3x$ in the interval [0,3] is $\sqrt{3}$
16. The value of c of the Lagrange's mean value theorem for the function $f(x) = x^2 - 3x + 2$ in [-2,3] is $\frac{5}{2}$
17. The value of c of the Cauchy's mean value theorem for the function $f(x) = \sqrt{x}$, $g(x) = \frac{1}{\sqrt{x}}$ in [a,b] is $\frac{1}{\sqrt{ab}}$
18. The maclaurin's series expansion of $f(x) = \cos x$ is $1 - \frac{x^2}{2!} + \frac{x^4}{4!} - \dots$
19. Limit of a sequence if it exists is convergence
20. The series $\sum (\sqrt{n+1} - \sqrt{n})$ is convergence

Sl. No.	Roll No.	NAME
1	16C31 80482	K. Akhila
2	485	K. Haribharan
3	486	L. Manasa Kalyani
4	488	M. Vamsi
5	489	Mohamad Seema
6	490	M. Venela
7	494	Mohammed Rehana
8	495	Mohammed Rubena Koush
9	496	Mohammed Yasmeen
10	497	M. Pranetha
11	498	Mufsira
12	492	M. Harini
13	493	N. Srikanth
14	494	N. Ramya
15	496	N. Swarna
16	498	N. Sushmitha
17	499	N. prashanth
18	480	P. Rajesh
19	481	P. Kavya
20	482	P. Vijay
21	484	P. Saichandira
22	485	P. Sanjana Reddy
23	486	P. Srilekha
24	488	P. Krishna
25	400	R. Divya
26	401	R. Ravali
27	403	R. Jaya Sree
28	406	Sarameen
29	407	S. praveen
30	409	S. Harichandana
31	401	Sony
32	402	Sriram Supriya
33	404	S. Sandya
34	405	S. Niharika

Logics Performance

Experiment No.	1		2		3	
	Lab Work	Record	Lab Work	Record	Lab Work	Record
482	10	05	09	05	10	05
485	09	04	09	04	09	04
486	10	04	10	05	10	05
488	09	05	10	05	10	05
489	09	04	09	05	09	05
490	09	04	09	04	09	04
494	09	04	10	05	10	05
495	10	05	10	05	10	05
496	09	04	10	05	10	05
497	10	05	10	05	10	05
498	09	05	09	04	09	05
492	09	04	09	05	09	04
493	08	04	08	04	08	04
494	10	05	10	05	09	05
496	09	05	10	04	10	05
498	10	05	10	05	10	05
499	09	05	10	05	10	05
480	09	05	09	05	09	05
481	09	04	09	04	09	04
482	09	04	10	05	10	04
484	09	04	10	05	10	05
485	10	05	10	05	10	05
486	10	05	10	05	10	05
488	08	04	08	04	08	04
400	09	05	10	05	10	05
401	10	05	10	05	10	05
403	10	05	10	05	10	05
406	09	05	10	05	10	05
407	09	05	09	05	09	05
409	10	05	10	05	10	05
401	0	0	0	0	0	0
402	08	04	08	04	09	04
404	08	04	09	05	09	05
405	10	05	09	05	09	04

multiple

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Lab Work

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Lab Work

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Evaluation Sheet

(Academic Year 2019-20)

Subject: Academic Seminar

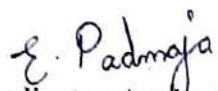
Class: IV ECE I-SEM (SEC-B)


Name of Review Committee Member:

S.No	H.T.No.	Name of Student	Topic Selection(10)	PPT (20)	Presenta tion Skills (20)	Content Delivery (20)	Queries (10)	Seminar Report (20)	Total (100)
1	16C31A0482	KOPPULA AKHILA	80 5	20	20	20	5	10	80
2	16C31A0485	KUNTA HARIHARAN	70 10	10	20	10	5	15	70
3	16C31A0486	LINGALA MANASA KALYANI	90 10	20	20	20	5	15	90
4	16C31A0488	MADISHETTY VAMSHI	80 5	20	20	20	5	10	80
5	16C31A0489	MAHMAD SEEMA	50 10	15	10	10	10	10	65
6	16C31A0490	MEKALA VENNELA	70 10	20	10	10	5	15	70
7	16C31A0494	MOHAMMAD REHANA	75 10	20	20	10	5	10	75
8	16C31A0495	MOHAMMAD RUHEENA KOUSAR	10	20	15	15	10	15	85
9	16C31A0496	MOHAMMAD YASMEEN	10	20	20	20	10	15	95
10	16C31A0497	MOTHE PRANEETHA	10	15	15	20	5	20	85
11	16C31A0498	MUFSIRA	8	20	15	10	5	10	68
12	16C31A04A2	MUSKULA HARINI	5	20	20	10	5	15	75
13	16C31A04A3	NAGULA SRIKANTH	10	20	10	10	8	10	68
14	16C31A04A4	NALLA RAMYA	10	20	10	10	8	10	68
15	16C31A04A6	NALLURI SWARNA	10	15	15	15	5	15	75
16	16C31A04A8	NUNE SUSHMITHA	10	20	20	10	7	15	82
17	16C31A04A9	NUNELA PRASHANTH	8	20	10	10	5	15	68
18	16C31A04B0	PADIDALA RAJESH	10	15	14	10	5	15	69
19	16C31A04B1	PEEDDAMMALA KAVYA	8	20	20	5	5	10	68
20	16C31A04B2	PENDELA VIJAY	10	10	20	20	5	15	80
21	16C31A04B4	PINGALI SAI CHANDRA	10	15	20	20	5	15	85
22	16C31A04B5	PINNINTI SANJANA REDDY	5	20	11	10	5	10	61
23	16C31A04B6	POLATI SRILEKHA	10	20	07	20	5	10	72
24	16C31A04B8	PULI KRISHNA	10	15	15	10	5	10	65
25	16C31A04C0	RAJARAPU DIVYA	10	18	15	15	5	15	78
26	16C31A04C1	RAMPELLI RAVALI	10	17	15	10	5	15	72
27	16C31A04C3	ROTTE JAYA SREE	10	20	15	20	10	10	85
28	16C31A04C6	SAMREEN	10	20	17	10	5	10	72
29	16C31A04C7	SAMUDRALA PRAVEEN	10	15	15	20	5	20	85
30	16C31A04C9	SANGINENI HARICHANDANA	10	20	20	15	5	20	90
31	16C31A04D2	SRIRAM SUPRIYA	10	15	15	10	5	10	65
32	16C31A04D4	SURA SANDYA	10	20	20	20	5	20	95
33	16C31A04D5	SURASI NIHARIKA	10	20	20	20	5	20	95
34	16C31A04D6	THAHA SAMREEN	5	20	20	20	5	10	80
35	16C31A04D7	THALLAPPELLY SAIKUMAR	10	20	20	15	5	20	90
36	16C31A04E0	VADDI SRUJANA	10	20	12	10	5	20	77


Principal

S.No	H.T.No.	Name of Student	Topic Selection(10)	PPT (20)	Presentation Skills (20)	Content Delivery (20)	Queries (10)	Seminar Report (20)	Total (100)
37	16C31A04E1	VALLAGI LAXMI PRASANNA	10	10	20	10	5	20	75
38	16C31A04E3	VALISA SWAPNA RANI	10	20	20	20	5	20	95
39	16C31A04E9	VUPPULA HARITHA	10	20	15	11	6	20	81
40	16C31A04F0	YATA SOUJANYA	10	17	15	10	5	15	72
41	16C31A04F1	YELLANKI HARIKRISHNA	5	20	15	10	5	15	70
42	16C31A04F2	ARAVIND KUMAR	10	15	10	10	5	15	65
43	16C31A04F4	GURIJALA SATHWIK	10	15	15	15	5	10	71
44	17C35A0403	ANTHONY MARTINA JOSEPH	10	20	20	20	5	20	95
45	17C35A0404	ARIKALA MANOJ KUMAR	10	15	10	10	5	20	70
46	17C35A0405	BANDI SWATHI	10	20	20	20	5	15	90
47	17C35A0406	BONAGANI PRANATHI	10	20	20	15	5	20	90
48	17C35A0407	BURA SANDEEP	10	20	20	10	5	15	80
49	17C35A0409	CHEVA SHRUTHI	10	20	20	15	5	20	90
50	17C35A0410	CHILUVERU KAVYASRI	10	20	16	10	5	15	76
51	17C35A0412	GUMPULA HINDHUSHA	10	20	20	20	5	20	95
52	17C35A0413	JAKKULA HIMAVARSHA	10	20	20	20	5	20	95
53	17C35A0414	KATIPALLY SAIRAM	10	20	20	20	5	20	95
54	17C35A0416	MANDA HARITHA	10	20	20	10	5	15	80
55	17C35A0418	MOHAMMAD SAMI UDDIN	10	20	20	20	5	20	95
56	17C35A0421	NAKKA THANUJA	10	20	19	10	5	15	72
57	17C35A0422	NOMULA SONI	10	20	20	10	5	15	80
58	17C35A0423	PULICHERI VAMSHI	10	20	10	10	5	15	70
59	17C35A0424	PUTTA ANAGHALAKSHMI	10	20	20	15	5	20	90
60	17C35A0425	SABBANI SPANDANA	10	20	15	14	5	15	79
61	17C35A0426	SAMREEN AHMEDI KHATOON	10	20	12	10	5	15	72
62	17C35A0427	SINGIREDDY SRUTHI	10	20	15	10	5	20	80
63	17C35A0430	VEMULA SRUTHI	10	20	20	20	5	20	95


Coordinator, Academic Seminars
(Mrs.E.Padmaja)


Head, Dept. of ECE
Head of Department
Electronics and Communication Engineering
BITES, Lakirepally 506 331


Principal
Boloji Institute of Technology & Science
Lakirepally (V), Narsampet (M)
Warangal (Dt) - 506 331 (T.S)

DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

Technical Seminars

Presenter: Noureen Fadhima.

Evaluator: S. Sridhar, Dr. P. Arul Kumar

Seminar Date: 06-04-2018.

Major positive feature(s):

Suggested areas for improvement

Category	Common Elements	Marks	Comments
Audience Interaction	Eye contact, body language, humour, use of laser pointer/mouse	05/05	Good
Oration	Volume, tempo, transitions, general flow, intonation, enthusiasm	05/05	Good.
Introduction	Explicitly stated motivation, research context, hypothesis/goals	05/05	Moderate
Body	Explanation/figure clarity, all content explained, content supports motivation/hypothesis	08/10	Content Explains need to be Improved
Conclusion	Related to motivation, Take-home messages, limitations, future directions	05/05	Okay
Slide Design	Organization, consistency, amount of content/text, use of colour, legibility	05/05	Good.
Presentation Structure	Appropriate length, logical flow, organization, tells a "story"	10/10	Fine.
Answering Questions	Clarity, conciseness, style, effective verification of question asked	05/05	Good.
Total Marks		48	


Evaluator


Principal

Balaji Institute of Technology & Science
Laknepally (V), Narsampet (M)
Warangal (Dt) - 506 331 (T.S)


H.O.D.

Dept. of Electrical & Electronics Engineering
Balaji Institute of Technology & Science
Laknepally, Narsampet, Warangal

DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

Technical Seminars

Date : 05.04.2018

Guide Lines for Technical Seminar abstract submission :

1. The Students are required to give a Technical seminar which carries 50 Marks in the II Semester of IV Year.
2. Every student must choose a topic from any of the articles of IEEE or any other Technical Journals related to EEE Domain.
3. The topics must not be repeated or copied from earlier batches.
4. The abstract must contain maximum of two pages.
5. The Faculty Coordinator : **Mr. S. SRIDHAR**
6. The students are supposed to submit the abstract on or before **04-04-2018**.
7. Preference to the selection of topic will be given on First Come First Serve basis and student must verify the available list with coordinator before submitting the abstract.

Guidelines for Seminar Presentation :

1. Each Student should deliver the seminar for a maximum duration of 45 minutes where the presentation should be for 30 minutes in PowerPoint, followed by Q & A session for 15 minutes.
2. The Presentation should consist of a minimum of 15 slides and maximum of 20 slides.
3. Submit a final detailed report of the Seminar in spiral bounded (The spiral binding should be transparent cover) at the time of the seminar.
4. The detailed schedule of seminars will be displayed in the departmental notice boards and uploaded to the college website at the end of November, 2015.
5. Seminars will be held in the respective classrooms as per the time table.
6. The seminar is evaluated for 50 Marks and the evaluation criteria is as follows :

Content & organizing ppts	English Fluency	Body language and gestures	Answering questions	Report	Total
20 Marks	15 Marks	5 Marks	5 Marks	5 Marks	50 M

7. All the students are required to attend the seminars without fail as the attendance will be considered for monthly calculations as per the JNTU regulations.
8. For any queries and information contact the concerned coordinator.

COORDINATOR : MR. S. SRIDHAR

Principal

Balaji Institute of Technology & Science
Laknepally (V), Narsampet (M)
Warangal (Dt) - 506 331 (T.S)


H.O.D.

Dept. Electrical & Electronics Engineering
Balaji Institute of Technology & Science
Laknepally, Narsampet, Warangal



Balaji Institute of Technology & Science

Estd.: 2001

Laknepally, NARSAMPET, Warangal - 506331

(Affiliated to JNTUH, Hyderabad and Approved by the AICTE, New Delhi)

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Department of Electronics & Communication Engg.

Project Evaluation Sheet

B.Tech: Major Project Work

Project Title: *Fault tolerant Parallel Filters based
on error correction codes*

Date: *3/01/18*

Review: *01*

Students Details

S.NO	Roll No	Student Name	Guide Name
01	14C31A0464	T. Alisha	Dr. V. Sekharababu
02	14C31A0411	B. Pravalika	
03	13C31A0405	A. Rajesh	
04	15C31A0412	K. Ramesh	

Students Contribution and Performance

Evaluation Parameters	Marks (20)				
	Batch Members				
	1	2	3	4	5
Objectives(5)	5	5	4	5	-
Tools/Hardware Description(8)	7	8	7	7	-
Presentation(4)	4	4	4	4	-
Quires(3)	3	3	3	3	-
Total(20)	19	20	18	19	-
Comments	Presentation is good				

V. Karthik Kumar

Name & sign of Project review Committee Member:

Ka

V. S. S. S. S. S.
Principal

Balaji Institute of Technology & Science
Laknepally (V), Narsampet (M)
Warangal (Dt) - 506 331 (T.S)

[Signature]
Head, Dept. ECE
Head of the Department
Electronics and Comm. Engg
BITS, Laknepally-506 331.



Balaji Institute of Technology & Science

Estd.: 2001

Laknepally, NARSAMPET, Warangal - 506331

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Department of Electronics & Communication Engg.

Project Evaluation Sheet

B.Tech: Major Project Work


Project Title: Fault Tolerant parallel filters based on Error correction codes Date: 03/11/18


Review: 01

Students Details						
S.NO	Roll No	Student Name	Guide Name			
1	14C31A0464	T. Anusha	Dr. V. Sekharababu			
2	14C31A0411	B. pravabika.				
3	19C31A0405	A. Rajesh.				
4	15C3A0412	K. Ramesh.				
Students Contribution and Performance						
Evaluation Parameters		Marks (20)				
		Batch Members				
		1	2	3	4	5
Objectives(5)		5	4	5	4	/
Tools/Hardware Description(8)		7	7	7	7	
Presentation(4)		4	4	4	4	
Quires(3)		3	3	3	3	
Total(20)		19	18	19	18	
Comments		Better.				

Name & sign of Project review Committee Member:

Dr. N. Vilas


Principal
Balaji Institute of Technology & Science
Laknepally (V), Narsampet (M)
Warangal (Dt) - 506 331 (T.S)


Head, Dept. ECE
Head of the Department
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Department of Electronics & Communication Engg.

Project Evaluation Sheet

B.Tech: Major Project Work

Project Title: Bluetooth Based Led Scrolling
System


Date: 19-3-2018

Review: 02

Students Details						
S.NO	Roll No	Student Name	Guide Name			
1.	14C31A0415	Dasari Deepak	Mr. K. Radhakrishna			
2.	14C31A0409	Belide Saikumar				
3.	14C31A0422	Tangala Bhavitha				
4.	14C31A0401	Aakula Damodara				
-	-	-				
Students Contribution and Performance						
Evaluation Parameters		Marks (20)				
		Batch Members				
		1	2	3	4	5
Literature survey(6)		6	6	5	6	-
Highlights of project features(6)		6	6	6	6	-
Presentation(5)		5	5	5	4	-
Quires(3)		3	3	3	3	-
Total(20)		20	20	19	19	-
Comments		Explanation is Good				

Name & sign of Project review Committee Member:


Principal
Balaji Institute of Technology & Science
Laknepally (V), Narsampet (M)
Warangal (Dt) - 506 331 (T.S)


Head, Dept.ECE
Head of the Department
Electronics and Comm. Engg
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