2.2.1 SPECIAL PROGRAMS/INITIATIVES FOR ADVANCED AND SLOW LEARNERS

S.No	Description	Nature of Learner	Page No
1.	Flexibility in curriculum for fast track completion	Advanced(Refer page No:5)	3
2.	Flexibility in curriculum to drop courses	Slow(Refer page No: 7)	5
3.	GATE/Competitive Exam Coaching Program	Advanced	6-23
4.	Certification courses - NPTEL	Advanced	24-25
5.	Mentoring	Both Advanced and Slow	26-32
6.	Peer to Peer Learning	Slow	33-37
7.	Remedial classes	Slow	38-39
8.	Parent Interaction	Both Advanced and Slow	40-41
9.	Parent's Meeting	Both Advanced and Slow	42-45

Note: Sample proofs are attached. Full Documents are available at the institution for physical verification.

ANNA UNIVERSITY : : CHENNAI - 600 025

AFFILIATED INSTITUTIONS

REGULATIONS 2017

CHOICE BASED CREDIT SYSTEM

Common to all B.E. / B.Tech. Full-Time Programmes

(For the students admitted to B.E. / B.Tech. Programme at various Affiliated Institutions)

DEGREE OF BACHELOR OF ENGINEERING / BACHELOR OF TECHNOLOGY

This Regulations is applicable to the students admitted to B.E/B.Tech. Programmes at all Engineering Colleges affiliated to Anna University, Chennai (other than Autonomous Colleges) and to all the University Colleges of Engineering of Anna University, Chennai from the academic year 2017-2018 onwards.

1. PRELIMINARY DEFINITIONS AND NOMENCLATURE

In these Regulations, unless the context otherwise requires:

I) **"Programme"** means Degree Programme, that is B.E./B.Tech. Degree Programme.

II) **"Discipline"** means specialization or branch of B.E./B.Tech. Degree Programme, like Civil Engineering, Textile Technology, etc.

III) **"Course"** means a theory or practical subject that is normally studied in a semester, like Mathematics, Physics, etc.

IV) **"Director, Academic Courses"** means the authority of the University who is responsible for all academic activities of the Academic Programmes for implementation of relevant rules of this Regulations pertaining to the Academic Programmes.

V) **"Chairman"** means the Head of the Faculty.

VI) **"Head of the Institution"** means the Principal of the College.

VII) **"Head of the Department"** means head of the Department concerned.

VIII) **"Controller of Examinations"** means the authority of the University who is responsible for all activities of the University Examinations.

IX) **"University"** means ANNA UNIVERSITY, CHENNAI.

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4.5. Industrial Training / Internship

The students may undergo Industrial training for a period as specified in the Curriculum during summer / winter vacation. In this case the training has to be undergone continuously for the entire period.

The students may undergo Internship at Research organization / University (after due approval from the Department Consultative Committee) for the period prescribed in the curriculum during summer / winter vacation, in lieu of Industrial training.

4.6 Industrial Visit

Every student is required to go for at least one Industrial Visit every year starting from the second year of the Programme. The Heads of Departments shall ensure that necessary arrangements are made in this regard.

4.7 Value Added Courses

The Students may optionally undergo Value Added Courses and the credits earned through the Value Added Courses shall be over and above the total credit requirement prescribed in the curriculum for the award of the degree. One / Two credit courses shall be offered by a Department **of an institution with the prior approval from the Head of the Institution.** The details of the syllabus, time table and faculty may be sent to the Centre for Academic Courses and the Controller of Examinations after approval from the **Head of the Institution** concerned atleast one month before the course is offered. **Students can take a maximum of two one credit courses / one two credit course** during the entire duration of the Programme.

4.8 Online Courses

4.8.1 Students may be permitted to credit only one online course of 3 credits with the approval of **Head of the Institution** and Centre for Academic Courses.

4.8.2 Students may be permitted to credit one online course (which are provided with certificate) subject to a maximum of three credits. The approved list of online courses will be provided by the Centre for Academic courses from time to time. The student needs to obtain certification or credit to become eligible for writing the End Semester Examination to be conducted by Controller of Examinations, Anna University. The details regarding online courses taken up by students should be sent to the Controller of Examinations, Anna University and Centre for Academic Courses one month before the commencement of End Semester Examination.

4.9 The students satisfying the following conditions shall be permitted to carry out their final semester Project work for six months in industry/research organizations.

The student should not have current arrears and shall have CGPA of 7.50 and above.

The student shall undergo the eighth semester courses in the sixth and seventh semesters. The Head of Department, in consultation with the faculty handling the said courses shall forward the proposal recommended by the Head of Institution to the Controller of Examinations through the Director, Centre for Academic courses for approval at least 4 weeks before the commencement of the sixth semester of the programme for approval.

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TIRUCHENGODE-637 215,
NAMAKKAL Dt, TAMIL NADU.

4.10 Medium of Instruction

The medium of instruction is English for all courses, examinations, seminar presentations and project / thesis / dissertation reports except for the programmes offered in Tamil Medium.

5. DURATION OF THE PROGRAMME

5.1 A student is ordinarily expected to complete the B.E. / B.Tech. Programme in 8 semesters (four academic years) but in any case not more than 14 Semesters for HSC (or equivalent) candidates and not more than 12 semesters for Lateral Entry Candidates.

5.1.1 A student is ordinarily expected to complete the B.E. Mechanical Engineering (Sandwich) Programme in 10 semesters (five academic years) but in any case not more than 18 Semesters for HSC (or equivalent) candidates.

5.2 Each semester shall normally consist of 75 working days or 540 periods of 50 minutes each. The Head of the Institution shall ensure that every teacher imparts instruction as per the number of periods specified in the syllabus and that the teacher teaches the full content of the specified syllabus for the course being taught.

5.3 The Head of the Institution may conduct additional classes for improvement, special coaching, conduct of model test etc., over and above the specified periods. But for the purpose of calculation of attendance requirement for writing the end semester examinations (as per clause 6) by the students, following method shall be used.

$$\text{Percentage of Attendance} = \frac{\text{Total no. of periods attended in all the courses per semester}}{(\text{No. of periods / week as prescribed in the curriculum}) \times 15 \text{ taken together for all courses of the semester}} \times 100$$

The University Examination will ordinarily follow immediately after the last working day of the semester commencing from I semester as per the academic schedule prescribed from time to time.

5.4 The total period for completion of the programme reckoned from the commencement of the first semester to which the candidate was admitted shall not exceed the maximum period specified in clause 5.1 irrespective of the period of break of study (vide clause 18) in order that he/she may be eligible for the award of the degree (vide clause 16).

6. COURSE REGISTRATION

6.1 The Institution is responsible for registering the courses that each student is proposing to undergo in the ensuing semester. Each student has to register for all courses to be undergone in the curriculum of a particular semester (with the facility to drop courses to a maximum of 6 credits (vide clause 6.5). The student can also register for courses for which the student has failed in the earlier semesters. In such cases the student shall do **reappearance registration** for those courses for which the attendance requirement is not compulsory. However, the student have the option to take up some other professional elective or open elective that he has failed to pass. **But, the total number of credits that a student is allowed to register per semester cannot exceed 36.** The registration details of the candidates may be approved by the Head of the Institution and forwarded to the Controller of Examinations. This registration is for undergoing the course as well as for writing the End Semester Examinations. No course shall be offered by any department of any institution unless a minimum 10 students register for the course.

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The courses that a student registers in a particular semester may include

  i.   Courses of the current semester.
  ii. The core (Theory/Lab /EEC) courses that the student has not cleared in the previous semesters.
  iii. Elective courses which the student failed (either the same elective or a different elective instead)

6.2 Flexibility to Drop courses

6.2.1 A student has to earn the total number of credits specified in the curriculum of the respective Programme of study in order to be eligible to obtain the degree.

6.2.2 From the III to final semesters, the student has the option of dropping existing courses in a semester during registration. Total number of credits of such courses cannot exceed 6.

6.2.3 The student shall register for the project work in the final semester only.

7. ATTENDANCE REQUIREMENTS FOR COMPLETION OF THE SEMESTER

7.1 A Candidate who has fulfilled the following conditions shall be deemed to have satisfied the requirements for completion of a semester.

Ideally every student is expected to attend all classes of all the courses and secure 100% attendance. However, in order to give provision for certain unavoidable reasons such as Medical / participation in sports, the student is expected to attend atleast 75% of the classes.

Therefore, he/she shall **secure not less than 75%** (after rounding off to the nearest integer) of overall attendance as calculated as per clause 5.3.

7.2 However, a candidate who secures overall attendance between 65% and 74% in the current semester due to medical reasons (prolonged hospitalization / accident / specific illness) / Participation in Sports events may be permitted to appear for the current semester examinations subject to the condition that the candidate shall submit the medical certificate / sports participation certificate attested by the Head of the Institution. The same shall be forwarded to the Controller of Examinations for record purposes.

7.3 Candidates who **secure less than 65% overall attendance and candidates who do not satisfy the clause 7.1 and 7.2** shall not be permitted to write the University examination at the end of the semester and not permitted to move to the next semester. They are required to repeat the incomplete semester in the next academic year, as per the norms prescribed.

8. CLASS ADVISOR

There shall be a class advisor for each class. The class advisor will be one among the (course-instructors) of the class. He / She will be appointed by the HoD of the department concerned. The class advisor is the ex-officio member and the Convener of the class committee. The responsibilities for the class advisor shall be:

- To act as the channel of communication between the HoD and the students of the respective class.
- To collect and maintain various statistical details of students.
- To help the chairperson of the class committee in planning and conduct of the class committee meetings.
- To monitor the academic performance of the students including attendance and to inform the class committee.
- To attend to the students' welfare activities like awards, medals, scholarships and industrial visits.

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K S R INSTITUTE FOR ENGINEERING AND TECHNOLOGY, TIRUCHENGODE-637215

Department of Electronics and Communication Engineering

Career Counseling Centre & Higher Education Cell

DATE: 03.02.2023

CIRCULAR

This is to inform that Higher Education Cell of Department of ECE has planned to conduct **"GATE/ Competitive Exam Coaching Program"** from 06.02.2023 to 06.04.2023 on **"Signals & Systems and DSP"**. This program is specially organized for advanced learners in aim for higher studies. Further, the interested students are also asked to give their names to **Ms.V.Sindhuja AP/ECE** and get benefited.

Venue: M 315

Time: 4.30 pm to 6.30 pm

Coordinator   HEC Coordinator   HoD

K S R INSTITUTE FOR ENGINEERING AND TECHNOLOGY, TIRUCHENGODE-637215

Department of Electronics and Communication Engineering

Higher Education Cell

Schedule for GATE/ Competitive Exam Coaching Program on "Signals & Systems and DSP"

Name of the Trainers: 1. Ms. B.Latha AP/ECE
2. Mr.M.Udhaya Kumar AP/ECE
3. Mrs.V.Sindhuja AP/ECE

S.No	Date	Time	No. of Hours	Topic
1	06.02.2023	4.30 PM to 6.30 PM	2 Hrs	Fourier series
2	07.02.2023	4.30 PM to 6.30 PM	2 Hrs	Fourier transform representations
3	08.02.2023	4.30 PM to 6.30 PM	2 Hrs	Fourier transform representations
4	09.02.2023	4.30 PM to 6.30 PM	2 Hrs	Sampling Theorem
5	10.02.2023	4.30 PM to 6.30 PM	2 Hrs	Continuous-time signals Applications
6	15.02.2023	4.30 PM to 6.30 PM	2 Hrs	Discrete-time Fourier transform
7	16.02.2023	4.30 PM to 6.30 PM	2 Hrs	Discrete-time Fourier transform
8	20.02.2023	4.30 PM to 6.30 PM	2 Hrs	DFT
9	21.02.2023	4.30 PM to 6.30 PM	2 Hrs	DFT
10	22.02.2023	4.30 PM to 6.30 PM	2 Hrs	FFT
11	23.02.2023	4.30 PM to 6.30 PM	2 Hrs	FFT
12	24.02.2023	4.30 PM to 6.30 PM	3 Hrs	Z-transform
13	27.02.2023	4.30 PM to 6.30 PM	2 Hrs	Z-transform
14	28.02.2023	4.30 PM to 6.30 PM	2 Hrs	Interpolation of discrete-time signals
15	14.03.2023	4.30 PM to 6.30 PM	2 Hrs	LTI systems & its Properties
16	15.03.2023	4.30 PM to 6.30 PM	2 Hrs	Causality
17	16.03.2023	4.30 PM to 6.30 PM	2 Hrs	Stability
18	17.03.2023	4.30 PM to 6.30 PM	2 Hrs	Impulse response
19	20.03.2023	4.30 PM to 6.30 PM	2 Hrs	Impulse response
20	23.03.2023	4.30 PM to 6.30 PM	2 Hrs	Convolution
21	24.03.2023	4.30 PM to 6.30 PM	2 Hrs	Poles and zeros
22	27.03.2023	4.30 PM to 6.30 PM	2 Hrs	Parallel structure
23	28.03.2023	4.30 PM to 6.30 PM	2 Hrs	Cascade structure
24	29.03.2023	4.30 PM to 6.30 PM	2 Hrs	Frequency response
25	30.03.2023	4.30 PM to 6.30 PM	2 Hrs	Frequency response
26	31.03.2023	4.30 PM to 6.30 PM	2 Hrs	Group delay
27	01.04.2023	4.30 PM to 6.30 PM	2 Hrs	Phase delay
28	03.04.2023	4.30 PM to 6.30 PM	2 Hrs	Digital filter design techniques
29	05.04.2023	4.30 PM to 6.30 PM	2 Hrs	Revision
30	06.04.2023	4.30 PM to 6.30 PM	2 Hrs	Assessment & Feedback

Coordinator

HEC Coordinator

HoD

K S R INSTITUTE FOR ENGINEERING AND TECHNOLOGY, TIRUCHENGODE-637215
Department of Electronics and Communication Engineering

Career Counseling Centre & Higher Education Cell

"GATE/ Competitive Exam Coaching Program" on "Signals & Systems and DSP"- List of Students

S.No	Year	Register No	Name
1	III	731620106001	AAMEENA A
2	III	731620106008	DHARSHAN R
3	III	731620106009	DHINAGARAN J
4	III	731620106011	GOKULRAJ D
5	III	731620106014	GUNASEKARAN M
6	III	731620106015	HARSHINI K
7	III	731620106016	HEMANATHAN N
8	III	731620106017	JEEVANRAJ M
9	III	731620106021	KOWSALYA S
10	III	731620106022	KUMUTHALAKSHMI T
11	III	731620106024	NANDHAKUMAR K
12	III	731620106025	NARENDHIRAN R
13	III	731620106028	PERUMAL S
14	III	731620106029	POOVARASAN S
15	III	731620106036	RANJANI T
16	III	731620106039	SANJAY P S
17	III	731620106043	SURYA NARAYANA
18	III	731620106046	VIKRAMAN D
19	III	731620106048	YAMINI H J
20	III	731620106302	DHIVAKAR
21	III	731620106303	HARIDHARAN S
22	III	731620106308	SRI JANANI T
23	IV	731619106001	ANANTHI S
24	IV	731619106002	ANSHIO RENIN M S
25	IV	731619106005	BHAVYA S
26	IV	731619106012	KIRUPANITHI M
27	IV	731619106013	KIRUTHIKA S
28	IV	731619106015	LOGESHBARANI S
29	IV	731619106016	MANIKANDAN P
30	IV	731619106017	MANIKANDAN S
31	IV	731619106020	NARMATHA SUBHASHRI
32	IV	731619106033	RUBAN NISANTH B
33	IV	731619106035	SAKTHIVEL S
34	IV	731619106037	SARANYA S
35	IV	731619106038	SELVA BRINDHA K
36	IV	731619106039	SONIKA K M
37	IV	731619106040	SUNMATHI R
38	IV	731619106042	UMABHARATHI C

V.Sindu 6/2/23
Course Coordinator

P. Preethi 6/2/2023
HoD

K S R INSTITUTE FOR ENGINEERING AND TECHNOLOGY, TIRUCHENGODE - 637 215

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

GATE Coaching Program-Signals & Systems and DSP

ATTENDANCE SHEET

Academic Year: 2022-23 (Even) Venue: M315

S.No	Year	REG.No	NAME
1	III	7316201006001	AAMEENA A
2	III	7316201006008	DHARSHAN R
3	III	7316201006009	DHINAGARAN J
4	III	7316201006011	GOKULRAJ D
5	III	7316201006014	GUNASEKARAN M
6	III	7316201006015	HARSHINI K
7	III	7316201006016	HEMANATHAN N
8	III	7316201006017	JEEVANRAJ M
9	III	7316201006021	KOWSALYA S
10	III	7316201006022	KUMUTHALAKSHMI T
11	III	7316201006024	NANDHAKUMAR K
12	III	7316201006025	NARENDHIRAN R
13	III	7316201006028	PERUMAL S
14	III	7316201006029	POOVARASAN S
15	III	7316201006036	RANJANI T
16	III	7316201006039	SANJAY P S
17	III	7316201006043	SURYA NARAYANA
18	III	7316201006046	VIKRAMAN D
19	III	7316201006048	YAMINI H J
20	III	7316201006302	DHIVAKAR
21	III	7316201006303	HARIDHARAN S
22	III	7316201006308	SRI JANANI T
23	IV	7316191006001	ANANTHI S
24	IV	7316191006002	ANSHIO RENIN M S
25	IV	7316191006005	BHAVYA S
26	IV	7316191006012	KIRUPANITHI M
27	IV	7316191006013	KIRUTHIKA S
28	IV	7316191006015	LOGESHBARANI S
29	IV	7316191006016	MANIKANDAN P
30	IV	7316191006017	MANIKANDAN S
31	IV	7316191006020	NARMATHA SUBHASHRI S
32	IV	7316191006033	RUBAN NISANTH B
33	IV	7316191006035	SAKTHIVEL S
34	IV	7316191006037	SARANYA S
35	IV	7316191006038	SELVA BRINDHA K
36	IV	7316191006039	SONIKA K M
37	IV	7316191006040	SUNMATHI R
38	IV	7316191006042	UMABHARATHI C

Attendance columns (dates): 6.3, 7.2, 8.2, 9.2, 10.2, 15.2, 16.2, 20.2, 21.2, 22.2, 23.2, 24.2, 27.2, 28.2, 14.3, 15.3, 16.3, 17.3, 20.3, 23.3, 24.3, 27.3, 28.3, 29.3, 30.3, 31.3, 1.4, 3.4, 5.4, 6.4

Course Coordinator

HoD

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TIRUCHENGODE-637 215,

K S R INSTITUTE FOR ENGINEERING AND TECHNOLOGY, TIRUCHENGODE – 637 215
DEPARTMENT OF ECE
GATE ASSESSMENT - "SIGNALS & SYSTEMS AND DSP"
Answer ALL the questions

1.	The input x(t) and output y(t) of a C.T.S related with the following equations. Which system is causal?	
	(a) $y(t)= x(t-2) + x(t+4)$	**(b)** $y(t)= (t-4) \, x(t+1)$
	(c) $y(t)= (t+4) \, x(t-1)$	**(d)** $y(t)= (t+5) \, x(t+5)$
2.	The Power in the signal $x(t) = 8\cos(20\pi t – \pi/2) + 4\sin(15\,\pi t)$ is	
	(a) 40	**(b)** 41
	(c) 82	**(d)** 42
3.	A periodic signal $x(n)$ of period N_1 is added to another periodic signal of period N_2. Then the periods of the resulting signal is always	
	(a) $N_1 + N_2$	**(b)** $N_1 N_2$
	(c) LCM of N_1 and N_2	**(d)** GCD of N_1 and N_2
4.	Given $x(n) = a^{|n|}$, $|a| < 1$ is	
	(a) an energy signal	**(b)** a power signal
	(c) neither an energy and power signal	**(d)** an energy as well as power signal
5.	$Y(t) = x(2t)$ is _____	
	(a) Compressed signal	**(b)** Expanded signal
	(c) Shifted signal	**(d)** Amplitude scaled signal by a factor of 2
6.	What is the magnitude of the exponential Fourier series coefficient of the fundamental term of the periodic signal $x(t) = 3 + 2\cos(3t) + \sin(3t)$	
	(a) 3	**(b)** $\sqrt{5}/2$
	(c) 1/2	**(d)** 1
7.	If $L[f(t)] = F(s)$, then $L[f(t - T)] =$	
	(a) $e^{st} F(s)$	**(b)** $e^{-st} F(s)$
	(c) $\dfrac{F(s)}{1 + e^{st}}$	**(d)** $\dfrac{F(s)}{1 - e^{-st}}$
8.	The Fourier series of an odd periodic function contains	
	(a) Odd harmonics only	**(b)** Even harmonics only
	(c) Cosine harmonics only	**(d)** Sine harmonics only

9.	The Fourier series for the function f(x) = sin2x is	
	(a) Sin x + sin 2	**(b)** 1-cos2x
	(c) Sin2x + cos2x	**(d)** $0.5 - 0.5cos2x$

10.	The fourier transform of the signal $x(t)= e^{2t} u(-t)$ is given by	
	(a) $1/(2-j\omega)$	**(b)** $2/(1-j\omega)$
	(c) $1/(2j-\omega)$	**(d)** $2/(2j-\omega)$

11.	The analog signal m(t) is given below $m(t) = 4 \cos 100\,\pi t + 8 \sin 200\,\pi t + \cos 300\,\pi t$, the Nyquist sampling rate will be	
	(a) 1/100	**(b)** 1/200
	(c) $1/300$	**(d)** 1/600

12.	Find the convolution of $x(t) = e^{2t}u(-t)$ and $h(t) = u(t-3)$	
	(a) $0.5\ exp(2t-6)u(-t+3) + 0.5u(t-3)$	**(b)** $0.5\ exp(2t-3)u(-t+3) + 0.8u(t-3)$
	(c) $0.5\ exp(2t-6)u(-t+3) + 0.5u(t-6)$	**(d)** $0.5\ exp(2t-6)u(-t+3) + 0.8u(t-3)$

13.	A casual LTI system is described by the difference equation $2y[n] = \alpha\,y[n-2] - 2x[n] + \beta x[n-1]$ The system is stable only if	
	(a) $\lvert\alpha\rvert = 2\ \lvert\beta\rvert < 2$	**(b)** $\lvert\alpha\rvert > 2\ \lvert\beta\rvert > 2$
	(c) $\lvert\alpha\rvert < 2$ any value of β	**(d)** $\lvert\beta\rvert < 2$, any value of α

14.	Which type of the system responds to its input represents the zero value of its initial condition?	
	(a) Zero state response	**(b)** Zero input response
	(c) Total response	**(d)** Natural response

15.	Which theorem states that the total average power of a periodic signal is equal to the sum of average powers of the individual fourier coefficients?	
	(a) Parseval's Theorem	**(b)** Rayleigh's Theorem
	(c) Both a & b	**(d)** None of the above

16.	Which among the following assertions represents a necessary conditions for the existence of fourier transform of discrete time signal(DTFT)	
	(a) Discrete time signal should be absolutely summable	**(b)** Discrete time signal should be absolutely multipliable
	(c) Discrete time signal should be absolutely integrable	**(d)** Discrete time signal should be absolutely differentiable

17.	Find Discrete time Fourier transform of x(n) = {1,-1,2,2}

(a) $1-e^{j\omega}+2e^{j2\omega}+2e^{j3\omega}$	(b) $1-e^{-j\omega}+2e^{-j2\omega}+2e^{-j3\omega}$
(c) $1+e^{j\omega}+2e^{j2\omega}+2e^{j3\omega}$	(d) $1-e^{j\omega}-2ej2\omega-2e^{j3\omega}$

18. If $x^k = 2^k$ for $k \le 0$ and $x_k = 0$ for $k \ge 0$, Z transform of the sequence x is

(a) $z/(z-2)$	(b) $1/(z-2)$
(c) $2/(z-2)^2$	(d) $2(2-z)$

19. The ROC of sequence $x[n] = (0.8)^n\,u[n] + (0.4)^n\,u[n]$ is

(a) $|z| > 0.8$	(b) $|z| > 0.4$
(c) $0.4 < |z| < 0.8$	(d) $|z| < 0.8$

20. What is the area of a Unit Impulse function?

(a) Zero	(b) Half of Unity
(c) Depends on the function	(d) Unity

21. The impulse response of a system is $h(n) = a^n u(n)$ the condition for the system to be BIBO stable is

(a) a is real and positive	(b) a is real and negative
(c) $|a| > 1$	(d) $|a| < 1$

22. Find the output of the system whose input and output are related by, $y(n) = 7y(n-1) - 12y(n-2) + 2x(n) - x(n-2)$ for the input $x(n) = u(n)$

(a) $y(n) = 1/6\, u(n) + 31/3\,(4)^n u(n) - 17/2\,(3)^n u(n)$	(b) $y(n) = 1/6\, u(n) - 3\,(4)^n u(n) + 17/2\,(3)^n u(n)$
(c) $y(n) = u(n) + 31/3\,(4)^n u(n) + 17/2\,(3)^n u(n)$	(d) $y(n) = u(n) - 31/3\,(4)^n u(n) + 17/2\,(3)^n u(n)$

23. Which type/s of discrete-time system do/does not exhibit the necessity of any feedback?

(a) Recursive Systems	(b) Non-recursive Systems
(c) Both a & b	(d) None of the above

24. Under which conditions does an initially relaxed system become unstable?

(a) only if bounded input generates unbounded output	(b) only if bounded input generates bounded output
(c) only if unbounded input generates unbounded output	(d) only if unbounded input generates bounded output

25. Consider a causal system with impulse response $h(n)=2^n u(n)$. If $x(n)$ is the input and $y(n)$ is the output to this system, then which of the following difference equation describes the system ?

(a) $y(n) = 2y(n+1) = x(n)$	(b) $y(n) - 2y(n-1) = x(n)$
(c) $y(n) + 2y(n-1) = x(n)$	(d) $y(n) - 1/2\,y(n-1) = x(n)$

VSindy 6/4/2023

COURSE COORDINATOR

P. Loooeji 6/4/2025

HOD

K S R INSTITUTE FOR ENGINEERING AND TECHNOLOGY, TIRUCHENGODE - 637 21

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

GATE Coaching Program-Signals & Systems and DSP

ASSESMENT SCORE

Academic Year: 2022-23 (Even)

S.NO	YEAR	REG NO	NAME	SCORE(50)
1	III	731620106001	AAMEENA A	28
2	III	731620106008	DHARSHAN R	36
3	III	731620106009	DHINAGARAN J	28
4	III	731620106011	GOKULRAJ D	28
5	III	731620106014	GUNASEKARAN M	30
6	III	731620106015	HARSHINI K	34
7	III	731620106016	HEMANATHAN N	36
8	III	731620106017	JEEVANRAJ M	32
9	III	731620106021	KOWSALYA S	34
10	III	731620106022	KUMUTHALAKSHMI T	38
11	III	731620106024	NANDHAKUMAR K	32
12	III	731620106025	NARENDHIRAN R	26
13	III	731620106028	PERUMAL S	40
14	III	731620106029	POOVARASAN S	38
15	III	731620106036	RANJANI T	40
16	III	731620106039	SANJAY P S	34
17	III	731620106043	SURYA NARAYANA KUMAR G	32
18	III	731620106046	VIKRAMAN D	40
19	III	731620106048	YAMINI H J	42
20	III	731620106302	DHIVAKAR	32
21	III	731620106303	HARIDHARAN S	40
22	III	731620106308	SRI JANANI T	38
23	IV	731619106001	ANANTHI S	38
24	IV	731619106002	ANSHIO RENIN M S	34
25	IV	731619106005	BHAVYA S	28
26	IV	731619106012	KIRUPANITHI M	34
27	IV	731619106013	KIRUTHIKA S	28
28	IV	731619106015	LOGESHBARANI S	28
29	IV	731619106016	MANIKANDAN P	32
30	IV	731619106017	MANIKANDAN S	34
31	IV	731619106020	NARMATHA SUBHASHRI S	30
32	IV	731619106033	RUBAN NISANTH B	36
33	IV	731619106035	SAKTHIVEL S	36
34	IV	731619106037	SARANYA S	32
35	IV	731619106038	SELVA BRINDHA K	42
36	IV	731619106039	SONIKA K M	34
37	IV	731619106040	SUNMATHI R	30
38	IV	731619106042	UMABHARATHI C	42

Course Coordinator

HoD

GATE-SS & DSP

Register No *

731620106008

Name of the Student *

DHARSHAN R

1. Y (t) = x (2t) is _____

2 points

◉ Compressed signal

○ Expanded signal

○ Shifted signal

○ Amplitude scaled signal by a factor of 2

2. Given $x(n) = a^{|n|}$, $|a| < 1$ is

  2 points

○ an energy signal

◉ a power signal

○ neither an energy and power signal

○ an energy as well as power signal

---

3. The Power in the signal $x(t) = 8\cos(20\pi t - \pi/2) + 4\sin(15\pi t)$ is

  2 points

◉ 40

○ 41

○ 82

○ 42

---

4. A periodic signal $x(n)$ of period N1 is added to another periodic signal of period N2. Then the periods of the resulting signal is always

  2 points

○ N1 + N2

○ N1 N2

◉ LCM of N1 and N2

○ GCD of N1 and N2

5. The input x(t) and output y(t) of a C.T.S related with the following equations. Which system is causal?   2 points

◉ y(t)= x(t-2) + x(t+4)

○ y(t)= (t-4) x(t+1)

○ y(t)= (t+4) x(t-1)

○ y(t)= (t+5) x(t+5)

6. If L[f(t)] = F(s), then L[f(t – T)] =   2 points

◉ e^st F(s)

○ e^-st F(s)

○ F(s)/(1+e^st)

○ F(s)/(1-e^st)

7. The Fourier series of an odd periodic function contains   2 points

○ Odd harmonics only

○ Even harmonics only

○ Cosine harmonics only

◉ Sine harmonics only

Page 16 of 45

8. The fourier transform of the signal.x(t)= e^2t u(-t) is given by   2 points

○ 1/(2-jω)

◉ 2/(1-jω)

○ 1/(2j-ω)

○ 2/(2j-ω)

9. The Fourier series for the function f(x) = sin2x is   2 points

○ Sin x + sin 2

○ 1-cos2x

○ Sin2x + cos2x

◉ 0.5 – 0.5cos2x

10. What is the magnitude of the exponential Fourier series coefficient of the   2 points
fundamental term of the periodic signal x(t) = 3 + 2cos(3t) + sin(3t)

◉ 3

○ √5/2

○ 1/2

○ 1

11. Find the convolution of x(t) = e^2tu(-t) and h(t) = u(t-3)

2 points

○ 0.5 exp(2t-6)u(-t+3) + 0.5u(t-3)

◉ 0.5 exp(2t-3)u(-t+3) + 0.8u(t-3)

○ 0.5 exp(2t-6)u(-t+3) + 0.5u(t-6)

○ 0.5 exp(2t-6)u(-t+3) + 0.8u(t-3)

12. The analog signal m(t) is given below m(t) = 4 cos 100 πt + 8 sin 200 πt + cos 300 πt,   2 points
the Nyquist sampling rate will be

○ 1/100

○ 1/200

◉ 1/300

○ 1/600

13. Which type of the system responds to its input represents the zero value of its initial   2 points
condition?

◉ Zero state response

○ Zero input response

○ Total response

○ Natural response

14. A casual LTI system is described by the difference equation $2y[n] = \alpha y[n-2] - 2x[n] +$ 2 points
$\beta x[n-1]$ The system is stable only if

⦿ $|\alpha| = 2 \, |\beta| < 2$

◯ $|\alpha| > 2 \, |\beta| > 2$

◯ $|\alpha| < 2$ any value of β

◯ $|\beta| < 2$, any value of α

15. Which theorem states that the total average power of a periodic signal is equal to the sum of average powers of the individual fourier coefficients? 2 points

⦿ Parseval's Theorem

◯ Rayleigh's Theorem

◯ Both a & b

◯ None of the above

16. Which among the following assertions represents a necessary conditions for the existence of fourier transform of discrete time signal(DTFT) 2 points

⦿ Discrete time signal should be absolutely summable

◯ Discrete time signal should be absolutely multipliable

◯ Discrete time signal should be absolutely integrable

◯ Discrete time signal should be absolutely differentiable

17. If $x^k = 2^k$ for $k \leq 0$ and $xk = 0$ for $k \geq 0$, Z transform of the sequence x is   2 points

○ z/(z-2)

○ 1/(z-2)

◉ 2/(z-2)^2

○ 2(2-z)

18. Find Discrete time Fourier transform of x(n) = {1,-1,2,2}   2 points

◉ 1-e^jω+2e^j2ω+2e^j3ω

○ 1-e^-jω+2e^-j2ω+2e^-j3ω

○ 1+e^jω+2e^j2ω+2e^j3ω

○ 1-e^jω-2e^j2ω-2e^j3ω

19. Find the Nyquist Frequency for the signal x(t) =3cos (50πt)+10 sin(300πt) – cos(100πt)   2 points

◉ a) 50 Hz

○ b) 100 Hz

○ c) 200 Hz

○ d) 300 Hz

20. The ROC of sequence x[n] = (0.8)n u[n] + (0.4)n u[n] is   2 points

(●) |z| > 0.8

( ) 1/(z-2)

( ) 0.4 < |z| < 0.8

( ) |z| < 0.8

21. The impulse response of a system is h(n) = anu(n) the condition for the system to be   2 points
BIBO stable is

( ) a is real and positive

( ) a is real and negative

( ) |a| > 1

(●) |a| < 1

22. Which type/s of discrete-time system do/does not exhibit the necessity of any   2 points
feedback?

( ) Recursive Systems

( ) Non-recursive Systems

( ) Both a & b

( ) None of the above

23. Find the output of the system whose input and output are related by, $y(n) = 7y(n-1) -$ 2 points
$12y(n-2) + 2x(n) - x(n-2)$ for the input $x(n) = u(n)$

- ⊙ $y(n) = 1/6\ u(n) + 31/3\ (4^n).u(n) -17/2\ (3^n)u(n)$

- ○ $y(n) = 1/6\ u(n) - 3\ (4^n)u(n) +17/2\ (3^n)u(n)$

- ○ $y(n) = u(n) + 31/3\ (4^n)u(n) +17/2\ (3^n)u(n)$

- ○ $y(n) = u(n) - 31/3\ (4^n)u(n) +17/2\ (3^n)u(n)$

24. Consider a causal system with impulse response $h(n)=2nu(n)$. If $x(n)$ is the input and   2 points
$y(n)$ is the output to this system, then which of the following difference equation
describes the system ?

- ○ $y(n) = 2y(n+1) = x(n)$

- ⊙ $y(n) -2y(n-1) = x(n)$

- ○ $y(n) +2y(n-1) = x(n)$

- ○ $y(n)-1/2y(n-1) = x(n)$

25. Under which conditions does an initially relaxed system become unstable?   2 points

- ⊙ only if bounded input generates unbounded output

- ○ only if bounded input generates bounded output

- ○ only if unbounded input generates unbounded output

- ○ only if unbounded input generates bounded
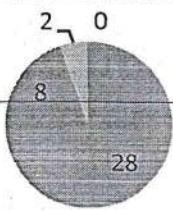
K S R Institute for Engineering and Technology, Tiruchengode-637215
Department of Electronics and Communication Engineering
### GATE Assessment on 'SS & DSP'
Consolidated feedback

Levels of Standard Questions Discussed
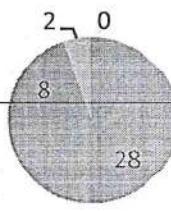
Excellent	28
Verygood	8
Good	2
Satisfactory	0

Effectiveness of Problem Solving

Excellent	28
Verygood	8
Good	2
Satisfactory	0

Syllabus Coverage/Content of Program
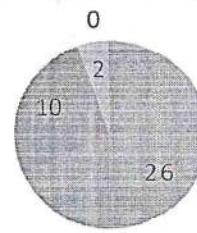
Excellent	28
Verygood	7
Good	2
Satisfactory	0

Improvement in Higher order abilities
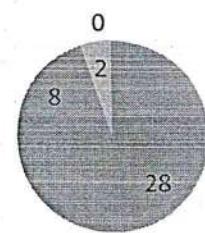
Excellent	26
Verygood	10
Good	2
Satisfactory	0
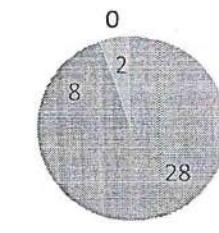
Knowledge upgradation

Excellent	28
Verygood	8
Good	2
Satisfactory	0

OVERALL RATING

Excellent	28
Verygood	8
Good	2
Satisfactory	0

Course Coordinator

HoD 10/04/2023
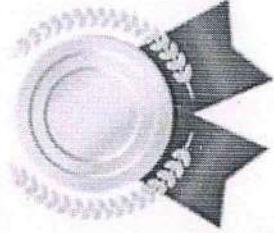
Elite

NPTEL Online Certification

(Funded by the MoE, Govt. of India)

This certificate is awarded to

LOGESHWARAN R

for successfully completing the course

MATLAB Programming for Numerical Computation

with a consolidated score of **76** %

| Online Assignments | 17.06/25 | Proctored Exam | 59.25/75 |

Total number of candidates certified in this course: 219

Jan-Apr 2023
(12 week course)

Prof. Devendra Jalihal
Chairperson,
Centre for Outreach and Digital Education, IITM

Prof. Andrew Thangaraj
NPTEL, Coordinator
IIT Madras

Indian Institute of Technology Madras

swayam
FREE ONLINE EDUCATION

To validate the certificate
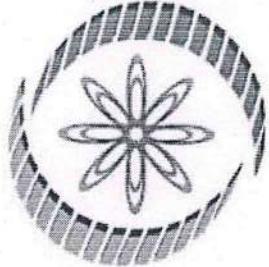
Roll No: NPTEL23CH42S33920690

No. of credits recommended: 3 or 4

Elite

NPTEL Online Certification
(Funded by the MoE, Govt. of India)

This certificate is awarded to

LOGESHWARAN R

for successfully completing the course

Introduction to Semiconductor Devices

with a consolidated score of **66** %

Online Assignments	16/25	Proctored Exam	50.4/75

Total number of candidates certified in this course: **132**

Jul-Oct 2022
(12 week course)

B Umashankar
Prof. B Umashankar
Chairperson, Centre for Continued Education (CCE)
IIT Hyderabad

Indian Institute of Technology Hyderabad

Prof. Andrew Thangaraj
NPTEL, Coordinator
IIT Madras

FREE ONLINE EDUCATION
swayam

Roll No:NPTEL22EE91S64520110   To validate the certificate   No. of credits recommended: 3 or 4

K S R INSTITUTE FOR ENGINEERING AND TECHNOLOGY
TIRUCHENGODE- 637 215
DEPARTMENT OF MECHANICAL ENGINEERING

CIRCULAR

DATE : 31.01.2023

For effective counseling and follow up the following mentors are allotted for II, III and IV year students. The mentors are asked to monitor the performance of the students, motivate them towards academic growth along with self growth of the students and the institution

S.No	Register Number	Student Name	Year/ Class	Faculty Mentor
1	731621114001	AAKASH E S	II	
2	731621114003	DEVANAND T	II	
3	731621114002	AKASH K	II	
4	731621114012	GIRISOTH P	II	
5	731621110304	DIVAKAR	II	
6	731620114002	AKASH R	III	
7	731620114317	YOGESH S	III	Dr.P.KANAKARAJAN
8	731620114009	GOKULNATH M	III	
9	731620114001	ABHISHEK KUMAR CHOUBEY	III	
10	731619114005	BHARANESH M	IV	
11	731619114001	AJAYKUMAR G	IV	
12	731619114006	BOOPATHI P	IV	
13	731619114002	ARAVIND M	IV	
14	731621114008	DHIVANESH M	II	
15	731621114020	KARTHIK RAJ K	II	
16	731621114004	DHANUSH B	II	
17	731621114014	GUGAN A	II	
18	731621110308	LOGESH M	II	
19	731620114004	BHARATH V	III	
20	731620114010	KAVINKUMAR J	III	Dr.M.SIVAKUMAR
21	731620114012	KIRUBAKARAN R	III	
22	731620114003	ASHOK KUMAR R G	III	
23	731619114007	DEEPA M	IV	
24	731619114008	DHEENADHAYALAN B	IV	
25	731619114009	EZHILVENDEN S	IV	
26	731619114014	HARISH KUMARR HV	IV	
27	731621114021	KAVIYARASAN K	II	
28	731621114005	DHANUSH P	II	
29	731621114006	DHARANI KRISHNAN M	II	
30	731621114019	KARTHIK P	II	
31	731621110301	ARUNKUMAR	II	
32	731620114005	DHARUN S	III	
33	731620114014	KRISHNAMOORTHI S	III	A.MOHANRAJ
34	731620114016	NAVETHITHA A A	III	
35	731619114011	GOKULNATH S	IV	
36	731619114010	GOKULA KANNAN T	IV	
37	731619114012	HARISH P	IV	
38	731619114020	KRITHICKSHAN S	IV	

S.No	Register Number	Student Name	Year/ Class	Faculty Mentor
39	731621114027	MOHAN KUMAR M	II	
40	731621110303	DHANUSH S	II	
41	731621114007	DHARUNESH K	II	
42	731621114009	DINESH KUMAR S	II	
43	731621114025	MOHAMMED KAFIL M	II	
44	731621114026	MOHAMMED SAMIH T	II	P.MANIKANDAN
45	731620114006	DINESHKUMAR R	III	
46	731620114017	PRATHAP P	III	
47	731620114020	SUBASH S	III	
48	731619114018	KAVIYARASU R	IV	
49	731619114013	HARISH U	IV	
50	731619114022	MARUTHUPANDI V	IV	
51	731621114028	MOHANRAM V	II	
52	731621114010	ELANGOVAN R	II	
53	731621114011	GIRI MURUGAN P	II	
54	731621114029	MONESH KUMAR G	II	
55	731621110302	BALAMURUGAN B	II	
56	731621110309	MANIKANDAN R	II	R.VASANTHAKUMAR
57	731620114021	VINITH SINGH R	III	
58	731620114022	VINOTH M	III	
59	731620114019	STEPHAN FLAMING A	III	
60	731619114023	MUKESH KUMAR C S	IV	
61	731619114017	KARTHIKEYAN G	IV	
62	731619114021	MANIKANDAN G	IV	
63	731621114033	PRADEES J	II	
64	731621110305	ELANCHEZHIAN G R	II	
65	731621114013	GOKUL S	II	
66	731621114015	HARIHARAN K	II	
67	731621114016	HARISHWAR R	II	
68	731621114030	NAVEENKUMAR N	II	S.BALAMURUGAN
69	731620114018	SANJEEV KUMAR M	III	
70	731620114303	DEEPAN M	III	
71	731620114308	IBRAHIM BADUSHA S	III	
72	731619114029	SANDHIYA R	IV	
73	731619114025	NANDHAKUMAR M	IV	
74	731619114015	JAICHANDRAN M	IV	
75	731621114034	PRASEN S S	II	
76	731621114017	JAWAHAR K	II	
77	731621114022	KOWSIK P	II	
78	731621110306	HARDEEP	II	
79	731621110310	MUKESH	II	
80	731620114302	BOOBALAN K	III	
81	731620114305	GIRIVASAN M	III	K.GOPALAKRISHNAN
82	731620114307	GURUMOORTHI R	III	
83	731620114310	LAKSHMANAN S	III	
84	731619114019	KISHORE P	IV	
85	731619114027	POOVARASAN A	IV	
86	731619114028	RAKESH G G	IV	
87	731619114301	ABISHAKE R V	IV	

S.No	Register Number	Student Name	Year/ Class	Faculty Mentor
88	731621114038	RAHAMATHULLA S	II	
89	731621110312	NITHISH C	II	
90	731621110314	RITHIK K	II	
91	731621114023	LOGESH D	II	
92	731621114024	LOGESH T	II	
93	731621114042	SATHISH S	II	J.MATHAN
94	731620114304	DHANUSH K	III	
95	731620114309	KARTHIK KM	III	
96	731620114316	WILFRED A	III	
97	731619114030	SANTHOSH M	IV	
98	731619114031	SANTHOSH P	IV	
99	731619114035	VIGNESH R	IV	
100	731621114041	SARAN P S	II	
101	731621110307	JAYAVIGNESH M	II	
102	731621110311	NAGARAJAN M	II	
103	731621114031	NAVEEN KUMAR M	II	
104	731621114032	NAVEEN KUMAR V	II	
105	731621114043	SUDHARSAN B	II	P.CHAKARAVARTHI
106	731620114306	GOKULNATH M	III	
107	731620114311	MANOJ KUMAR M	III	
108	731620114312	SRIDHAR V	III	
109	731619114034	VIGNESH P	IV	
110	731619114303	DHANAPPRAKASH U	IV	
111	731619114305	SATHISH KUMAR S	IV	
112	731621114044	TAMILSELVI K	II	
113	731621110313	PAVIZHAN E R	II	
114	731621114039	ROHAN N	II	
115	731621114040	SANTHOSH M	II	
116	731621114045	VIGNESWARAN V	II	
117	731620114015	NAVEEN G	III	
118	731620114314	VASANTH N	III	G.VENKATESH
119	731620114315	VASANTHAKUMAR S	III	
120	731620114313	SRIMURALI AS	III	
121	731619114026	NIVAS K	IV	
122	731619114033	VALLIAPPAN S P	IV	
123	731619114024	NACHIYAPPAN A	IV	
124	731619114016	KARNAN S	IV	

HoD/Mech

K S R INSTITUTE FOR ENGINEERING AND TECHNOLOGY
Department of Information Technology
STUDENT MENTORING ANALYSIS REPORT

Academic Year / Sem.	2022 – 23 (EVEN)	Name of the Mentor	T. Nandhini
Name of the Student	K. Anusree	Register No.	731621205003
Year / Sem.	II / IV	Mobile Number	8486285662
Email ID	anusreekasinathan 2204 @ gmail.com	Parent Mobile Number	8098082321
Category of the Student*	Advanced Learner ✓	Average Learner	Slow Learner

* Tick appropriate

I. Counseling by Faculty

S. No.	Date	Counseling Provided	Feedback from student	Signature Student	Signature Faculty	Signature HOD
1.	16-2-2023	Informed to Placement coordinator Advice to score good CGPA in upcoming sem	Teaching was good. and it is understandable	K. Anudy	(sign) 16/2/23	(sign) 16/2/23
2.	1-3-2023	Convey to HOD sir, Preplan Placement coordinator, Advice to Participate other college event	Schedule in Nan-mudhalvan - Need Aptitude class	K. Anuf	(sign) 1/2/23	(sign) 1/3/23
3.	27-3-23	Convey to HOD sir, Have to Increase IA marks upcoming exam	Give any one set for internal exam. There is no sufficient time to study both the set	K. Anudy	(sign) 27/3/23	(sign) 28/3/23
4.	20-4-23	Advice to Improve the CGPA. Learn technical skill	No issues to say, everything is good	K. Anudy	(sign) 20/4/23	(sign) 20/4/23
5.	5-5-23	Advice to Improve the technical skill	There is no issues, Everything is good	K. Anudy	(sign) 5/5/23	(sign) 5/5/23

Need to keep aptitude tests

II. Performance in Other Activities
(Co-curricular (PPT/Seminar/Workshops attended) & Extra Curricular)
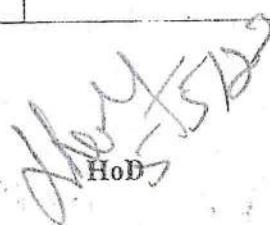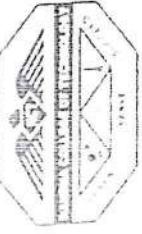
S. No.	Type of the Programme	College	Date	Awards Won
1.	Paper & Quiz presentation	Nandha college of Engineering Technology	10/3/23	Participation Certificate
2.	PPT	Erode sengunthar engineering college	20/10/22 21/10/22	Participation certificate

III: Mentoring Outcome (Mention How the Advanced learners /Average learners /slow learners performances are improved after mentoring)

S. No.	Remarks	Signature by Faculty
1.	Improvement in Academic	16/5/23
2.	Participate other college event	16/5/23
3.	Learning coding skill	16/5/23
4.		

PRINCIPAL.
K S R INSTITUTE FOR
ENGINEERING AND TECHNOLOGY,
K S R KALVI NAGAR,
TIRUCHENGODE-637 215,
NAMAKKAL Dt, TAMIL NADU.

HoD
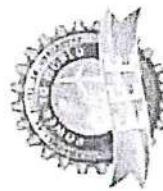
NANDHA COLLEGE OF TECHNOLOGY
ERODE - 638052
(Affiliated to Anna University Chennai, Approved by AICTE , New Delhi)

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

The Indian Science Congress Association - Student Chapter
Sponsored

'' **IGNITRA 2K23** ''

Certificate
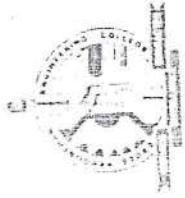
This certificate is awarded to Mr./Mrs./Miss ___ K. ANUSREE - ii - II

of ___ KSR INSTITUTE FOR ENGINEERING AND TECHNOLOGY

Participation of Paper Presentation / Project Presentation / Multimedia / Connexion / Quiz in the

National Level Technical Symposium-IGNITRA '2k23' Organized by ILLUMINA-Association of Electrical

and Electronics Engineering on 10th March 2023. He / She was awarded ___ prize.

CONVENOR

HOD/EEE

PRINCIPAL

ERODE SENGUNTHAR ENGINEERING COLLEGE

AN AUTONOMOUS INSTITUTION

APPROVED BY AICTE NEW DELHI AND PERMANENTLY AFFILIATED TO ANNA UNIVERSITY
ACCREDITED BY NBA NEW DELHI NAAC WITH 'A' GRADE

PERUNDURAI, ERODE - 638 057

DEPARTMENT OF CSE AND AI&DS

CERTIFICATE OF PARTICIPATION

INNOWIZ - 2K22

This is to certify that Selvan / Selvi _____ ANUSHREE K _____

of _____ KSR INSTITUTE FOR ENGINEERING AND TECHNOLOGY _____

has participated in the PAPER PRESENTATION event at the National Level Technical

Symposium INNOWIZ-2K22 held on 20th & 21st October 2022.

Paper Title: _____ AQUOUS COMMUNICATION USING MODEM _____

Dr.S.Tamil Selvan
CO-ORDINATOR

Dr.G.Sivakumar
HOD

V. Vijay
Dr.V.Venkatachalam
PRINCIPAL

Thiru.G.Kamalamurugan
CORRESPONDENT

PRINCIPAL
K S R INSTITUTE FOR
ENGINEERING AND TECHNOLOGY
K S R KALVI NAGAR,
TIRUCHENGODE-637 215,
NAMAKKAL Dt, TAMIL NADU.

K S R Institute for Engineering and Technology

Department of Computer Science and Engineering

List of Students undergone Mini Project / Project/ Idea Contest

Academic Year 2022-2023

S.No	Name of the student	Year / Semester	Project / Mini Project/ Idea Contest /	Title
1.	Deepan G Manojkumar M Prabhu M Ruthresan V	IV/VIII	Project	Ensemble Voting Classifier for Prediction of Traffic Using SUMO Transel Scenarios
2.	Ashwin M Mohanaprasath M Prasanth S Manoranjith G	IV/VIII	Project	Crop Yield Prediction by Using CNN & Bi - directional LSTM Techniques
3.	Shalene V Monikasri B Ilakiya V Nandhini R	IV/VIII	Project	Plant Disesase Prediction using Hybrid model
4.	Thangamani R Mounika Sri B Indhuja V Hemamalini G	IV/VIII	Project	Kidney Stone detection using deep Learning Techniques
5.	Pranesh Kumar N Abinanthan R Arunprakash C Gayathri K	IV/VIII	Project	Intrusion Detection in IoT using Deep Learning
6.	Barath P Santhosh M Prathap D Yuvaraj A	IV/VIII	Project	Design and Implementation of Disease Diagnose system using Unified Networks
7.	Subhashini P Rakkesh S Abirami Jotheeswaran S	IV/VIII	Project	Design and Development of Intelligent Activity Detection System using Multiview Cameras
8.	Amirtheswari A Pavithra K Jeeva M Madhumitha M	IV/VIII	Project	Prediction of Respiratory Disease using Machine Learning Algorithms
9.	Dharsha K Dhevak A Ganesh M Harikrishnaa S	IV/VIII	Project	Provisioning infrstructure to facilitate containerized Microservice based High Frequency Trading(HFT) application using Docker in google cloud
10.	Satheesh Natrayan A Sai Siva Sanjay R Preethi V Jeevanantham S	IV/VIII	Project	Provision and administer cloud spanner Instances and databases

S.No	Name of the student	Year / Semester	Project / Mini Project/ Idea Contest /	Title
11.	Bharath Kumar K Mohammed Rizwan M Mirun Kannan V Mathivanan R	IV/VIII	Project	Building and securing a resilient kubernetes cluster for enterprise workloads in google cloud platform
12.	Krishnamoorthy M Yogesh M Sanjay M Nishanth R	IV/VIII	Project	Tracing the latency report of data in GCP using kubernets engine for improving the performance
13.	Arul Murugan S Sunmathi M Sathiyaprabavathi S Rithika P	IV/VIII	Project	Configuring and administering in my sql in google cloud platform(gcp)
14.	Keerthirajan M Kamalesh S	IV/VIII	Project	Implementing cross-cloud VPC peering with terraform for intercloud communication between google cloud and aws
15.	Pream Kumar K Preamkumaran P Manoj J Ariharan P	IV/VIII	Project	Analyzing and improving the performance of startup company using google cloud operations
16.	Sinthana G Logeshwaran G Shaheen M Gobi B	IV/VIII	Project	Securing access to application with IAP and compute engine
17.	Arjun K Gokula kannan M Jaishini A Malarvizhi K	III/VI	Mini Project	Creating an instance with multiple network interfaces
18.	Deepa R Durga Devi K S Kavishni S Yamuna K	III/VI	Mini Project	Configuring Private Google Access and Cloud NAT using GCP
19.	Deepika S Brindha L Kirija R SriNavaneethaswetha M P	III/VI	Mini Project	Building a Virtual Private Cloud (VPC) Network on GCP
20.	Raghul K Sabarimugilan M Ajith S Hariprasath G	III/VI	Mini Project	Optimizing cost with Google Cloud Storage
21.	Devadharshini S Indhumathi M Swetha M Elangumaran T	III/VI	Mini Project	Securing Cloud Applications with Identity Aware Proxy (IAP) using Zero-Trust

S.No	Name of the student	Year / Semester	Project / Mini Project/ Idea Contest /	Title
22.	Harish Kumar J Navin S Praganan A Vibin S	III/VI	Mini Project	Loading Data and performing backups on GCP using cloud spanner
23.	Dharshini N Krithika R Pooja G Thilothama D	III/VI	Mini Project	Smart Grid Sustainability Analysis using Machine Learning
24.	Dharani S Jenida P Krishani M Sowmiya G	III/VI	Mini Project	EMG Data Analysis using Machine Learning & Deep Learning Techniques
25.	Arulmurugan V Divya R Jagajith K R Priyadharshini S	III/VI	Mini Project	Air Pollution Monitoring using Machine Learning Techniques
26.	Abhishek Anand Sathish R Vinoth R Yash Raj	III/VI	Mini Project	Milk Quality Checking using Machine Learning Techniques
27.	Kamalesh T Naveenkumar M Nithin S Saravanan M	III/VI	Mini Project	Smartphone Based Human Activity Recognition System
28.	Devaraj M Gnanamoorthi M Ibrahim Sheriff T K Kavinraj D	III/VI	Mini Project	Detection of Phishing Attack using NLP and Machine Learning
29.	Dhanasekar V Mohankumar S Sanjay N Sanjith V	III/VI	Mini Project	Bank Note Authentication
30.	Priyadharsan M Sanjai R Vasanth R Muthu Palaniyappan G	III/VI	Mini Project	Sesimogarphic Area Prediction using Machine Learning
31.	Ganesh Kumar Mohamed Sigaf M Sanjay M Sunny Kumar Jaiswal	III/VI	Mini Project	Intelligent Method for Depression State Prediction from Human Signals

HoD/CSE

MILK QUALITY CHECKING USING RANDOM FOREST ALGORITHM

A MINI PROJECT REPORT

Submitted by

ABHISHEK ANAND	**(731620104001)**
SATHISH R	**(731620104050)**
VINOTH R	**(731620104060)**
YASH RAJ	**(731620104062)**

in partial fulfillment for the award of the degree

of

BACHELOR OF ENGINEERING IN COMPUTER SCIENCE AND ENGINEERING

## KSR INSTITUTE FOR ENGINEERING AND TECHNOLOGY TIRUCHENGODE – 637215
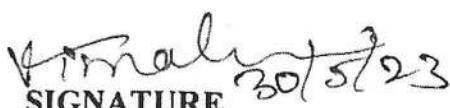
ANNA UNIVERSITY: CHENNAI 600 025

MAY 2023

ANNA UNIVERSITY: CHENNAI 600 025

BONAFIDE CERTIFICATE

Certified that this project report "MILK QUALITY CHECKING USING RANDOM FOREST ALGORITHM" is the bonafide work of "ABHISHEK ANAND (731620104001), SATHISH R (731620104050), VINOTH R (731620104060), YASH RAJ(731620104062)" who carried out the project work under my supervision.

SIGNATURE 30/5/23

SIGNATURE

Dr. M. VIMALA DEVI.,M.E., Ph.D
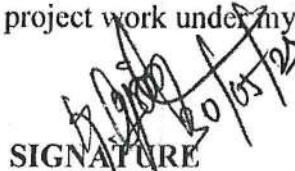
HEAD OF THE DEPARTMENT
Associate Professor & Head,

Computer Science and Engineering,

K S R Institute for Engineering and Technology,

Tiruchengode-637 215.

Mr. K.VINOTH,M.E
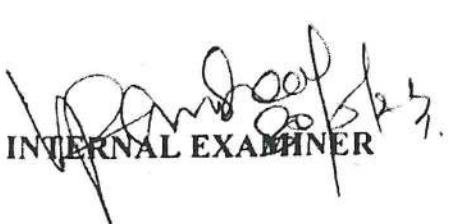
SUPERVISOR
Assistant Professor,

Computer Science and Engineering,

K S R Institute for Engineering and Technology,

Tiruchengode-637 215.

Submitted for the Mini Project work Viva-Voce held on 30·05·023

INTERNAL EXAMINER

EXTERNAL EXAMINER

ii

K S R INSTITUTE FOR ENGINEERING AND TECHNOLOGY, TIRUCHENGODE – 637 215

Department of Biomedical Engineering

Remedial class schedule – 03

Academic Year: 2022-23

REF: KSRIET/OFF/CIR-3/2022-2023

Semester: EVEN
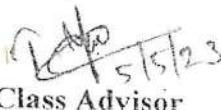
DATE: 05.05.2023

CIRCULAR

The schedule for remedial classes of III year B.E.-BME is given below. The mentioned students are asked to attend without fail.

S.No	Name of the course	Date & Time	Time
1.	EC8691 Microprocessors and Microcontrollers	15.05.23	
2.	BM8601 Diagnostic and Therapeutic Equipment - I	12.05.23	
3.	BM8651 Biomechanics	11.05.23	4.00pm – 6.00pm
4.	GE8291 Environmental Science and Engineering	-08.05.23	
5.	MD8091 Hospital Management	10.05.23	

	Name of the Slow Learners		
1.	HARIHARAN S	2.	RAGURAMAN M
3.	KANNAN M	4.	MUGILAN R
5.	VIMALNATH S	6.	KAVINKUMAR M
7.	VINOTH G	8.	VISHNURAM S R
9.	ARULMURUGAN R	10.	PRAVEEN E
11.	DARVIN V	12.	PRAVEEN S
13.	KAVIARASU R	14.	YAPSE FRANCIS M V

5/5/23

Class Advisor

Program Coordinator

K S R INSTITUTE FOR ENGINEERING AND TECHNOLOGY
Tiruchengode - 637215
(Approved by AICTE, New Delhi and Affiliated by Anna University, Chennai
All UG Programme are Approved by NBA)

Department of Biomedical Engineering
Remedial Class Test - 03   Attendance
Academic Year:2022-2023 (EVEN)

Year/Sem:III/VI

Batch:2020-2024

S. No.	Reg. No.	Name of the Student	15.05.23 MP&MC	12.05.23 DTE-01	11.05.23 BM	08.05.23 EVS	10.05.23 HM
1	7316201021002	ARULMURUGAN R	P	P	P	P	P
2	7316201021004	DARVIN V	P	P	P	P	P
3	7316201021010	HARIHARAN S	P	P	P	P	P
4	7316201021011	HARI PRASANTH S	P	P	A	A	P
5	7316201021014	KANNAN M	P	P	P	P	P
6	7316201021015	KAVIARASU R	P	P	A	P	P
7	7316201021016	KAVINKUMAR M	P	P	P	P	P
8	7316201021022	MUGILAN R	P	P	P	P	P
9	7316201021024	PRAVEEN V	P	P	P	P	P
10	7316201021025	PRAVEEN S	P	P	P	P	P
11	7316201021027	RAGURAMAN M	A	P	P	P	P
12	7316201021040	VIMALNATH S	P	P	P	P	P
13	7316201021041	VINOTH G	P	P	P	P	P
14	7316201021043	YAPSE FRANCIS M V	P	P	P	P	P

REMARKS

The above students performance has improved in Academic

Class Advisor

10/5/23

K S R INSTITUTE FOR ENGINEERING AND TECHNOLOGY

Department of...EEE......

Parents Interaction for Advanced / Average /Slow Learners

Name of the faculty : Dr. A. MURUGESAN

Academic year : 2022 - 2023

Year/Sem : EVEN

S.NO	Students Name	Parent Name & Contact No	Date of Interaction	Information given to parent about students performances	Sign of parent
1.	Ram Murugan R	9385360045	10/2/23	Discuss about Students performance Asked to attend classes regularly	
2.	Ragul P	6380256933	14/3/23	Intimate the Student University Result.	
3.	Bharanidharan c	9976530068	14/3/23	Discuss about University Marks.	
4.	Vikraman M	9865119849	14/3/23	Discuss about Students Performance in University exam & Internal exam.	
5	Muthusamy M	9159805349	18/3/23	Discuss about Students performance Asked to attend the class regula	
6.	Rabithan U	9842125052	18/3/23	Discuss about Placement Activities	
7.	Kanthickraja s	9788150277	18/3/23	Discuss about Previous Semester Performance. and IA performan.	
8.	Gokulraj S	8056991939	18/3/23	Discuse about Placement Activities.	
9.	Elavarasan T	9790426898	25/5/23	Informed about Commencement of University exam & Student internship.	
10.	Agilan A	9751440326	25/5/23	Informed about Commencement of University exam & student internship	
11.	Chandru S	9715646161	25/5/23	Informed about Commencement of University exam & Student internship	
12.	Gowtham A	9788891771	25/5/23	Informed about Commencement of University exam & Student internsh	

13.	Mareeswaran P	9566734610	25/5/23	Informed about Commencement of University exam & students intern
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				

Faculty

HoD

K S R INSTITUTE FOR ENGINEERING AND TECHNOLOGY

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Date: 20.03.2023

Dear Sir/Mam,

Sub: Parents – Teachers Meet – Regarding

The Parents – Teachers Meet is conducted once a semester with a view to discussing the various aspects connected with students curricular, Academic performance, Placement training, Co-curricular activities, Extra-curricular activities, etc., the meet aims at facilitating a better understanding among the parents, teachers and the students leading to overall improvement of students progress. It is therefore beneficial for the parents to participate in the meeting and give their valuable suggestions for achieving the above objective.

The Parents – Teacher meet for this semester will be held on 31.03.2023 at 10.00am. You are requested to kindly make it convenient to attend the same.

AGENDA FOR PARENTS MEETING:

TIMING	SESSION DETAIL
10.00 am to 11.00am	Discussion with Class Advisors and Mentors
11.00am to 11.30am	Break
11.30am to 01.00pm	Parents meeting with HoD
01.00pm to 02.00pm	Lunch

Venue: ECE Seminar Hall, KSRIET

Thanking You

P. ycoch 29/03/2023
HoD/ECE

PRINCIPAL.
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TIRUCHENGODE-637 215,
NAMAKKAL Dt, TAMIL NADU.

K S R INSTITUTE FOR ENGINEERING AND TECHNOLOGY, TIRUCHENGODE
DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING
PARENTS FEED BACK

NAME OF THE STUDENT: V. Arun   YEAR/SEM: 2 year / IV-S
(மாணவரின்பெயர்)   (வருடம்பருவம்)

VENUE: ECE Department   DATE: 31.3.23   TIME: 12.00 Pm
(இடம்)   (நாள்)   (நேரம்)

S. NO	Description (பொருள்)	Excellent (மிகச்சிறப்பு)	Very Good (மிகநன்று)	Good (நன்று)	Normal (சுமார்)
1.	Faculty Approach (ஆசிரியர்களின் அணுகுமுறை)	✓			
2.	Training &placement (வேலைவாய்ப்புபயிற்சி)	✓			
3.	Study environment (கல்விதூழ்நிலை)	✓			
4.	Care for students (மாணவர்களுக்கான நற்கவனிப்பு)	✓			
5.	Infrastructure facilities (உள்கட்டமைப்புவசதிகள்)	✓			
6.	Overall performance (மொத்தசெயல்திறன்)	✓			

PLEASE LIST TWO GOOD ASPECTS OF KSRIET
எங்கள் கல்லூரியின் இரண்டு நல்லசெயல்களை பற்றி எழுதவும்.

conducting parent's meeting

mentor for students

PLEASE GIVE TWO SUGGESTIONS FOR FUTHER IMPROVEMENT
எங்கள் கல்லூரியின் செயல்பாடுகளை மேம்படுத்த இரண்டு அறிவுரை எழுதவும்.

* Parent's teacher's meeting should be cumplosory
* make mentor for each and every students

PARENT'S SIGNATURE
(பெற்றோர் கையொப்பம்)

K S R INSTITUTE FOR ENGINEERING AND TECHNOLOGY, TIRUCHENGODE
DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING
PARENTS FEED BACK

NAME OF THE STUDENT: S. Athiel

YEAR/SEM: III / IV

(மாணவரின்பெயர்)

(வருடம்/பருவம்)

VENUE: ECE Department

(இடம்)

DATE: 31/03/2023

(நாள்)

TIME: 11:45

(நேரம்)

S. NO	Description (பொருள்)	Excellent (மிகச்சிறப்பு)	Very Good (மிகநன்று)	Good (நன்று)	Normal (சுமார்)
1.	Faculty Approach (ஆசிரியர்களின் அணுகுமுறை)		✓		
2.	Training &placement (வேலைவாய்ப்புபயிற்சி)	✓			
3.	Study environment (கல்விதூழ்நிலை)		✓		
4.	Care for students (மாணவர்களுக்கான நற்கவனிப்பு)	✓			
5.	Infrastructure facilities (உள்கட்டமைப்புவசதிகள்)	✓		✓	
6.	Overall performance (மொத்தசெயல்திறன்)			✓	

PLEASE LIST TWO GOOD ASPECTS OF KSRIET
எங்கள் கல்லூரியின் இரண்டு நல்லசெயல்களை பற்றி எழுதவும்.

- Teachers are guiding a students as Good
- Teachers are giving Ideas about Studies.

PLEASE GIVE TWO SUGGESTIONS FOR FUTTHER IMPROVEMENT
எங்கள் கல்லூரியின் செயல்பாடுகளை மேம்படுத்த இரண்டு அறிவுரை எழுதவும்.

PRINCIPAL.
K S R INSTITUTE FOR
ENGINEERING AND TECHNOLOGY,
K S R KALVI NAGAR,
TIRUCHENGODE -637 215,
NAMAKKAL DI, TAMIL NADU.

PARENT'S SIGNATURE
(பெற்றோர் கையொப்பம்)
S. Kioshea

K S R INSTITUTE FOR ENGINEERING AND TECHNOLOGY, TIRUCHENGODE
DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING
PARENTS FEED BACK

NAME OF THE STUDENT: K.Dhanush Kuman
(மாணவரின்பெயர்)

YEAR/SEM: II year / 4-Sem
(வருடம்/பருவம்)

VENUE: ECE Department
(இடம்)

DATE: 31.03.23
(நாள்)

TIME: 3:00 Pm
(நேரம்)

S. NO	Description (பொருள்)	Excellent (மிகச்சிறப்பு)	Very Good (மிகநன்று)	Good (நன்று)	Normal (சுமார்)
1.	Faculty Approach (ஆசிரியர்களின் அணுகுமுறை)	✓			
2.	Training &placement (வேலைவாய்ப்புபயிற்சி)		✓		
3.	Study environment (கல்விசூழ்நிலை)		✓		
4.	Care for students (மாணவர்களுக்கான நற்கவனிப்பு)	✓			
5.	Infrastructure facilities (உள்கட்டமைப்புவசதிகள்)	✓			
6.	Overall performance (மொத்தசெயல்திறன்)		✓		

PLEASE LIST TWO GOOD ASPECTS OF KSRIET
எங்கள் கல்லூரியின் இரண்டு நல்லசெயல்களை பற்றி எழுதவும்.

PLEASE GIVE TWO SUGGESTIONS FOR FUTHER IMPROVEMENT
எங்கள் கல்லூரியின் செயல்பாடுகளை மேம்படுத்த இரண்டு அறிவுரை எழுதவும்.

PRINCIPAL.
K S R INSTITUTE FOR
ENGINEERING AND TECHNOLOGY,
K S R KALVI NAGAR,
TIRUCHENGODE-637 215,
NAMAKKAL Dt. TAMIL NADU.

K. Saraswathi
PARENT'S SIGNATURE
(பெற்றோர் கையொப்பம்)