VIDYA ACADEMY OF SCIENCE & TECHNOLOGY
TECHNICAL CAMPUS
KILIMANOOR

COURSE DIARY

Branch	:	ELECTRONICS AND COMMUNICATION
Semester	:	VII Year : 2019
Subject	:	CONTROL SYSTEMS
Code	:	EC 409

Name of the staff member	:	Ms. SREEJITHA S.G.
Designation	:	ASSISTANT PROFESSOR
Department	:	ELECTRONICS AND COMMUNICATION
Mobile No	:	9809266546
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GENERAL INSTRUCTIONS

- Students performance should be evaluated solely on academic basis.
- Students's evaluation should be fair, consistent, transparent and accountable.
- Evaluation of students' performance shold be disclosed to the students.

1. Keep the Course Diary up to date clearly indicating the subject coverage and students attendance on the relevant pages.
2. paste the syllabus in the relevant page
3. Write/paste the Course plan in the relevant page.
4. Events in a semester such as Series Test days, Cultural/Celebration days, days for extra/ Co-curricular activities etc... may be indicated in the year Calender.
5. Assignment details may be written in the Course Diary or may be filled in The Course File.
   (i) Minimum 3 no. of assignments should be given
   (ii) Different sets of questions may be given in an assignment (at least three) to a class.
   (iii) Assignments may be in the form of Written-closed/open book, individual/group, home assignment, or in the form of oral presentation, quiz, seminar etc.
6. Show complete split up of sessional marks in the page 'Particulars of Marks'. Final sessional mark for each student should be equal to the sum of marks awarded for Asignments(10) and Series tests (40).
7. All the entries in the course diary must be, legibly written without overwriting and free of errors.
8. Do not count marks of class tests along with the series test for computing sessional mark.
9. The staff member will be responsible for the safe custody of the Course Diary and (s)he should return it to the HOD at the end of semester or earlier if s(he) leaves the department or discontinue the subject.
10. Follow KTU regulations for computing sessional marks

PRINCIPAL

Branch	: ELECTRONICS AND COMMUNICATION ENGINEERING
Semester	: VII Year : 2019
Subject	: CONTROL SYSTEMS
Code	: EC409

Name of the staff member	: Ms. SREEJITHA S.G.
Designation	: ASSISTANT PROFESSOR
Department	: ELECTRONICS AND COMMUNICATION ENGINEERING
Mobile No	: 9809266546
E-mail	: sreejitha.sg@vidyatc.klmnr.ac.in.

SCHEDULE OF WORK

Days	1	2	3	4	5	6	7
MON		EC409 CS					
TUE							
WED							
THU						EC409 CS	EC409 CS
FRI			EC409 CS				
SAT							EC409 CS

SYLLABUS

COURSE CODE	COURSE NAME	L-T-P-C	YEAR OF INTRODUCTION
EC409	CONTROL SYSTEMS	3-0-0-3	2015

Prerequisite:
MA 101 Calculus, MA102 Differential Equations, MA201 Linear Algebra & Complex Analysis, MA204 Probability, Random Processes and Numerical Methods,EC202 Signals & Systems

Course objectives:

- To introduce the elements of control system and their modeling the system
- To introduce methods for analyzing the time response, the frequency response and the stability of systems.
- To design control systems with compensating techniques.
- To introduce the state variable analysis method.
- To introduce basic concepts of digital control systems.

Syllabus: Control system , types and application, feedback system, mathematically modelling of control systems, block diagram representation, signal flow graph, Mason's formula, test signals, time response analysis, frequency analysis, stability concepts and analysis, state variable analysis. Observability and controllability, digital control systems , state space analysis, Jury's test

Expected outcome:
Students should be able to

- Represent mathematically a systems and deriving their transfer function model.
- Analyse the time response and frequency response of the systems for any input
- Find the stability of system
- Design a control system with suitable compensation techniques
- Analyse a digital control system.

Text Books

1. Farid Golnaraghi, Benjamin C. Kuo, Automatic Control Systems, 9/e, Wiley India
2. Ogata K., Discrete-time Control Systems, 2/e, Pearson Education.
3. Gopal, Control Systems, 4/e, McGraw Hill Education India Education , 2012.

References

1. Norman S Nise, Control System Engineering, 5/e, Wiley India
2. Ogata K., Modern Control Engineering, Prentice Hall of India, 4/e, Pearson Education, 2002.
3. Richard C Dorf and Robert H. Bishop, Modern Control Systems, 9/e, Pearson Education, 2001.
4. Gopal, Digital Control and State Variable Method, 4/e, McGraw Hill Education India 2012.

Course Plan

Module	Course content (42 hrs)	Hours	Marks
1	Basic Components of a Control System, Applications, Open-Loop Control Systems and Closed-Loop Control Systems	1	15
	Effects of Feedback on Overall Gain, Stability, External, disturbance or Noise	1	

SYLLABUS

	Types of Feedback Control Systems, Linear versus Nonlinear Control Systems ,Time-Invariant versus Time-Varying Systems .	1	
	Overview of solving differential equations using Laplace transforms	1	
	Mathematical modeling of control systems - Mechanical and electromechanical systems.	2	
	Block diagram representation and reduction methods	2	
	Signal flow graph and Mason's rule formula	2	
II	Standard test signals. Time response specifications.	1	15
	Time response of first and second order systems to unit step input, ramp inputs, time domain specifications	2	
	Steady state error and static error coefficients.	1	
	Dynamic error coefficient and its evaluation.	1	
	FIRST INTERNAL EXAM		
III	Stability of linear control systems: methods of determining stability, Routh's Hurwitz Criterion.	2	15
	Root Locus Technique: Introduction, properties and its construction.	2	
	Frequency domain analysis: Frequency domain specifications, correlation between time and frequency responses	1	
IV	Nyquist stability criterion: fundamentals and analysis	2	15
	Relative stability: gain margin and phase margin. Stability analysis with Bode plot.	2	
	Design of Control Systems: PD and PI controllers	2	
	Design with phase-lead and phase-lag controllers (frequency domain approach).	2	
	SECOND INTERNAL EXAM		
V	State variable analysis: state transition matrix and equation, State space representation of Continuous Time systems	2	20
	Transfer function from State Variable Representation, Solutions of the state equations	2	
	Concepts of Controllability and Observability, Kalman Test	2	
VI	Discrete Control systems fundamentals: Overview of Z transforms. State space representation for Discrete time systems.	2	20
	Sampled Data control systems ,Sampling Theorem, Sample & Hold, Open loop & Closed loop sampled data systems.	2	
	State space analysis : Solving discrete time state space equations, pulse transfer function, Discretization of continuous time state space equations	3	
	Stability analysis of discrete time systems Jury's test	1	
	END SEMESTER EXAM		

Question Paper

The question paper shall consist of three parts. Part A covers I and II module, Part B covers III and IV module, Part C covers V and VI module. Each part has three questions which may have maximum four subdivisions. Among the three questions one will be a compulsory question covering both modules and the remaining from each module, of which one to be answered. Mark patterns are as per the syllabus with maximum 30 % for theory and 70% for logical/numerical problems, derivation and proof.

COURSE PLAN

No	Date & Day	HR	Topics to be covered
1	01-08-19 THURSDAY	6	Introduction
2	01-08-19 THURSDAY	7	Basic Components of a Control System, Applications, Openloop and closed loop Control systems.
3	02-08-19 FRIDAY	3	Effects of feedback on Overall gain, Stability, External disturbance or Noise.
4	05-08-19 MONDAY	2	Types of feedback Control systems, Linear Vs Nonlinear Control systems, Time-Invariant, Time Varying Systems.
5	08-08-19 THURSDAY	6	Overview of Solving differential equations using Laplace Transforms.
6	08-08-19 THURSDAY	7	Mathematical Modeling of Control systems.
7	09-08-19 FRIDAY	3	Mechanical and Electromechanical Systems.
8	12-08-19 MONDAY	2	Block diagram representation
9	16-08-19 ~~THURSDAY~~	3	Reduction Methods
10	19-08-19 MONDAY	2	Signal flow graph
11	22-08-19 THURSDAY	6	Mason's rule formula.
12	22-08-19 THURSDAY	7	Standard test Signals. Time response Specifications.
13	26-08-19 MONDAY	2	Time response of first and Second order systems to unit step input.
14	29-08-19 THURSDAY	6	ramp inputs, time domain specifications
15	29-08-19 THURSDAY	7	Steady state error and Static error Coefficients
16	30-08-19 FRIDAY	3	Dynamic error coefficient and its evaluation
17	02-09-19 MONDAY	2	Stability of linear Systems: Methods of determing Stability.
18	05-09-19 THURSDAY	6	Routh's Hurwitz Criterion
19	05-09-19 THURSDAY	7	Root Locus Technique - Introduction
20	06-09-19 FRIDAY	3	Properties and its Construction
21	16-09-19 MONDAY	2	Frequency domain analysis, Specifications, Correlation between time and frequency responses.
22	23-09-19 MONDAY	2	Nyquist Stability Criterion

MODULE-1

MODULE 2

MODULE 3

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SUBJECT COVERAGE

	No	Date & Day	HR	Topics covered	Mode of Instruction
MODULE-I	1.	01-08-19 THURSDAY	7.	Introduction	
	2	05-08-19 MONDAY	2	Basic Components of a Control system, Appln, Openloop & closed loop Control Systems	Lecture
	3	07-08-19 WEDNESDAY	1	Effects of Feedback on Overall gain, Stability, External disturbance or Noise	Lecture
	4	16-08-19 FRIDAY	1	Types of Feedback Control Systems, Linear & Nonlinear CS, Time-Invariant, Time Varying Systems	Lecture
	5	19-08-19 MONDAY	2	Overview of Solving differential equations using laplace Transforms	Lecture.
	6	19-08-19 MONDAY	2	Mathematical Modelling of Control systems	Lecture
	7	22-08-19 THURSDAY	2	Mechanical & Electromechanical Systems	Lecture
	8	26-08-19 MONDAY	2	Block diagram representation	Lecture
	9	29-08-19 THURSDAY	5	Reduction Methods	Lecture
	10	29-08-19 THURSDAY	6	Signal flow graph	Lecture
	11	29-08-19 THURSDAY	7	Mason's rule formula.	Lecture
MODULE-II	12	30-08-19 FRIDAY	1	Standard test signals. Time response Specifications	Lecture
	13	16-09-19 MONDAY	2	Time response of first & Second order Systems to unit step input.	Lecture.
	14	23-09-19 MONDAY	2	Ramp input, time domain Specifications	Lecture
	15	30-09-19 MONDAY	2	Steady state error and static error coefficients	Lecture
	16	30-09-19 MONDAY	4	Dynamic error Coefficient & its evaluation	Lecture.
MODULE-III	17	10-10-19 FRIDAY	6	Stability of Linear Systems, Methods of determining stability	Lecture
	18	10-10-19 THURSDAY	7	Routh's Hurwitz Criterion	Lecture
	19	14-10-19 MONDAY	2	Root Locus Technique - Introduction	Lecture
	20	14-10-19 MONDAY	4	Properties & its Construction	Lecture.
	21	16-10-19 WEDNESDAY	1	frequency domain Analysis, Specifications, Correlation between time & freq	Lecture.
	22	17-10-19 THURSDAY	6	Nyquist Stability Criterion	Lecture

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COURSE PLAN

No	Date & Day	HR	Topics to be covered
23	26-09-19 THURSDAY	6	Fundamentals and analysis
24	26-09-19 THURSDAY	7	Relative Stability: gain margin and phase margin
25	27-09-19 FRIDAY	3	Stability analysis with Bode plot.
26	30-09-19 MONDAY	2	Design of Control Systems
27	03-10-19 THURSDAY	6	PD & PI Controllers
28	03-10-19 THURSDAY	7	Design with phase lead & phase lag.
29	04-10-19 FRIDAY	3	Controllers (Frequency domain approach).
30	10-10-19 THURSDAY	6	State Variable analysis: State transition matrix & equation.
31	10-10-19 THORSDAY	7	State Space representation of Continous time systems
32	11-10-19 FRIDAY	3	Transfer function from state Variable representation
33	14-10-19 MONDAY	2	Solutions of the state equations
34	17-10-19 THURSDAY	6	Concepts of Controllability and observability
35	17-10-19 THURSDAY	7	Kalman Test.
36	18-10-19 FRIDAY	3	Discrete Control systems-Fundamentals. Overview of z transforms.
37	21-10-19 MONDAY	2	State Space representation for Discrete time systems.
38	24-10-19 THURSDAY	6	Sampled Data Control Systems, Sampling Theorem.
39	24-10-19 THURSDAY	7	Sample and hold, Open & closed loop data systems.
40	25-10-19 FRIDAY	3	State Space Analysis: Solving discrete time
41	31-10-19 THURSDAY	6	State Space equations, pulse transfer function.
42	31-10-19 THURSDAY	7	Discretization of Continous time State Space equations
43	01-11-19 FRIDAY	3	Stability analysis of discrete time Systems Jurystest
44	04-11-19 MONDAY	2	REVISION - MODULE 1

MODULE-4 — MODULE-5 — MODULE-6

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SUBJECT COVERAGE

No	Date & Day	HR	Topics covered	Mode of Instruction
23	17-10-19 THURSDAY	7	Fundamentals & Analysis	Lecture.
24	19-10-19 SATURDAY	7	Relative stability; gain margin & phase margin	Lecture.
25	24-10-19 THURSDAY	6	Stability Analysis with Bodeplot	Lecture
26	24-10-19 THURSDAY	7	Design of Control Systems.	Lecture.
27	25-10-19 Friday	3	PD & PI Controllers	Lecture
28	31-10-19 Thursday	2	Design with phase lead & phase lag	Lecture.
29	31-10-19 Thursday	4	Controllers (frequency domain approach)	Lecture.
30	04-11-19 MONDAY	2	State Variable analysis; State transition matrix & eqn	Lecture.
31	05-11-19 TUESDAY	1	State Space representation of C.T System	Lecture
32	05-11-19 TUESDAY	7	Transfer function from state Variable representation	Lecture.
33	07-11-19 THURSDAY	3	Solutions of the state equations.	Lecture.
34	08-11-19 FRIDAY	1	Concepts of Controllability & observability	Lecture
35	08-11-19 FRIDAY	2	Kalman Test.	Lecture
36	08-11-19 FRIDAY	6	Discrete Control Systems - Fundamentals · Overview of z transforms	Lecture
37	08-11-19 FRIDAY	7	State Space representation for discrete time Systems.	Lecture
38	11-11-19 MONDAY	2	Sampled Data Control Systems, Sampler Theorem.	Lecture.
39	11-11-19 MONDAY	5	Sample & hold, Open & closed loop	Lecture
40	11-11-19 MONDAY	6	State Space Analysis: Solving discrete	Lecture
41	11-11-19 MONDAY	7	time State equations, pulse transfer functions	Lecture
42	14-11-19 THURSDAY	7	Discretization of Continous time State space	Lecture
43	18-11-19 MONDAY	4	Stability analysis of discrete time system	Lecture
44	19-11-19 TUESDAY	2	Jury's test.	Lecture

Module I
Module II
Module III
Module IV
Module V
Module VI

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COURSE PLAN

No	Date & Day	HR	Topics to be covered
45	06-11-19 THURSDAY	6	REVISION- MODULE 2
46	06-11-19 THURSDAY	7	REVISION- MODULE 2
47	08-11-19 FRIDAY	3	REVISION - MODULE 2
48	11-11-19 MONDAY	2	REVISION - MODULE 3
49	14-11-19 THURSDAY	6	REVISION - MODULE 3
50	14-11-19 THURSDAY.	7	REVISION - MODULE 4
51	15-11-19 FRIDAY	3	REVISION - MODULE 4
52	18-11-19 MONDAY	2	REVISION - MODULE 5
53	21-11-19 THURSDAY	6	REVISION - MODULE 5
54	21-11-19 THURSDAY	7	REVISION - MODULE 6
55	22-11-19 FRIDAY	3	REVISION - MODULE 6.

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SUBJECT COVERAGE

No	Date & Day	HR	Topics covered	Mode of Instruction
45	21-11-19 THURSDAY	6	Revision	Lecture
46	21-11-19. THURSDAY	7	Revision.	Lecture.

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HOD RJS

LOG OF TUTORIAL

Sl.No	Date	Topic of Tutorial	Manner of conduct of Tutorial	Duration

DETAILS OF ASSIGNMENT/TUTORIALS/MINI PROJECTS

Sl. No.	Date of issue	Date of submission	Date of return after evaluation	Description
1.	23-09-19	30-09-19	03-10-19	4 Set of Problems covering Block diagram reduction, SFG For each Set of Students. Set A (Roll No-1 – 11) Set B (Roll No-12- 22) Set C (Roll No-23 - 33)
2.	18-11-19	22-11-19	25-11-19	Root locus problems. Set A (Roll No 1–11) Set BC Roll No 12-22) Set C (Roll No 23-33).

Semester & Batch S7 ECE

Subject: EC409. CONTROL SYSTEMS

Roll No.	Name	Month	AUG										SEPT						
		Date	1	5	7	16	19	19	22	26	29	29	30	16	29	23	30	30	10	10
		Period	7	2	1	1	2	4	2	2	6	7	3	2	5	2	2	4	6	7
76.08	1. AKHIL V.		X	X	A	X	X	X	X	X	A	A	A	A	A	A	X	X	X	X
95.65	2. ANEESHA S.		X	A	X	X	X	X	X	X	X	X	X	A	X	X	X	X	X	X
63.04	3. ARSHIN A.S.		A	X	A	X	A	A	X	A	X	X	X	A	X	X	X	X	X	X
86.95	4. ASWATHY A.S.		X	X	X	X	X	X	X	X	X	X	X	A	X	A	A	A	A	A
91.30	5. ASWATHY CHANDRAN		X	X	X	A	X	X	X	X	X	X	X	X	X	X	X	X	X	X
76.08	6. ASWATHY P.K.		X	X	X	A	X	X	X	X	A	A	A	X	A	X	A	A	X	X
91.30	8. ASWATHY V.S.		X	X	X	X	X	X	A	X	X	X	X	A	X	X	X	X	X	X
86.95	9. ATHULYA A.L.		X	X	X	X	X	X	X	X	X	X	X	X	X	X	A	A	X	X
93.47	10. BHAGYA GIRI		X	X	X	X	X	X	X	X	X	X	X	X	X	A	A	A	X	X
95.65	11. DHANYA J. BABU		X	X	X	X	X	X	X	X	X	X	A	A	X	X	X	X	X	X
76.08	12. FATHIMA SALIM		X	X	X	A	X	X	X	A	X	X	X	A	X	A	X	X	A	A
80.60	13 KIRAN DILEEP		X	X	X	X	X	X	X	X	A	A	X	A	A	X	A	A	A	A
93.47	14. KRIPA K.J		X	X	X	A	X	X	X	A	X	X	X	A	X	X	X	X	X	X
97.82	15 M G. ANAGHA NAIR		X	X	X	X	X	X	X	X	X	X	X	A	X	X	X	X	X	X
91.30	16 PREKSHA		X	X	X	X	X	X	X	X	A	A	X	X	A	X	X	X	X	X
100	17. RESHMA RAVI		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
80.43	18. ROSHNA R.S.		X	X	A	X	X	X	X	A	X	X	X	A	X	A	A	A	X	X
80.43	19. SAFNA BEEGAM S.		X	X	X	X	X	X	X	A	X	X	X	A	X	A	X	X	X	X
82.60	20. SARANYA S.		X	X	X	X	X	X	X	A	X	X	X	A	X	A	X	X	X	X
76.08	21. SHONIMA A.S.		X	X	X	A	X	X	A	A	X	X	X	A	X	A	X	X	A	A
76.08	22. SUNISHA S.		X	X	X	X	X	X	X	X	A	A	A	A	A	A	A	A	X	X
86.95	23. VINEETHA V.		X	X	X	X	X	X	X	X	X	X	A	A	X	A	X	X	X	X
76.08	24. VISHNU RAM D.S.		X	X	X	X	X	X	X	X	A	A	X	A	A	A	X	X	X	X
88.95	25. AKHIL CHANDRAN		A	X	X	X	X	X	A	X	A	A	X	X	A	A	X	X	X	X
89.13	26. ANJALI J.S.		X	X	X	X	A	A	X	X	X	X	X	X	X	X	X	X	A	A
76.08	27. ARUN A.G.		X	X	A	A	X	X	X	X	X	X	A	X	X	A	A	X	X	X
91.30	28. ARYA SIVAN		X	X	X	X	A	A	X	A	X	X	X	X	X	X	X	X	X	X
76.08	29. ATHUL SURESH		A	X	A	X	X	X	A	X	X	X	X	A	A	X	A	X	X	X

Roll No.	OCT 14	14	16	17	18	19	24	24	25	31	31	NOV 04	05	05	07	08	08	08
	2	4	1	6	7	7	6	7	3	2	4	2	1	7	3	1	2	6
1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	A	A	A
2	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
4	X	X	A	X	X	X	A	A	A	A	A	A	A	A	X	X	X	X
5	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
6	A	A	A	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
7	X	X	A	X	X	X	X	X	X	X	X	A	A	X	A	X	X	X
8	X	X	A	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
9	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
10	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
11	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
12	X	X	X	A	A	X	A	A	X	X	X	X	X	X	A	X	X	X
13	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
14	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
15	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
16	X	X	X	X	X	X	X	X	X	X	A	X	X	X	X	X	X	X
17	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
					X													
18	X	X	X	X	X	X	X	X	X	A	A	X	X	X	A	X	X	X
19	A	A	X	X	X	X	X	X	X	X	X	X	X	X	X	A	A	A
20	X	X	X	A	A	X	X	X	X	A	A	X	X	X	X	X	X	X
21	X	X	X	A	A	X	A	A	X	X	X	X	X	X	X	X	X	X
22	X	X	X	X	X	X	X	X	X	A	A	A	X	X	X	X	X	X
23	X	X	X	X	X	X	X	X	X	A	A	X	X	X	X	X	X	X
24	X	X	X	X	X	X	X	X	A	X	X	X	A	X	X	A	A	A
25	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
26	X	X	X	X	X	X	X	X	A	X	X	X	X	X	X	X	X	X
27	X	X	X	X	X	X	X	X	X	X	X	X	X	X	A	X	X	X
28	X	X	X	X	X	X	X	X	X	X	X	A	X	X	X	X	X	X
29	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	A	A	A

Roll No.	(10) Assignment: A1	A2	A3	Total	(20) (20) Test: T1	T2	T3	Total
1	7	10			14	19		
2	10	10			14	18		
4	5	5			12	10		
5	8	10			20	19		
6	10	10			16	19		
7	10	10			18	20		
8	7	5			11	16		
9	10	10			20	20		
10	10	10			19	20		
11	10	10			A	20		
12	10	10			A	20		
13	7	10			15	15		
14	10	10			17	19		
15	10	10			17	19		
16	10	10			20	18		
17	10	10			18	19		
18	10	10			16	19		
19	10	10			18	20		
20	10	10			18	18		
21	10	10			16	19		
22	10	10			19	20		
23	10	10			19	19		
24	7	10			10	14		
25	7	10			20	19		
26	10	10			19	19		
27	7	10			15	19		
28	10	10			20	18		
29	7	10			A	17		

Semester & Batch S7 ECE

Subject	EC409. CONTROL SYSTEMS
Roll No.	Name
1.	AKHIL V.
2.	ANEESHA S.
3.	ARSHIN A.S.
4.	ASWATHY A.S.
5.	ASWATHY CHANDRAN
6.	ASWATHY P.K.
7.	ASWATHY V.S.
8.	ATHULYA A.L.
9.	BHAGYA GIRI
10.	DHANYA J. BABU
11.	FATHIMA SALIM
12.	KIRAN DILEEP
13.	KRIPA K.J
14.	M G. ANAGHA NAIR
15.	PREKSHA
16.	RESHMA RAVI
17.	ROSHNA R.S.
18.	SAFNA BEEGAM S.
19.	SARANYA S.
20.	SHONIMA A.S.
21.	SUNISHA S.
22.	VINEETHA V.
23.	VISHNU RAM D.S.
24.	AKHIL CHANDRAN
25.	ANJALI J.S.
26.	ARUN A.G.
27.	ARYA SIVAN
28.	ATHUL SURESH

NOV

Roll No.	08	11	1	11	14	18	19	21	21
	7	2	5	6	7	7	2	6	7
1	A	X	X	X	X	X	X	X	X
2	X	X	X	X	X	X	X	X	X
4	X	X	X	X	X	A	X	A	X
5	X	X	X	X	X	X	X	X	X
6	X	X	X	X	X	X	X	X	X
7	X	X	X	X	X	X	X	X	X
8	X	X	X	X	X	X	A	X	X
9	X	X	X	X	X	X	A	A	A
10	X	X	X	X	X	X	X	X	X
11	X	X	X	X	X	X	X	X	X
12	X	X	X	X	X	X	X	X	X
13	X	X	X	X	X	X	X	X	X
14	X	X	X	X	X	X	X	X	X
15	X	X	X	X	X	X	X	X	X
16	X	X	X	X	X	X	X	X	X
17	X	X	X	X	X	X	X	X	X
18	X	X	X	X	X	X	X	X	X
19	A	X	X	X	X	X	X	X	X
20	X	X	X	X	X	X	A	X	X
21	X	X	X	X	X	X	X	X	X
22	X	X	X	X	X	X	X	X	X
23	X	X	X	X	X	X	A	X	X
24	A	X	X	X	X	X	X	X	X
25	X	X	X	X	X	X	X	X	X
26	X	X	X	X	X	X	X	X	X
27	X	A	A	A	A	A	X	X	X
28	X	X	X	X	X	X	X	X	X
29	A	X	X	X	X	A	X	X	X

Semester & Batch S5 ECE

Month AUG. SEPT

Subject EC409 CONTROL SYSTEMS

Roll No.	Name	Date	1	5	7	16	19	17	22	26	29	29	30	16	29	23	30	30
		Period	7	2	1	1	2	4	2	2	6	7	1	2	5	2	2	4
30	JIJI CHANDRAN		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
31	MANEESH M.S.		A	X	X	X	X	X	X	A	A	A	X	X	A	X	X	X
32	RESHMA S.		A	X	X	A	X	X	X	X	X	X	X	A	X	X	X	X
33.	SREETHU P.R.		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

91.30
89.13
86.95
97.82

Roll No.	OCT										NOV						
	14	19	16	17	12	19	24	24	25	31	04	05	05	07	08	08	08
	2	4	1	6	7	7	6	7	3	2	4	2	1	7	3	1	2	6
30	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
31	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
32	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
33	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

RB

Assignment				Test				Roll No.
A1	A2	A3	Total	T1	T2	T3	Total	
10	10			20	20			30
7	10			20	20			31
10	10			18	19			32
10	10			20	20			33

RB

Semester & Batch S5 ECE

Subject EC409 CONTROL SYSTEMS

Roll No.	Name
30	JIJI CHANDRAN
31	MANEESH M.S.
32	RESHMA S.
33.	SREETHU P.R.

91.30
89.13
86.95
85.82

NOV

Roll No.	08	11	11	11	11	14	18	19	21	21
	7	2	5	6	7	7	4	2	6	7
30	X	A	A	A	A	X	X	X	X	X
31	X	X	X	X	X	X	X	X	X	X
32	X	X	X	X	X	A	A	A	X	X
33	X	X	X	X	X	A	X	X	X	X

SEMESTER CALENDAR

No.	Date	Event	Remarks
1	01-08-19	Commencement of class	
2.	09-08-19	Class suspended due to flood.	
3.	12-08-19	Bakrid Holiday	
4.	16-08-19	Class Committee Meeting - S7 ECE	
5.	27-08-19	Graduation Day 2019.	
6.	05-09-19	Publishing Attendance.	
7.	06-09-19	Onam Celebration	
8.	20-09-19	Control System first Series Examination	
9.	26&27/09-19	ARTS Day	
10.	30-09-19	First Series Examination marks publishing date.	
11	21,22-10-19	Holiday due to heavy rains	
12	30-10-19	Second Series - Control system	
13	5-11-19	Consolidated Series 1 & 2 publishing date	
14	20-11-19	KSU Strike - Class suspended	
15	25-11-19	Class ends.	

ATTENDANCE, MARKS FOR ASSIGNMENT, TESTS AND
INTERNAL EVALUATION MARKS WITH SPLIT UP (IN TABULAR FORM)

RollNo.	Name	Attendance	Assignment	Tests	Internal Marks
1	AKHIL V.	76.08	9	34	43
2	ANEESHA S.	95.65	10	32	42.
4	ARSHIN A.S.	63.04	5	22	27
5	ASWATHY A.S.	86.95	9	39	48
6	ASWATHY CHANDRAN	91.30	10	35	45
7	ASWATHY P.K.	76.08	10	38	48
8	ASWATHY V.S.	91.30	6	27	31
9	ATHULYA A.L.	86.95	10	40	50
10	BHAGYA GIRI	93.47	10	39	49
11	DHANYA J. BABU	95.65	10	20	30
12	FATHIMA SALIM	76.08	10	20	30
13	KIRAN DILEEP	82.60	9	30	39
14	KRIPA K.J.	93.47	10	36	46
15	MG ANAGHA NAIR	97.82	10	36	46
16	PREKSHA	91.30	10	38	48
17	RESHMA RAVI	100	10	37	47
18	ROSHNA R.S.	80.43	10	35	45
19	SAFNABEEGAM S.	80.43	10	38	48
20	SARANYA S.	82.60	10	36	46
21	SHONIMA A.S.	76.08	10	35	45
22	SUNISHA S.	76.08	10	39	49
23	VINEETHA V.	86.95	10	38	48
24	VISHNURAM D.S	76.08	9	34	43
25	AKHIL CHANDRAN	86.95	9	39	48
26	ANJALI J.S.	89.13	10	38	48
27	ARUN A.G.	76.08	9	34	43
28	ARYA SIVAN	91.30	10	38	48
29	ATHUL SURESH	76.08	9	17	26

RES

ATTENDANCE, MARKS FOR ASSIGNMENT, TESTS AND INTERNAL EVALUATION MARKS WITH SPLIT UP (IN TABULAR FORM)

RollNo.	Name	Attendance	Assignment	Tests	Internal Marks
30	JIJI CHANDRAN	91.30	10	40	50
31	MANEESH M.S.	89.13	9	40	49
32	RESHMA S.	86.95	10	37	47
33	SREETHU P.R.	97.82.	10	40	50

RAS

RESULT ANALYSIS

Name of the Faculty member	: Ms SREEJITHA SG
Subject with code	: EC409
Class/Batch	: S7 ECE
No. of hours per week	: 5
Class	from : AUG 2019 to : NOV 2019
Other faculty member who shared the subject	: —
No. of hours for the other faculty	: —

RESULT OF INTERNAL ASSESSMENT

Tests	No. of students in the class	No. of students appeared for the exam	No. of students who scored % marks					No. of failures	Class Average
			> 89	75-89	60-74	50-59	40-49		
Series-1	32	29	17	7	3	2	0	0	17.07
Series-2	32	32	27	3	1	1	0	0	18.47

RESULT OF UNIVERSITY EXAMINATIONS

No. of students in the class	No. of students appeared for the exam	No. of students who scored % marks									No. of failures	Class Average
		O	A+	A	B+	B	C	P	F	FE	I	
32	30	0	0	0	3	9	7	0	11	0	0	11	59.38%

Comments :

Signature of faculty

Signature of HOD

Notes