


2.6.2 Attainment of Programme outcomes and course outcomes are evaluated by the institution.

S. No	Name of the course
1	Control Systems
2	Microwave and Optical Communication
3	Electro Magnetic Fields and Waves
4	IC Applications Lab
5	Embedded System Design


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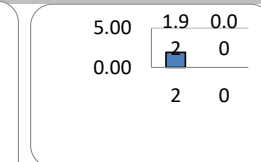
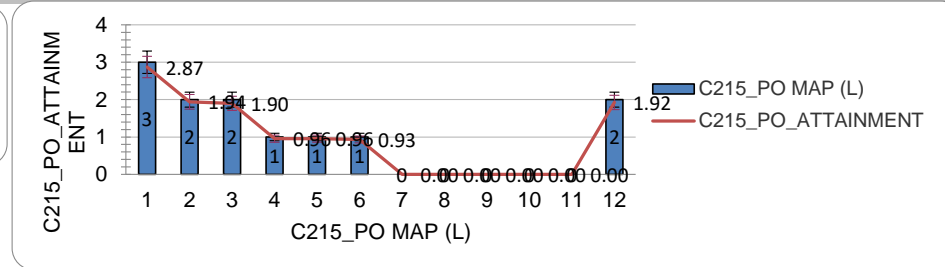
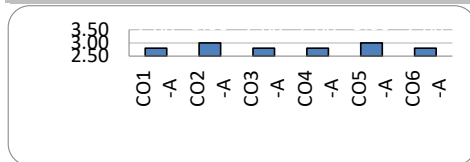
COURSE TITLE	Control Systems	COURSE CODE	EC503PC
NAME & DESIGNATION	Chinnam S V Maruthi Rao	SECTION	A
NAME & DESIGNATION	Chinnam S V Maruthi Rao	SECTION	B
DEPARTMENT	Electronics and Communication Engineering	REGULATION	R18
BATCH	2020-24	YEAR & SEMESTER	III - I
ACADEMIC YEAR	2022-23		

COURSE NAME	COURSE OUTCOMES	BTL
C303.1	Understand the modeling of LTI systems using Transfer Function of a system mathematically and graphically with industrial examples	2 & 3
C303.2	Understand the response of a system in time domain and assess their stability for LTI systems	2
C303.3	Understand the response of a system in frequency domain and various methods to assess their stability for LTI systems	3 & 4
C303.4	Understand the concept of relative stability and assess the same using Nyquist method in LTI systems	3 & 4
C303.5	Design simple Controllers and Compensators based on the frequency domain specifications	5 & 6
C303.6	Understand the modeling of Linear Time variant / Discrete systems through state space representation	3

COURSE TITLE	LECTURE	TUTORIAL	PRACTICAL	HOURS	CREDITS	CO1-T	CO2-T	CO3-T	CO4-T	CO5-T	CO6-T	CO1-A	CO2-A	CO3-A	CO4-A	CO5-A	CO6-A
Control Systems	3	1		4	4	2.02	2.38	1.65	1.65	2.38	2.02	2.80	3.00	2.80	2.80	3.00	2.80

CO PO MAPPING	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
C303.1	X	-	X	-	X	X	-	-	-	-	-	X	X	-
C303.2	X	X	-	-	X	-	-	-	-	-	-	X	X	-
C303.3	X	X	X	-	-	-	-	-	-	-	-	X	X	-
C303.4	X	X	X	X	-	-	-	-	-	-	-	X	X	-
C303.5	X	X	X	X	-	-	-	-	-	-	-	X	X	-
C303.6	X	-	X	X	-	-	-	-	-	-	-	-	X	-
C215_CO PO MAP	X	X	X	X	X	X	-	-	-	-	-	X	X	-

C_PO ATTAINMENT	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	CO_ATT
C303.1	2	-	1	-	2	1	-	-	-	-	-	2	1	-	2.80
C303.2	2	2	-	-	1	-	-	-	-	-	-	1	1	-	3.00
C303.3	3	2	2	-	-	-	-	-	-	-	-	1	2	-	2.80
C303.4	2	1	2	1	-	-	-	-	-	-	-	1	1	-	2.80
C303.5	3	2	2	1	-	-	-	-	-	-	-	2	2	-	3.00
C303.6	2	-	1	1	-	-	-	-	-	-	-	-	1	-	2.80
C215_PO MAP (L)	3	2	2	1	1	1	0	0	0	0	0	2	2	0	2.87
C215_PO_ATTAINMENT	2.87	1.94	1.90	0.96	0.96	0.93	0.00	0.00	0.00	0.00	0.00	1.92	1.92	0.00	



PRE REQUISITES	GAPS IF ANY	ACTION TAKEN	DATE	RESOURCE PERSON	%ST ATTENDED	RELEVENCE TO Pos	RELEVENCE TO PSOs

	CO1	CO2	CO3	CO4	CO5	CO6
Domain Expert Feedback	2	2	1	1	2	2
Student Feedback	2.00	3.00	2.00	2.00	3.00	2.00
University Results	1.5	1.5	1.5	1.5	1.5	1.5
Average	1.83	2.17	1.50	1.50	2.17	1.83
Enhancement %						
10	2.0	2.4	1.7	1.7	2.4	2.0

UNIT	CO	L NO:	TOPIC	COURSE OBJECTIVES	COURSE OUTCOMES	KEY NO:	KEY WORD	
Unit-I: Introduction to Control Problem								
UNIT - 1	CO - 1	1	Introduction to Control Problem	To represent the LTI system functionality as Transfer Function through mathematical and Graphical methods with various electrical, mechanical and electromechanical systems as examples.	Understand the modeling of LTI systems using Transfer Function of a system mathematically and graphically with industrial examples	1	Open Loop & Closed Loop	
		2	Industrial Control examples			2	Transfer Function	
		3	Mathematical models of physical systems			3	Block Diagram	
		4	Control hardware and their models					
		5	Transfer function models of linear time-invariant systems					
		6	Feedback Control					
		7	Open-Loop and Closed-loop systems					
		8	Benefits of Feedback					
		9	Block diagram algebra					
UNIT-II: Time Response Analysis of Standard Test Signals								
UNIT - 2	CO - 2	1	Time response of first and second order systems for standard test inputs	To understand the first and second order systems response in time domain and analyze their stability through RH Criterion and Root Locus Techniques	Understand the response of a system in time domain and assess their stability for LTI systems	1	Time Domain Specifications	
		2	Application of initial and final value theorem			2	RH Criteria	
		3	Design specifications for second order systems based on the time-response			3	Root Locus	
		4	Concept of Stability					
		5	Routh-Hurwitz Criteria					
		6	Relative Stability analysis					
		7	Root-Locus technique					
		8	Construction of Root-loci					
UNIT-III: Frequency-Response Analysis								
UNIT - 3	CO - 3	1	Relationship between time and frequency response	To understand the frequency response of a system and assess their stability through Polar plots and Bode Plot Techniques	Understand the response of a system in frequency domain and various methods to assess their stability for LTI systems	1	Frequency Response	
		2	Polar plots			2	Polar Plot	
		3	Bode plots			3	Bode Plot	
	UNIT-III: Frequency-Response Analysis							
	CO - 4	1	Nyquist stability criterion	To assess the stability of a system through Nyquist Plots and improve their performance	Understand the concept of relative stability and assess the same using Nyquist method in LTI systems	1	Nyquist Plot	
		2	Relative stability using Nyquist			2	Gain Margin	
		3	Gain and phase margin			3	Phase Margin	
4		Closed-loop frequency response						

UNIT-IV: Introduction to Controller Design							
UNIT - 4	CO - 5	1	Stability	To understand the frequency domain specifications and design various controllers and compensators to improve the performance of system	Design simple Controllers and Compensators based on the frequency domain specifications	1	Frequency Domain Specifications
		2	Steady-state accuracy			2	Controllers
		3	Transient accuracy			3	Compensators
		4	Disturbance Rejection				
		5	Root-loci method of feedback controller design				
		6	Design specifications in frequency-domain				
		7	Frequency-domain methods of design				
		8	Application of Proportional, Integral and Derivative Controllers				
		9	Lead and Lag compensation in designs				
		10	Analog and Digital implementation of controllers				
UNIT-V: State Variable Analysis and Concepts of State Variables							
UNIT - 5	CO - 6	1	State space model	To understand the state space representation and assess the dynamic response for linear time variant / discrete systems	Understand the modeling of Linear Time variant / Discrete systems through state space representation	1	State Space Model
		2	Diagonalization of State Matrix			2	Controllability and Observability
		3	Solution of state equations			3	Discrete Time System
		4	Eigen values and Stability Analysis				
		5	Concept of controllability and observability				
		6	Pole-placement by state feedback				
		7	Discrete-time systems				
		8	Difference Equations				
		9	State-space models of linear discrete-time systems				
		10	Stability of linear discrete-time systems				

CO PO MAPP	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	CO_A
C303.1	2	0	1	0	2	1	0	0	0	0	0	2	1	0	2.80
C303.2	2	2	0	0	1	0	0	0	0	0	0	1	1	0	3.00
C303.3	3	2	2	0	0	0	0	0	0	0	0	1	2	0	2.80
C303.4	2	1	2	1	0	0	0	0	0	0	0	1	1	0	2.80
C303.5	3	2	2	1	0	0	0	0	0	0	0	2	2	0	3.00
C303.6	2	0	1	1	0	0	0	0	0	0	0	0	1	0	2.80
SUM	14	7	8	3	3	1	0	0	0	0	0	7	8	0	
CO_PO MAP	3	2	2	1	1	1	0	0	0	0	0	2	2	0	0
C_PO ATT	2.87	1.94	1.90	0.96	0.96	0.93	0.00	0.00	0.00	0.00	0.00	1.92	1.92	0.00	

0

SUM RANGE	CO_PO(L)
0	0
1-3	1
4-11	2
12-18	3

5	III-I ECE-B	20VE1A0465	AMDA HARSHITHA	1.5	2	0.5		2					1	2	0.5	7.5	5	5	18	
6	III-I ECE-B	20VE1A0466	AVULA PALLAVI	2	2	0.5	0.5	2	1				2	2	0.5	9	7.5	5	22	
7	III-I ECE-B	20VE1A0467	BACHSHANKAR YUVRAJ SINGH					2	1				2	2		7	9.5	5	22	
8	III-I ECE-B	20VE1A0468	BANDARI KUSHI	1.5	2	0.5		2	1				2	2	0.5	8.5	7	5	21	
9	III-I ECE-B	20VE1A0469	BARAKA CHARAN KUMAR				0.5		0				1.5	1.5	0.5	4	7	5	16	
10	III-I ECE-B	20VE1A0471	BODDUPALLY NANDINI	2	2	1	2	2	0.5							9.5	7.5	5	22	
11	III-I ECE-B	20VE1A0472	DADINABOYINA AKSHAY YADAV	0.5		0	0	0.5								1	7	5	13	
12	III-I ECE-B	20VE1A0473	DASARI SIDDHARTHA	1									2			3	5.5	5	14	
13	III-I ECE-B	20VE1A0474	DEVULAPALLY SWATHI	1.5	2	0.5							2	2	0.5	8.5	9.5	5	23	
14	III-I ECE-B	20VE1A0475	DINDU MANI KRISHNA GOUD	1				0			0.5		0	0		1.5	6.5	5	13	
15	III-I ECE-B	20VE1A0476	GANDHAM VEERABABU	1				0	0.5		0		1.5	1		3.5	8	5	17	
16	III-I ECE-B	20VE1A0477	GATTU SHREYA REDDY	2	2								2	2		8	9.5	5	23	
17	III-I ECE-B	20VE1A0478	GAYANI SATHVIKA VEMPATI				0.5	2	1		1		2	0.5	0.5	6.5	6.5	5	18	
18	III-I ECE-B	20VE1A0479	JALLA ANUSHA	0	1.5	0.5		0	0.5				2			4	8	5	17	
19	III-I ECE-B	20VE1A0480	JEELA NAVEEN		2			0	2	0.5						4.5	7	5	17	
20	III-I ECE-B	20VE1A0481	KARNATI VAMSHIKRISHNA																	
21	III-I ECE-B	20VE1A0482	KOLLIPARA RAJESH					1.5	1		0					2.5	7.5	5	15	
22	III-I ECE-B	20VE1A0483	KOTAPATI SATHYA VARA PRASAD					0	2	1		1		2	2	7	9	5	21	
23	III-I ECE-B	20VE1A0484	LODANGI RAKESH					0	2	1				2	2	0.5	7.5	9	5	22
24	III-I ECE-B	20VE1A0485	M JAGALINGA		2			2	0.5				2	0		4.5	9	5	19	
25	III-I ECE-B	20VE1A0486	MACHIPEDDI PRAVALIKA	1	2	0.5							2			5.5	7	5	18	
26	III-I ECE-B	20VE1A0487	MANCHALA SAI HARSHITH										2			3	9.5	5	18	
27	III-I ECE-B	20VE1A0489	MERUGU PAVAN GOUD	1				0	2	1			2	2		7	9.5	5	22	
28	III-I ECE-B	20VE1A0490	NADIMGERI ANIL KUMAR										2			3	8.5	5	17	
29	III-I ECE-B	20VE1A0491	NARAHARI ANUDEEP REDDY	1.5	1		0.5	2								5	7.5	5	18	
30	III-I ECE-B	20VE1A0492	NELLIKONDI AJAY KUMAR REDDY								1	0	0.5	2	0	0.5	4	8	5	17
31	III-I ECE-B	20VE1A0493	NUTANAKANTI PAVAN	0									1			1	7	5	13	
32	III-I ECE-B	20VE1A0494	P PRANATHI	1	2	0.5				0.5			1.5	0		5	3.5	5	14	
33	III-I ECE-B	20VE1A0495	PENDYALA MAHANTH		1			2	1				2	2	0.5	7.5	6.5	5	19	
34	III-I ECE-B	20VE1A0497	PONUGOTI SWATHANTRA RAO		2	0.5				1	1		2	2	0.5	5	8	5	18	
35	III-I ECE-B	20VE1A0498	RAMISETTI KIREETI				0.5	2	1				1	2		6.5	7.5	5	19	
36	III-I ECE-B	20VE1A0499	RANGINEENI YASASWINI SATHYA VAISHNAMI	2	0	0	0	2	1							5	6.5	5	17	
37	III-I ECE-B	20VE1A04A0	RAPOL BHARGAV REDDY								0		0			0	2.5	5	8	
38	III-I ECE-B	20VE1A04A1	SEELAM SUNIL	1	0								1.5	0.5	0	3	3.5	5	12	
39	III-I ECE-B	20VE1A04A2	SHAIK NASIR HUSSAIN		0.5			2	1				1.5	0	0	4.5	8	5	18	
40	III-I ECE-B	20VE1A04A3	SHAMPURI BINDHU SRI				0.5	2	1				2	2	0.5	8	8.5	5	22	
41	III-I ECE-B	20VE1A04A4	SINGIREDDY CHANDRA SHEKAR REDDY																	
42	III-I ECE-B	20VE1A04A5	SUREPALLY ADITH				2	0	0				1	0	0	3	6	5	14	
43	III-I ECE-B	20VE1A04A6	TADI NAGA BHAGYA SRI	1	1.5	0.5							2	2	0.5	7.5	5.5	5	18	
44	III-I ECE-B	20VE1A04A7	THORRURU SONYPRIYA	1.5	1								2	1	0	5.5	7	5	18	
45	III-I ECE-B	20VE1A04A8	VALLAKATI NANDU	2	2			2	1							7	5.5	5	18	
46	III-I ECE-B	20VE1A04A9	VANJA LAHARI REDDY	0	0.5	0.5					1	0.5	0.5	2	0	0	4	7.5	5	17
47	III-I ECE-B	20VE1A04B0	VIGRAHALA VENKATA DHIRTI	2	2	0.5		2	1							7.5	6.5	5	19	
48	III-I ECE-B	20VE1A04B1	VISLAVATH MACHENDER				0				1		1.5	2	0	4.5	8.5	5	18	
49	III-I ECE-B	20VE1A04B2	VYDYULA RISHITHA	2						2	2	1	2	2	0.5	9.5	9.5	5	24	
50	III-I ECE-B	20VE1A04B3	YEJARLA NARASIMHA							0.5	1.5		1.5	0		3.5	8.5	5	17	
51	III-I ECE-B	20VE1A04B4	B KISHORE CHAND				0.5		0				1			1.5	4	5	11	
52	III-I ECE-B	20VE1A04B5	CHAMA VAMSHIDHAR REDDY																	
53	III-I ECE-B	20VE1A04B6	SHAIK AYAZ																	
54	III-I ECE-B	21VESAO408	BAGANI SHAIK ALTHAF BASHA					0.5	0.5	2	0.5		2	1		6	8.5	5	20	
55	III-I ECE-B	21VESAO409	CHAMBETI VENKATA SAI CHABANAYA				0	1.5	1				2	2		6.5	8	5	20	
56	III-I ECE-B	21VESAO410	GAVVALA SAI TEJA							0.5	2		2	2	0.5	7	8.5	5	21	
57	III-I ECE-B	21VESAO411	GUGULOTHU SRINATH	1	2					1			2	2		7	9	5	21	
58	III-I ECE-B	21VESAO412	JINKALA KARTHIK							1	2		1.5		0	4.5	9.5	5	19	
59	III-I ECE-B	21VESAO413	MATAM SAI NITHIN				1.5	1.5	1				1.5	2	0	7.5	8	5	21	
60	III-I ECE-B	21VESAO414	VEERABOMMA PRASANATH	0						1.5	0	0	2	2		5.5	5	5	16	
61	III-I ECE-B	21VESAO415	MANGALI MADHU LOHITH	0			0						1.5			1.5	5.5	5	12	

5	III-I ECE-B	20VE1A0465	AMDA HARSHITHA				2	1	1				0.5	2	1	7.5	7	5	20	19	48	B+
6	III-I ECE-B	20VE1A0466	AVULA PALLAVI				2	2	1	2	2	0.5				9.5	10	5	25	24	42	B+
7	III-I ECE-B	20VE1A0467	BACHSHANKAR YUVRAJ SINGH		2		2	1	1						1	6	7.5	5	19	21	13	F
8	III-I ECE-B	20VE1A0468	BANDARI KUSHI				2	1	1				2	2	1	9	9	5	23	22	41	B+
9	III-I ECE-B	20VE1A0469	BARAKA CHARAN KUMAR		1		1	1	0		0.5					2	4.5	5	12	14	26	C
10	III-I ECE-B	20VE1A0471	BODDUPALLY NANDINI				2	2	1	0	2	1				8	8	5	21	22	30	B
11	III-I ECE-B	20VE1A0472	DADINABOYINA AKSHAY YADAV	0		0			0							0	8	5	13	13	1	F
12	III-I ECE-B	20VE1A0473	DASARI SIDDHARTHA	2			2	0	1							5	7	5	17	16	1	F
13	III-I ECE-B	20VE1A0474	DEVULAPALLY SWATHI				2	1	1				0.5	2	1	7.5	7	5	20	22	36	B
14	III-I ECE-B	20VE1A0475	DINDU MANI KRISHNA GOUD						1							1	4.5	5	11	12	5	F
15	III-I ECE-B	20VE1A0476	GANDHAM VEERABABU				1		1	0.5	0		0			2.5	7	5	15	16	12	F
16	III-I ECE-B	20VE1A0477	GATTU SHREYA REDDY				2	1	1	2	2					8	8	5	21	22	38	B+
17	III-I ECE-B	20VE1A0478	GAYANI SATHVIKA VEMPATI				2	0	1	0.5	0		1	0.5		4.5	5.5	5	15	17	51	B+
18	III-I ECE-B	20VE1A0479	JALLA ANUSHA	0.5	1		2	1	0							4.5	7.5	5	17	17	34	B+
19	III-I ECE-B	20VE1A0480	JEELA NAVEEN																		29	B+
20	III-I ECE-B	20VE1A0481	KARNATI VAMSHIKRISHNA																	#####		
21	III-I ECE-B	20VE1A0482	KOLLIPARA RAJESH							0.5						0.5	7	5	13	14	17	F
22	III-I ECE-B	20VE1A0483	KOTAPATI SATHYA VARA PRASAD				2	1	1				2		1	7	6	5	18	20	37	B
23	III-I ECE-B	20VE1A0484	LODANGI RAKESH				1.5	0.5	0				1	0.5	1	4.5	8.5	5	18	20	23	B+
24	III-I ECE-B	20VE1A0485	M JAGALINGA		2		1	1								4	6	5	15	17	32	C
25	III-I ECE-B	20VE1A0486	MACHIPEDDI PRAVALIKA				1	2			0.5					3.5	5.5	5	14	16	40	B
26	III-I ECE-B	20VE1A0487	MANCHALA SAI HARSHITH																	18	26	C
27	III-I ECE-B	20VE1A0489	MERUGU PAVAN GOUD				2	1	0	2	1					6	10	5	21	22	27	C
28	III-I ECE-B	20VE1A0490	NADIMGERI ANIL KUMAR						0.5						0	0.5	8	5	14	16	19	F
29	III-I ECE-B	20VE1A0491	NARAHARI ANUDEEP REDDY				2	1	1	2	2					8	6.5	5	20	19	39	B
30	III-I ECE-B	20VE1A0492	NELLIKONDI AJAY KUMAR REDDY		1					2	0		1.5		0.5	4	9	5	18	18	46	B+
31	III-I ECE-B	20VE1A0493	NUTANAKANTI PAVAN																	13		
32	III-I ECE-B	20VE1A0494	P PRANATHI				2	1.5	0				1	2	0.5	7	8	5	20	17	51	B+
33	III-I ECE-B	20VE1A0495	PENDYALA MAHANTH		2	0	2	1	1							6	9	5	20	20	33	B
34	III-I ECE-B	20VE1A0497	PONUGOTI SWATHANTRA RAO				2		1	2						5	6.5	5	17	18	36	B
35	III-I ECE-B	20VE1A0498	RAMISETTI KIREETI				1.5	1	1	2	0.5	0				6	6.5	5	18	19	38	B
36	III-I ECE-B	20VE1A0499	RANGINEENI YASASWINI SATHYA VAISHNAVI		2		2	1	1				0			6	9	5	20	19	48	B+
37	III-I ECE-B	20VE1A04A0	RAPOL BHARGAV REDDY																	8		
38	III-I ECE-B	20VE1A04A1	SEELAM SUNIL				1	1		1.5	0					3.5	7	5	16	14	26	C
39	III-I ECE-B	20VE1A04A2	SHAIK NASIR HUSSAIN																	18	48	B+
40	III-I ECE-B	20VE1A04A3	SHAMPURI BINDHU SRI				2	1	1	2	2					8	9	5	22	22	55	A
41	III-I ECE-B	20VE1A04A4	SINGIREDDY CHANDRA SHEKAR REDDY																	#####		
42	III-I ECE-B	20VE1A04A5	SUREPALLY ADITH				1	0					1.5	1		3.5	7.5	5	16	15	26	C
43	III-I ECE-B	20VE1A04A6	TADI NAGA BHAGYA SRI				2	1	0.5				1.5	2	1	8	8	5	21	20	28	C
44	III-I ECE-B	20VE1A04A7	THORRURU SONYPRIYA				2	1	0.5	2	2	0.5				8	9.5	5	23	21	35	B
45	III-I ECE-B	20VE1A04A8	VALLAKATI NANDU				2	1		2	0.5	0.5				6	9.5	5	21	20	38	B
46	III-I ECE-B	20VE1A04A9	VANJA LAHARI REDDY		0											0			0	9	36	B
47	III-I ECE-B	20VE1A04B0	VIGRAHALA VENKATA DHRITI				1.5		0.5	0.5	0.5			0.5		3	7	5	15	17	26	C
48	III-I ECE-B	20VE1A04B1	VISLAVATH MACHENDER				2	1	1				1	1		6	8	5	19	19	33	B
49	III-I ECE-B	20VE1A04B2	VYDYULA RISHITHA				2	2	1	2	2	1				10	10	5	25	25	57	A+
50	III-I ECE-B	20VE1A04B3	YEJARLA NARASIMHA		0	2	0	1								3	7.5	5	16	17	32	C
51	III-I ECE-B	20VE1A04B4	B KISHORE CHAND		0					0						0	1.5	5	7	9	9	F
52	III-I ECE-B	20VE1A04B5	CHAMA VAMSHIDHAR REDDY																	#####		
53	III-I ECE-B	20VE1A04B6	SHAIK AYAZ																	#####		
54	III-I ECE-B	21VESAO408	BAGANI SHAIK ALTHAF BASHA				2	1	1				2	0	1	7	7	5	19	20	47	B+
55	III-I ECE-B	21VESAO409	CHAMBETI VENKATA SAI SHARANAYA				2	1	1	0	0					4	3.5	5	13	17	41	B
56	III-I ECE-B	21VESAO410	GAVVALA SAI TEJA		1	1	1.5	1								4.5	2	5	12	17	36	B
57	III-I ECE-B	21VESAO411	GUGULOTHU SRINATH				1		0.5		1	0				2.5	4	5	12	17	28	C
58	III-I ECE-B	21VESAO412	JINKALA KARTHIK				2		1	2						5	10	5	20	20	38	B
59	III-I ECE-B	21VESAO413	MATAM SAI NITHIN				1		1	1						3	5.5	5	14	18	38	B
60	III-I ECE-B	21VESAO414	VEERABOMMA PRASANTH				2	1	0					1		4	6.5	5	16	16	32	C
61	III-I ECE-B	21VESAO415	MANGALI MADHU LOHITH																	12		

	A	B	C	A	B	C	A	B	C	A	B	C	10M	5M	25M	
MID 1-INTERNAL THRESHOLD	50	1	1	0.5	1	1	0.5	1	1	0.5	1	1	0.5	5	2.5	12.5
MID 2-INTERNAL THRESHOLD	50	1	1	0.5	1	1	0.5	1	1	0.5	1	1	0.5	5	2.5	12.5
EXTERNAL THRESHOLD	40	30														

CO ATTAINMENT	DES	OBJ	ASN	DES	OBJ	ASN	INT	EXT	DIRECT	INDIRECT	CO_ATT	INT %	25	TARGET
CO1	69.7	90.1	97.5	3	3	3	3.00	3	3.00	2.00	2.80	EXT %	75	2.02
CO2	77.8	90.1	97.5	3	3	3	3.00	3	3.00	3.00	3.00			2.38
CO3	67.5	90.1	97.5	3	3	3	3.00	3	3.00	2.00	2.80	DIRECT %	80	1.65
CO4	71.7	81.7	100.0	3	3	3	3.00	3	3.00	2.00	2.80	INDIRECT %	20	1.65
CO5	82.5	81.7	100.0	3	3	3	3.00	3	3.00	3.00	3.00			2.38
CO6	82.2	81.7	100.0	3	3	3	3.00	3	3.00	2.00	2.80			2.02
COURSE OVERALL CO ATTAINMENT (AVERAGE)											2.87		2.02	


% RANGE	LEVEL
<40%	0
40% to 50%	1
50% to 60%	2
>60%	3

| | |

S.No	Hall Ticket No.	CO1	CO2	CO3	CO4	CO5	CO6
1	20VE1A0401	2	3	2	2	3	2
2	20VE1A0402	2	3	2	2	3	2
3	20VE1A0403	2	3	2	2	3	2
4	20VE1A0404	2	3	2	2	3	2
5	20VE1A0405	2	3	2	2	3	2
6	20VE1A0406	2	3	2	2	3	2
7	20VE1A0407	2	3	2	2	3	2
8	20VE1A0408	2	3	2	2	3	2
9	20VE1A0409	2	3	2	2	3	2
10	20VE1A0410	2	3	2	2	3	2
11	20VE1A0411	2	3	2	2	3	2
12	20VE1A0412	2	3	2	2	3	2
13	20VE1A0413	2	3	2	2	3	2
14	20VE1A0414	2	3	2	2	3	2
15	20VE1A0415	2	3	2	2	3	2
16	20VE1A0416	2	3	2	2	3	2
17	20VE1A0417	2	3	2	2	3	2
18	20VE1A0418	2	3	2	2	3	2
19	20VE1A0419	2	3	2	2	3	2
20	20VE1A0420	2	3	2	2	3	2
21	20VE1A0421	2	3	2	2	3	2
22	20VE1A0422	2	3	2	2	3	2
23	20VE1A0423	2	3	2	2	3	2
24	20VE1A0424	2	3	2	2	3	2
25	20VE1A0425	2	3	2	2	3	2
26	20VE1A0426	2	3	2	2	3	2
27	20VE1A0427	2	3	2	2	3	2
28	20VE1A0428	2	3	2	2	3	2
29	20VE1A0429	2	3	2	2	3	2
30	20VE1A0430	2	3	2	2	3	2
31	20VE1A0431	2	3	2	2	3	2
32	20VE1A0432	2	3	2	2	3	2
33	20VE1A0433	2	3	2	2	3	2
34	20VE1A0434	2	3	2	2	3	2
35	20VE1A0435	2	3	2	2	3	2
36	20VE1A0436	2	3	2	2	3	2
37	20VE1A0437	2	3	2	2	3	2
38	20VE1A0438	2	3	2	2	3	2
39	20VE1A0439	2	3	2	2	3	2
40	20VE1A0440	2	3	2	2	3	2
41	20VE1A0441	2	3	2	2	3	2
42	20VE1A0443	2	3	2	2	3	2
43	20VE1A0444	2	3	2	2	3	2

44	20VE1A0445	2	3	2	2	3	2
45	20VE1A0446	2	3	2	2	3	2
46	20VE1A0447	2	3	2	2	3	2
47	20VE1A0448	2	3	2	2	3	2
48	20VE1A0449	2	3	2	2	3	2
49	20VE1A0450	2	3	2	2	3	2
50	20VE1A0451	2	3	2	2	3	2
51	20VE1A0452	2	3	2	2	3	2
52	20VE1A0453	2	3	2	2	3	2
53	20VE1A0454	2	3	2	2	3	2
54	20VE1A0455	2	3	2	2	3	2
55	20VE1A0456	2	3	2	2	3	2
56	20VE1A0458	2	3	2	2	3	2
57	20VE1A0459	2	3	2	2	3	2
58	20VE1A0460	2	3	2	2	3	2
59	21VE5A0401	2	3	2	2	3	2
60	21VE5A0402	2	3	2	2	3	2
61	21VE5A0403	2	3	2	2	3	2
62	21VE5A0404	2	3	2	2	3	2
63	21VE5A0405	2	3	2	2	3	2
64	21VE5A0406	2	3	2	2	3	2
65	21VE5A0407	2	3	2	2	3	2
1	20VE1A0461	2	3	2	2	3	2
2	20VE1A0462	2	3	2	2	3	2
3	20VE1A0463	2	3	2	2	3	2
4	20VE1A0464	2	3	2	2	3	2
5	20VE1A0465	2	3	2	2	3	2
6	20VE1A0466	2	3	2	2	3	2
7	20VE1A0467	2	3	2	2	3	2
8	20VE1A0468	2	3	2	2	3	2
9	20VE1A0469	2	3	2	2	3	2
10	20VE1A0471	2	3	2	2	3	2
11	20VE1A0472	2	3	2	2	3	2
12	20VE1A0473	2	3	2	2	3	2
13	20VE1A0474	2	3	2	2	3	2
14	20VE1A0475	2	3	2	2	3	2
15	20VE1A0476	2	3	2	2	3	2
16	20VE1A0477	2	3	2	2	3	2
17	20VE1A0478	2	3	2	2	3	2
18	20VE1A0479	2	3	2	2	3	2
19	20VE1A0480	2	3	2	2	3	2
20	20VE1A0481	2	3	2	2	3	2
21	20VE1A0482	2	3	2	2	3	2
22	20VE1A0483	2	3	2	2	3	2

23	20VE1A0484	2	3	2	2	3	2
24	20VE1A0485	2	3	2	2	3	2
25	20VE1A0486	2	3	2	2	3	2
26	20VE1A0487	2	3	2	2	3	2
27	20VE1A0489	2	3	2	2	3	2
28	20VE1A0490	2	3	2	2	3	2
29	20VE1A0491	2	3	2	2	3	2
30	20VE1A0492	2	3	2	2	3	2
31	20VE1A0493	2	3	2	2	3	2
32	20VE1A0494	2	3	2	2	3	2
33	20VE1A0495	2	3	2	2	3	2
34	20VE1A0497	2	3	2	2	3	2
35	20VE1A0498	2	3	2	2	3	2
36	20VE1A0499	2	3	2	2	3	2
37	20VE1A04A0	2	3	2	2	3	2
38	20VE1A04A1	2	3	2	2	3	2
39	20VE1A04A2	2	3	2	2	3	2
40	20VE1A04A3	2	3	2	2	3	2
41	20VE1A04A4	2	3	2	2	3	2
42	20VE1A04A5	2	3	2	2	3	2
43	20VE1A04A6	2	3	2	2	3	2
44	20VE1A04A7	2	3	2	2	3	2
45	20VE1A04A8	2	3	2	2	3	2
46	20VE1A04A9	2	3	2	2	3	2
47	20VE1A04B0	2	3	2	2	3	2
48	20VE1A04B1	2	3	2	2	3	2
49	20VE1A04B2	2	3	2	2	3	2
50	20VE1A04B3	2	3	2	2	3	2
51	20VE1A04B4	2	3	2	2	3	2
52	20VE1A04B5	2	3	2	2	3	2
53	20VE1A04B6	2	3	2	2	3	2
54	21VE5A0408	2	3	2	2	3	2
55	21VE5A0409	2	3	2	2	3	2
56	21VE5A0410	2	3	2	2	3	2
57	21VE5A0411	2	3	2	2	3	2
58	21VE5A0412	2	3	2	2	3	2
59	21VE5A0413	2	3	2	2	3	2
60	21VE5A0414	2	3	2	2	3	2
61	21VE5A0415	2	3	2	2	3	2
	AVG	2.00	3.00	2.00	2.00	3.00	2.00

DATE: 12-11-22	Mid-1 Question Paper - Descriptive	Marks	CO	Cognitive Process Dimension
Answer any two of the following:				
1	a) For the mechanical system shown below, derive the transfer function; $f(t)$ is the input, whereas V_2 is the output. Derive the analogous electrical system using F-V and F-I analogies.	2	CO-1	BTL-3
	b) Elucidate the procedure for the Root Locus.	2	CO-2	BTL-2
	c) Define Gain Margin and Phase Margin. using Block diagram Algebra, determine the overall gain C/R	1	CO-3	BTL-1
2	a) 	2	CO-1	BTL-3
	b) Derive the response of a second order system for a unit step input in time domain when $\zeta = 1$	2	CO-2	BTL-3
	c) Discuss the procedure for the design of a Bode Plot.	1	CO-3	BTL-2
3	a) Explain the operation of ordinary traffic signal, which control automobile traffic at roadway intersections. When are they open loop control systems? How can traffic be controlled more effectively?	2	CO-1	BTL-4
	b) A Unity Feedback Control System has the Forward Transfer Function $G(S) = 25/S(S + 6)$. Find the Rise Time, Peak Time and Maximum Overshoot for Unit Step Input.	2	CO-2	BTL-3
	c) Illustrate the relation between time domain and frequency domain in a control system.	1	CO-3	BTL-4
4	a) Differentiate Open Loop and Closed Loop Systems.	2	CO-1	BTL-4
	b) Consider a Sixth Order System with the Characteristic Equation, $S^6 + 25S + 854 + 1353 + 2052 + 165 + 16 = 0$	2	CO-2	BTL-4
	c) Using Routh Stability Criterion, Find whether the System is Stable or not, Give the Reasons	1	CO-3	BTL-2
DATE: 20-01-23				
DATE: 20-01-23	Mid-2 Question Paper - Descriptive	Marks	CO	Cognitive Process Dimension
Answer any two of the following:				
1	a) List the Procedural steps in the design of a Lag-Lead Compensator.	2	CO-4	BTL-1
	b) An LTI system is characterized by homogenous state equation $\begin{bmatrix} \dot{x}_1 \\ \dot{x}_2 \end{bmatrix} = \begin{bmatrix} 1 & 0 \\ 1 & 1 \end{bmatrix} \begin{bmatrix} x_1 \\ x_2 \end{bmatrix} + \begin{bmatrix} 1 \\ 0 \end{bmatrix} u$ Compute the solution of homogenous equation assuming the initial state vector $x_0 = \begin{bmatrix} 1 \\ 0 \end{bmatrix}$	2	CO-5	BTL-3
	c) A unity feedback control system has an open loop transfer function given by $G(S)H(S) = \frac{8}{S(S+4)(5S+1)}$ Draw the Nyquist diagram and test the stability.	1	CO-6	BTL-2
2	a) Consider a unity feedback system with open loop transfer function $G(S) = K/S(S+2)(S+5)$. Design a feedback compensator to satisfy the following specifications (i) $M_p \leq 12$ (ii) $T_s \leq 3$ sec (iii) $K_v \geq 4$ Verify whether the following system is controllable and observable or not.	2	CO-4	BTL-6
	b) $\begin{bmatrix} \dot{x}_1 \\ \dot{x}_2 \end{bmatrix} = \begin{bmatrix} -2 & 0 \\ 0 & -1 \end{bmatrix} \begin{bmatrix} x_1 \\ x_2 \end{bmatrix} + \begin{bmatrix} 1 \\ 0 \end{bmatrix} u$ $C = [1 \ 1]$	2	CO-5	BTL-5
	c) List the different steps involved in the construction of a Bode plot. Consider a feedback system with open loop transfer function Design a PID controller, so that the phase margin of the system is 45° at a frequency of 4 rad/sec and steady state error for unit ramp input is 0.6.	1	CO-6	BTL-2
3	a) $G(S) = \frac{100}{(S+1)(S+2)(S+10)}$ Diagonalize the system matrix given below	2	CO-4	BTL-6
	b) $A = \begin{bmatrix} 0 & 1 & 0 \\ 0 & 0 & 1 \\ -2 & -5 & -4 \end{bmatrix}$	2	CO-5	BTL-5
	c) Sketch the polar plot of the following transfer function $G(S) = \frac{10(1+S)}{(2+S)(4+S)}$	1	CO-6	BTL-2 & 5
4	a) Derive the Resonant Peak and Resonant Frequency of a second order system frequency domain response. Consider the system $X' = AX(t) + BU(t)$, Where X is desired to place the poles at $S = -2+j4, -2-j4$ and -10 . Determine the state feedback	2	CO-4	BTL-6
	b) $A = \begin{bmatrix} 1 & 0 & 0 \\ 0 & 0 & 1 \\ -1 & -2 & -4 \end{bmatrix}$ $B = \begin{bmatrix} 0 \\ 0 \\ 1 \end{bmatrix}$	2	CO-5	BTL-3
	c) Define Gain Margin and Phase Margin of a second order system in frequency domain.	1	CO-6	BTL-1

Bloom's Taxonomy



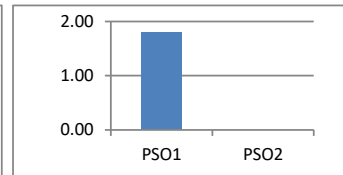
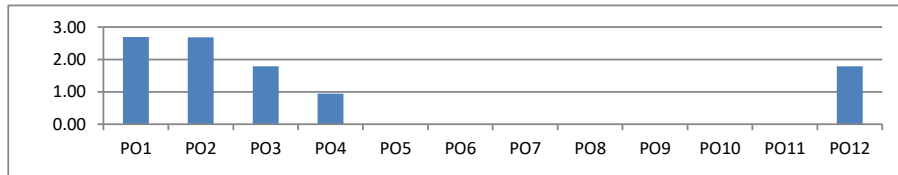
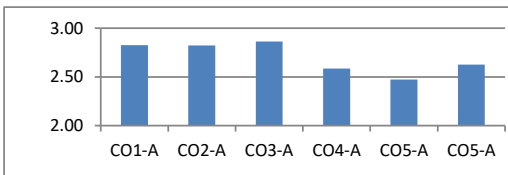
COURSE TITLE	MICROWAVE AND OPTICAL COMMUNICATION	COURSE CODE	EC701PC
NAME & DESIGNATION	Dr.SHANKER PONNAPALLY	SECTION	A,B,C,D
NAME & DESIGNATION	Dr.SHANKER PONNAPALLY	SECTION	A,B,C,D
DEPARTMENT	ELECTRONICS AND COMMUNICATION ENGINEERING	REGULATION	R18
BATCH	2019-2023	YEAR & SEMESTER	IV-I
ACADEMIC YEAR	2022-2023		

COURSE NAME	COURSE OUTCOMES	CPD	HOURS
C411.1	Apply Electro-Magnetic wave theory to analyze microwave parameters in guided medium .	TL2	17
C411.2	Analyze the behavior of microwave components such as directional couplers, power dividers / combiner etc.,	TL4	14
C411.3	Study the performance of specialized microwave tubes such as Klystron, reflex klystron and travelling wave tubes.	TL4	7
C411.4	Study the performance of specialized microwave tubes such as M-type tubes.	TL3	9
C411.5	Understand the operation of microwave solid state devices.	TL3	9
C411.6	Measure various Microwaveparameters(power, reflection coefficient, VSWR etc.)	TL2	13

COURSE TITLE	LECTURE	TUTORIAL	PRACTICA	HOURS	CREDITS	CO1-T	CO2-T	CO3-T	CO4-T	CO5-T	CO6-T	CO1-A	CO2-A	CO3-A	CO4-A	CO5-A	CO5-A
MICROWAVE AND OPTICA	4	0	0	62	4	2.06	1.70	1.70	1.70	2.06	2.06	2.83	2.82	2.86	2.59	2.47	2.63

CO PO MAPPING	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2			
C411.1	X	X	-	-	-	-	-	-	-	-	-	-	-	-			
C411.2	X	X	X	X	-	-	-	-	-	-	-	X	X	-			
C411.3	X	X	X	X	-	-	-	-	-	-	-	X	X	-			
C411.4	X	X	X	-	-	-	-	-	-	-	-	X	X	-			
C411.5	X	-	-	-	-	-	-	-	-	-	-	-	-	-			
C411.6	X	X	X	X	-	-	-	-	-	-	-	X	X	-			
C401_CO PO MAP	X	X	X	X	-	-	-	-	-	-	-	X	X	-			

C_PO ATTAINMENT	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	CO_ATT		
C411.1	3	1	0	0	0	0	0	0	0	0	0	0	0	0	2.83		
C411.2	2	2	2	1	0	0	0	0	0	0	0	1	1	0	2.82		
C411.3	2	3	2	1	0	0	0	0	0	0	0	1	1	0	2.86		
C411.4	3	3	2	0	0	0	0	0	0	0	0	1	1	0	2.59		
C411.5	3	3	2	0	0	0	0	0	0	0	0	1	1	0	2.47		
C411.6	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2.63		
C401_PO MAP (L)	3	3	2	1	0	0	0	0	0	0	0	2	2	0	2.70		
C401_PO_ATTAINMENT	2.69	2.69	1.79	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.79	1.79	0.00			



PRE REQUISITES	GAPS IF ANY	ACTION TAKEN	DATE	RESOURCE PERSON	%ST ATTENDED	RELEVENCE TO Pos	RELEVENCE TO PSOs

	CO1	CO2	CO3	CO4	CO5	CO6
Domain Expert Feedback	2	1	1	1	2	2
Student Feedback	2.13	2.13	2.13	2.13	2.13	2.13
University Results	1.5	1.5	1.5	1.5	1.5	1.5
Average	1.88	1.54	1.54	1.54	1.88	1.88
Enhancement %						
10	2.1	1.7	1.7	1.7	2.1	2.1

UNIT	CO	L NO	TOPIC	COURSE OBJECTIVES	COURSE OUTCOMES	KEY NO:	KEY WORD	
UNIT - 1	CO - 1	UNIT - I - Microwave Transmission Lines-I						
		1	Introduction Microwave Spectrum	Understand the significance of microwaves and microwave transmission lines. Analyze wave propagation in TE, TM or TEM modes, in structures such as rectangular waveguides.	Apply Electro-Magnetic wave theory to analyze microwave parameters.	1	MICRO WAVES (K1)	
		2	Rectangular Waveguides-Expressi			2	Rectangular Waveguide (K2)	
		3	Solution of wave equation in rectan			3	MICRO STRIP LINES(K3)	
		4	Characteristic equation and Cut-of					
		5	Sketches of TE and TM mode field					
		6	Phase and Group velocities, Wavel					
		7	Transmission and Power losses, In					
		8	Micro strip lines- introduction Cha					
		9	Dielectric Constant Effective dielec					
		10	Losses in micro strip lines, Quality					
		11						
		12						
UNIT - II - Cavity Resonators, Waveguide Components and Applications								
UNIT - 2	CO - 2	1	Introduction	Develop the knowledge on transmission lines for microwaves, cavity resonators and waveguide components and applications.	Analyze microwave components such as directional couplers, power dividers / combiner etc.,	1	Rectangular cavity resonator (K1)	
		2	Rectangular cavity resonator			2	Microwave Junctions (K2)	
		3	Dominant modes and resonant freq			3	Ferrite components (K3)	
		4	Coupling mechanisms- Probe, Loop					
		5	Waveguide discontinuities- Waveg					
		6	Waveguide attenuators- Resistive c					
		7	Waveguide phase shifters- Dielect					
		8	Waveguide multipoint junctions- E					
		9	Directional couplers- 2 Hole, Bethe					
		10	Ferrites- Composition and charact					
		11	Scattering matrix- significance, for					
		12	S matrix calculations for magic tee					
		UNIT - III : Microwave Tubes						
UNIT - 3	CO - 3	1	O type and M type classification	Understand and analyze the operation of microwave tubes like klystron, magnetron, travelling wave tube, etc.	Study the performance of specialized microwave tubes such as Klystron, and reflex klystron	1	Conventional tubes(K1)	
		2	O-type tubes: 2 cavity klystrons- st			2	Two cavity klystrons (K2)	
		3	velocity modulation process Appl			3	Reflex Klystron(K3)	
		4	small signal theory expressions for					
		5	Reflex klystrons- structure, appl					
		6	principle of working Mathematical					
		7	power output, efficiency Oscillati					
		8						
		9						
	CO - 4	8	Helix TTS: Significance	Familiarize with microwave solid state devices.	Study the performance of specialized microwave tubes such as travelling wave tubes.	1	Slowwave Structures (K1)	
		9	types and characteristics of slow w			2	Velocity Modulation (K2)	
		10	Amplification process (qualitative)			3	Helix TWT(K3)	
		11	Gain considerations					
		12						
		13						
UNIT-IV: M-Type Tubes:								
UNIT - 4	CO - 5	1	Introduction	Understand the scattering matrix parameters and its use.	Study the performance of specialized microwave tubes such as M-type tubes and Understand the operation of microwave solid state devices.	1	M-Type Tubes (K1)	
		2	Cross-field effects Magnetrons- dif			2	Microwave Solid State Devices (K2)	
		3	8 cavity cylindrical travelling wave			3	TEDs (K3)	
		4	Hull cut Hartree conditions					
		5	modes of resonance and Pi-mode o					
		6	output characteristics Problems on					
		7	Microwave Solid State Devices: Int					
		8	TEDs- introduction					
		9	Gunn diode principle RWH theory					
		10	characteristics Basic Modes of ope					
		11	Gunn Oscillation Modes					
		12	LSA mode Avalanche Transit Time					
		13						
UNIT-V: Microwave Measurements								
UNIT - 5	CO - 6	1	Scattering Matrix-Significance for	Introduce the student the microwave test bench for measure different parameters like attuneation, VSWR, impedance etc.	Measure various Microwave parameters(power , reflection coefficient, VSWR etc.)	1	Scattering Matrix (K1)	
		2	Calculations for-2 port Junctions E			2	Microwave Bench Setup (K2)	
		3	Circulator and Isolator problems			3	Microwave Measurements (K3)	
		4	Description of Microwave Bench- I					
		5	Microwave power measurement B					
		6	Measurement of Attenuation Measure					
		7	Measurement of Low and High VSW					

CO PO N	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
C401.1	3	1	0	0	0	0	0	0	0	0	0	0	0	0
C401.2	2	2	2	1	0	0	0	0	0	0	0	1	1	0
C401.3	2	3	2	1	0	0	0	0	0	0	0	1	1	0
C401.4	3	3	2	0	0	0	0	0	0	0	0	1	1	0
C401.5	3	3	2	0	0	0	0	0	0	0	0	1	1	0
C401.6	1	0	0	0	0	0	0	0	0	0	0	0	0	0
SUM	14	12	8	2	0	0	0	0	0	0	0	4	4	0

	CO1	CO2	CO3	CO4	CO5	CO6
PO1	3	2	2	3	3	1
PO2	1	2	3	3	3	0
PO3	0	2	2	2	2	0
PO4	0	1	1	0	0	0
PO5	0	0	0	0	0	0
PO6	0	0	0	0	0	0
PO7	0	0	0	0	0	0
PO8	0	0	0	0	0	0
PO9	0	0	0	0	0	0
PO10	0	0	0	0	0	0
PO11	0	0	0	0	0	0
PO12	0	1	1	1	1	0
PSO1	0	1	1	1	1	0
PSO2	0	0	0	0	0	0

CO PO N	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	CO_A
C401.1	3	1	0	0	0	0	0	0	0	0	0	0	0	0	2.83
C401.2	2	2	2	1	0	0	0	0	0	0	0	1	1	0	2.82
C401.3	2	3	2	1	0	0	0	0	0	0	0	1	1	0	2.86
C401.4	3	3	2	0	0	0	0	0	0	0	0	1	1	0	2.59
C401.5	3	3	2	0	0	0	0	0	0	0	0	1	1	0	2.47
C401.6	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2.63
CO_PO I	3	3	2	1	0	0	0	0	0	0	0	2	2	0	
C_PO A1	2.69	2.69	1.79	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.79	1.79	0.00	

SUM RA	CO_PO(L)
0	0
1-3	1
4-11	2
12-18	3

Descriptive Question Wise Marks

S.No	Hall Ticket No.	Student Name	Q1			Q2			Q3			Q4			I DES (10)	I OBJ (10)	I ASN (5)	I MID (25)
			CO1	CO2	CO3	CO1	CO2	CO3	CO1	CO2	CO3	CO1	CO2	CO3				
			A	B	C	A	B	C	A	B	C	A	B	C				
			2	2	1	2	2	1	2	2	1	2	2	1				
1	15VE1A04E3	KUNCHALA SAI LOHINATH RAO													0	5	5	
2	18VE1A04E0	JONNADA NITIN RAJ													7	5	12	
3	19VE1A0401	AJAY PRANEETH VETURI										1	1	1	3	8.5	5	17
4	19VE1A0402	AKSHITHA VEERANKI	1	1	1				1	1	1				6	9	5	20
5	19VE1A0403	ALIGOLU MANASA	1.5	2	0.5							1.5	2	1	8.5	9.5	5	23
6	19VE1A0404	ALLAM SURESH	1	1	1	1	1	1							6	8.5	5	20
7	19VE1A0405	ANNAMDAS SONY SRILEKHA		0.5	1				1.5	1	1	1	1	1	6.5	9.5	5	21
8	19VE1A0406	BOMMAKOORI SAKETH													7.5	5	13	
9	19VE1A0407	C SATYA SAI SIDDARTHA	1			1									2	8	5	15
10	19VE1A0408	C V R KOUSHIK	1	0.5											1.5	5	5	12
11	19VE1A0409	CHALLA SAI NITHIN VARDHAN			0.5										0.5	8	5	14
12	19VE1A0410	CHIMALA RAJESH	1		0.5			0.5							2	7.5	5	15
13	19VE1A0411	DHARAVATH GANDHI	0.5		1							1		1	3.5	7.5	5	16
14	19VE1A0412	EGA SATHWIKA	1.5	1	0.5				1	1	1				6	8	5	19
15	19VE1A0413	ENUGU KRUTI	0.5	1	0.5				1.5	1	1				5.5	7.5	5	18
16	19VE1A0414	ERUPAKA AKHILA				0.5	0.5	0.5	1	1	1				4.5	6.5	5	16
17	19VE1A0415	GADIPARTHI NITESH CHOWDARY	1.5	1.5	1				1.5	1.5	1				8	6	5	19
18	19VE1A0416	GANDHAM UDAY KUMAR			0.5	1	1	0.5	1						3.5	7.5	5	16
19	19VE1A0417	GANGAPURAM VISHAL	1	1	1							1	1	0.5	5.5	8	5	19
20	19VE1A0418	GANJI ESHWAR SAI	1	1	0.5				0.5		0.5				3.5	8	5	17
21	19VE1A0419	GARDAS UDAY KIRAN	1						1						2	8.5	5	16
22	19VE1A0420	GARUGU SRIKAR	1	1	1	1	0.5								4.5	6.5	5	16
23	19VE1A0421	GODI VISHNU VARDHAN REDDY	2			1	1								4	8.5	5	18
24	19VE1A0422	GOPATHI SREE SHAKTHEESWARI	2	2	1	1.5	0.5	0.5							7.5	9.5	5	22
25	19VE1A0423	GUNDU SAI KRISHNA REDDY	1.5	1.5	1	0.5	0.5	0							5	7	5	17
26	19VE1A0424	KAMATHAM SAI NITHYA	0.5	0.5	0.5							0.5	1		3	6.5	5	15
27	19VE1A0425	KANCHUKATLA SHIVANI	1.5	2	1	1	1.5	0.5						0.5	7.5	8.5	5	21
28	19VE1A0426	KEERTHI SHARMA TELKAPALLY	1.5	1.5	1				1.5	1.5	1				8	8	5	21
29	19VE1A0427	KUNCHALA GOPI CHAND								0.5	1				1.5	8	5	15
30	19VE1A0428	LAGUDU SHRUTHI	2	2	1	2	1.5	1							9.5	9	5	24
31	19VE1A0429	MASHAPARI ADARSH	0.5								1				1.5	7	5	14
32	19VE1A0430	MALKAPURAM AASHISH							1	0.5	1				2.5	8	5	16
33	19VE1A0431	MANDA AKASH REDDY	2	2	1										5	8	5	18
34	19VE1A0432	MANGALAGIRI ASHWITHA	0		0.5										0.5	8.5	5	14
35	19VE1A0433	MEDDLA HARIKA	2	2	1				1						6	8	5	19
36	19VE1A0434	MIDIDODDA NAVYA SAI VINEETH	2		0.5				1.5	1	1				6	8	5	19

37	19VE1A0435	MOVVA DEEKSHITHA	1	1	0	1.5	1.5	1							6	8.5	5	20
38	19VE1A0436	NAMPALLI RITHIKA	2	2	1				2	2	1				10	7.5	5	23
39	19VE1A0437	NARAYANA NIKHITHA REDDY	1.5	1	1	1.5	1.5	1							7.5	7.5	5	20
40	19VE1A0438	NISHITHA CHITTANURI	0.5	1	0.5				1	1					4	7.5	5	17
41	19VE1A0439	P KAVYA REDDY	1.5		0.5							1	0.5		3.5	7.5	5	16
42	19VE1A0440	PALNATI AKANKSHA	1.5	1	0.5	1	0.5	0.5							5	7.5	5	18
43	19VE1A0441	PERVALA SNIGDHA	1	1	0.5	1	1	0.5							5	7.5	5	18
44	19VE1A0442	POOJARLA PAVAN TEJA	1	1	0.5	0	0								2.5	7	5	15
45	19VE1A0443	POTHANA SINDHU							1	1.5	1		1		4.5	7.5	5	17
46	19VE1A0444	RACHAKONDA AAKASH	1			0.5		0.5							2	7.5	5	15
47	19VE1A0445	RAMOJU SHILPA	2	2	1			0.5							5.5	7	5	18
48	19VE1A0446	RENDUCHINTALA SAI SOWMYA															5	5
49	19VE1A0447	RUDRARAJU VARSHA	1.5	0.5	1				1	1.5	1				6.5	8	5	20
50	19VE1A0448	S RUCHITHA							1.5	1.5	1	1	0.5		5.5	8.5	5	19
51	19VE1A0449	SAIELLA SAILEELA	1	1.5	0.5							2	0.5	0	5.5	8.5	5	19
52	19VE1A0450	SALVERU AKHILA	1.5	1.5	1	1.5	1.5	1							8	8	5	21
53	19VE1A0451	SAPPIDI SOHAN REDDY	1	1		0.5	1								3.5	8	5	17
54	19VE1A0452	SINGARAM MANIK REDDY	1	0.5	0.5	1.5	1	0.5				1	0.5		5	9	5	19
55	19VE1A0453	SPANDANA PAM	1	1	0.5	1	1								4.5	9.5	5	19
56	19VE1A0454	SUMANTH VADLA	1	0.5	1				1	1	1		1	0.5	5.5	8.5	5	19
57	19VE1A0455	SURAKANTI MALAVIKA	1.5	1.5	1							1	1.5	1	7.5	8.5	5	21
58	19VE1A0456	THUMRUGOTI GODHA SREE	1.5		1	2		1	1		1				5.5	9	5	20
59	19VE1A0457	VUTUKURI BHUVAN CHANDRA	1		0.5				1		0.5				3	5.5	5	14
60	19VE1A0459	VIJAYAWAR HRISHIKESH JOSHI														8	5	13
61	19VE1A0460	YEDULLA PREETHI	1	1	1				1	1.5	1				6.5	8.5	5	20
62	19VE5A0409	ERRA BHAVANI	1.5			0.5			1	1					3.5	8	5	17
63	20VE5A0401	CHANDRAPATI SRI POOJITHA	1	1	0.5				1.5	1.5	1				6.5	7.5	5	19
64	20VE5A0402	DAYAMULLAH SHAREEF	1		0				1	0			1		2	4.5	5	12
65	20VE5A0403	DUBBA HARITHA				2			2						4	7.5	5	17
66	20VE5A0404	NADIMPALLY AJAY	1	0.5	0.5				1						3	3.5	5	12
67	20VE5A0405	P NARSIMHA															5	5
68	20VE5A0406	PANTHANGI PRAVALIKA	1.5	1.5					1.5						4.5	7.5	5	17
69	19VE1A0461	AELLA SNIKITHA	1		1				1		1				4	8	5	17
70	19VE1A0462	ALLOJU HARISH	1		0.5			0.5	0.5		0		0		2	8.5	5	16
71	19VE1A0463	ANAGANDLA MOUNIKA	2	2	1				2	2	1				10	8.5	5	24
72	19VE1A0464	ANTHATHI VENKAT CHARAN TEJ	1.5		1			1							3.5	9.5	5	18
73	19VE1A0465	BANDI SAI TARUN	1	1	0.5			0.5							3	6	5	14
74	19VE1A0466	BATCHU AMBIKA SAHITYA				1	2	1	1.5	2	1				8.5	8.5	5	22
75	19VE1A0467	CHILUKALA SAI SUJITH	1.5	1.5	1	1.5	0.5	1							7	8	5	20
76	19VE1A0468	CHINTHAPALLI MANISHA RANI				2	2	1	2	2	1				10	8.5	5	24
77	19VE1A0469	CHITTARS SURENDRA MAHITHA	2	2	1							1	1	1	8	8.5	5	22
78	19VE1A0470	DESU GEETHA SAI LAKSHMI	1	0.5								1			2.5	8	5	16

79	19VE1A0471	GANDHAM THANU SRI				1	1	1				1	1	1	6	7.5	5	19
80	19VE1A0472	GANGAPURAM HARSH SAINATH	1		0.5	0.5		0.5							2.5	5.5	5	13
81	19VE1A0473	GANIYA SATHVIKA	1	1.5					1						3.5	8	5	17
82	19VE1A0474	GHATTAMANENI YASHWANI PRIYA	1	1	1	0.5		1							4.5	8	5	18
83	19VE1A0475	GREESHMA MUNAGA	1	1	1	1.5	1	0.5							6	8	5	19
84	19VE1A0476	GUBBALA SAI SREE	2	2	1	2	1.5	1							9.5	6	5	21
85	19VE1A0477	GURRALA NAGA SURENDRA REDDY	1.5	1.5	1	1.5	1.5	1							8	8	5	21
86	19VE1A0479	JULURI SAIRAM			0.5			0.5							1	2.5	5	9
87	19VE1A0480	K SAI SHRIYA	1.5	2	1	2	2	1							9.5	8.5	5	23
88	19VE1A0481	KADTHALA UDAYASRI	2	2	1	1.5	2	1							9.5	8.5	5	23
89	19VE1A0482	KARNATI GOUTHAM														4.5	5	10
90	19VE1A0483	KATAKAM AKSHAY KUMAR REDDY	1	1	1				2		1				6	3.5	5	15
91	19VE1A0484	KOUDE GNANENDER									0.5	1	1	0.5	3	8.5	5	17
92	19VE1A0485	KOWSHIK THADAKAMALLA	1	1											2	3.5	5	11
93	19VE1A0486	KUNCHALA PRASAD	1		1						1				3	5.5	5	14
94	19VE1A0487	L SHRAVYA	2	2	0.5	2	2	1							9.5	9.5	5	24
95	19VE1A0488	LENKALA MANJARIKA				1	1	1	1.5	1.5	1				7	8.5	5	21
96	19VE1A0489	MOOLA PAVAN KUMAR GOUD	1	1	1	1	1	1							6	6.5	5	18
97	19VE1A0490	MANDALAJU TRIVENI BHARGAVI				2	1	1	1.5	1.5	1				8	5.5	5	19
98	19VE1A0491	MEDAM AKHIL	1.5	1.5	1				1	1	1				7	7	5	19
99	19VE1A0492	MIRYALA NIKHILA	1	1.5	1	1	0.5	1							6	7	5	18
100	19VE1A0493	MULAGIRI BHUVANDHAVEE	1	1.5	1	1	1	1							6.5	8	5	20
101	19VE1A0494	NAGULA THARUN REDDY															5	5
102	19VE1A0495	NAMA SHRESHTA	2	2	1				2	2	1				10	8	5	23
103	19VE1A0496	NANDIPETA SHANKAR	1	0.5	1			1			1				3.5	7	5	16
104	19VE1A0497	NARRA PAVANI	1.5	1.5	1	1	1	1							7	8	5	20
105	19VE1A0498	NISHANTH REDDY SURABHI							1		1	1		1	4	8	5	17
106	19VE1A0499	NITIN THOTA	1.5	1	1	1	0.5	1							6	8	5	19
107	19VE1A04A0	P CHARAN KUMAR GOUD	1		1			1							3	9	5	17
108	19VE1A04A1	PALLI VENKATA SHRI SAHITYA	1.5	1.5	1				1.5	1.5	1				8	9	5	22
109	19VE1A04A2	PANTULU SAI SHREYAS	1	1	0.5			0.5		0.5					3	7.5	5	16
110	19VE1A04A3	PATEL GAUTHAMI	1	1	1					1.5			1		4.5	8.5	5	18
111	19VE1A04A4	PATNAM MADHUVANI	2	1.5	1				1.5	2	1				9	8.5	5	23
112	19VE1A04A5	PIPPALAPALLI INDRIMA	2	2	1	2	1	1							9	8	5	22
113	19VE1A04A6	RAJAMONI SRIKANTH	1	1.5	1				0.5	0.5	1				5.5	8.5	5	19
114	19VE1A04A7	RAMOJU ABHIRAM	1		0.5	1		0.5							3	6.5	5	15
115	19VE1A04A8	RAVULA ARTHI	2	1.5	1				1.5	0.5	1				7.5	8	5	21
116	19VE1A04A9	SAMUDRALA DATTU	1.5	1.5	1	1	1	1							7	8.5	5	21
117	19VE1A04B0	SANDAGALLA PURUSHOTHAM	1	0.5						0.5					2	8.5	5	16
118	19VE1A04B1	SETTIGARI KOUSHIK	2	2	1				2		1				8	7.5	5	21
119	19VE1A04B2	SRI ABHINAY PADALA		0.5	0.5	0.5	0.5	0.5							2.5	7	5	15
120	19VE1A04B3	SUDIREDDY AKHILA				1	2	1	1.5	2	1				8.5	9	5	23

121	19VE1A04B4	THUPPARI VIDYA							0.5		1	1.5		0.5	3.5	8	5	17
122	19VE1A04B5	TURUPU SHIVA PRASAD REDDY	1	1	1	1	1								5	8	5	18
123	19VE1A04B6	VALAKONDA DEEPTHI							2	0.5	1	2		1	6.5	8	5	20
124	19VE1A04B7	VALLALA SAI CHARAN	1	0.5	1				1	0.5	1				5	7.5	5	18
125	19VE1A04B8	VUNDHYALA VENNELA	1	1.5	1				1.5	0	1				6	8	5	19
126	19VE1A04B9	YANALA LIKITHA	1.5	1	1				1	0.5	0.5				5.5	8	5	19
127	19VE1A04C0	YASA SATHWIKA	2	2	1				2	2	1				10	8.5	5	24
128	20VE5A0407	AMRAI VIKAS	2	2	1	1									6	4.5	5	16
129	20VE5A0408	BHUKYA SHEKAR	1	1	1				1	1	1				6	7	5	18
130	20VE5A0409	BOINPALLY DEEPIKA	2	2	1	2	1	1							9	8.5	5	23
131	20VE5A0410	CHITTIMALLA SHREYA				1.5	1.5	1				1.5	1.5	1	8	7.5	5	21
132	20VE5A0411	GILLA DURGA	1	1.5	1							1	1	1	6.5	8.5	5	20
133	20VE5A0412	METTU ROHIT REDDY	1	1.5	1							0.5		0.5	4.5	8.5	5	18
134	19VE1A04C1	A NIKHIL GOUD	0.5						0.5	0.5	0.5				2	8	5	15
135	19VE1A04C2	AVANCHA SAI SRILAYA	2	2	1	2	2	1							10	9	5	24
136	19VE1A04C3	ANIREDDY SINDHU REDDY	0.5	0.5	0.5				0.5		1				3	7.5	5	16
137	19VE1A04C4	ADDULA HYNDAVI	2	2	0.5				1	0.5	1				7	8.5	5	21
138	19VE1A04C6	B K V R L KEERTHANA	2	2	1	2	1	1							9	9	5	23
139	19VE1A04C7	BEEJANI SHIVA KUMAR	0												0	7.5	5	13
140	19VE1A04C8	BEJJANKI SARAYU					2	1				2	2	1	8	9	5	22
141	19VE1A04C9	BOLLEPALLI AKHILA	2	2	0.5		1	1				1	1	1	7.5	7.5	5	20
142	19VE1A04D0	BYADEGERA NEHA	2	2					2	0.5	1				7.5	7.5	5	20
143	19VE1A04D2	D LAHARI					1	1				2	1	1	6	9.5	5	21
144	19VE1A04D3	D PRIYA DARSHINI			0.5	2	1.5	1	2	2	1				9.5	9	5	24
145	19VE1A04D4	DHARAMKAR PRIYANKA	1	1	0	1.5	0.5	0							4	8.5	5	18
146	19VE1A04D5	DATRIK LOKESH KUMAR	0												0	8.5	5	14
147	19VE1A04D6	DIDUGU YOGESWARA DATTA	2	2							1				5	8.5	5	19
148	19VE1A04D7	DONGAPURE SHRUTHI	2	2	0.5				2	1.5	1				9	9	5	23
149	19VE1A04D8	GADAPA MANICHANIKYA	0												0	4.5	5	10
150	19VE1A04E0	GIRAMONI RAMYA	1	2								1.5	1.5		6	8.5	5	20
151	19VE1A04E1	JAMPALA PADMAVATHI	0.5	1.5	0.5	2	1	1							6.5	9.5	5	21
152	19VE1A04E2	JANGAM RAHUL	2		1										3	7.5	5	16
153	19VE1A04E3	K JAHNAVI	2	2			1								5	8.5	5	19
154	19VE1A04E4	K PREETHI				1	2	1	1	1	1				7	9	5	21
155	19VE1A04E5	KALVAKOL PRASANNA REDDY	1.5		0.5	2		1							5	8	5	18
156	19VE1A04E6	KAMINI ASWIN SAI	1.5		0.5										2	8	5	15
157	19VE1A04E7	KANCHARLA NIKHITHA	2	1.5	1	2	1	1							8.5	9	5	23
158	19VE1A04E8	KANDANURU SRIVATSA	1	1								2	2		6	7.5	5	19
159	19VE1A04E9	KOMIRINENI AKSHAY RAO			0.5				1	2					3.5	8.5	5	17
160	19VE1A04F0	KONDAPARTHI SREEJA	2	1	0				0.5					1	4	7	5	16
161	19VE1A04F1	UMMADI KRISHNA TARUN REDDY	1.5												1.5	7	5	14
162	19VE1A04F2	KUNDURU GANESH REDDY	0												0	8	5	13

163	19VE1A04F3	MADIREDDY RISHIKA	2	2	1						2	2	1	10	9	5	24	
164	19VE1A04F4	MARUPAKA KRISHNA PHANINDRA	2	1	1				1	1	1			7	8	5	20	
165	19VE1A04F5	MITTAPALLY PRAVALIKA	1.5	2	0.5	1.5	1.5	1						8	8.5	5	22	
166	19VE1A04F6	MOTHADI VENKATA SAI RAGHU	1	1	0.5									2.5	7.5	5	15	
167	19VE1A04F7	NANDYALA AKHILA		1		1			0.5					2	9	5	16	
168	19VE1A04F8	PABHISHETTY SAI PRANITH	1	2	1	2	2	1						9	9.5	5	24	
169	19VE1A04F9	PEDDAGONI SHIVA PRASAD			1	0.5		1				1.5	1	4	8.5	5	18	
170	19VE1A04G0	PENDEM SAI SANKEERTHAN	1.5		0.5	0.5						1		3	8	5	16	
171	19VE1A04G1	POCHAMREDDY SANJAY REDDY				2		1						3	8.5	5	17	
172	19VE1A04G2	POLA NANDHINI	2		0.5	2		1						5.5	9.5	5	20	
173	19VE1A04G3	PONUGOTHI SRIVANI	2	1.5	0.5				1.5	1				6.5	8.5	5	20	
174	19VE1A04G4	PULIGILLA TEJA RANGANATH	2	2	0.5				2	1.5	1			9	8	5	22	
175	19VE1A04G5	RACHAMALLA CHAITRA	2	2	1	1	1.5	1						8.5	9	5	23	
176	19VE1A04G6	RAVULA SHIVA							2					2	8	5	15	
177	19VE1A04G7	SAIDAM ALEKYA				1.5	1		2	2				6.5	9.5	5	21	
178	19VE1A04G8	SANEM NIKSHITHA				2		1	1	2		2		6	9.5	5	21	
179	19VE1A04G9	SHAIK SAMEER	0											0	9.5	5	15	
180	19VE1A04H0	SHAKANAMONI RUTHWIK	1											1	9.5	5	16	
181	19VE1A04H1	SHUBHANGI GAUR	2	1	1	2	2	1	1					9	10	5	24	
182	19VE1A04H2	SUNDALAM VENKATESH							2		1	2		5	9.5	5	20	
183	19VE1A04H3	TADIKONDA HEMANTH NAGA SAI	2	2							1			5	9.5	5	20	
184	19VE1A04H4	TALARI JYOTHI	2	2	1	2	1	1						9	9	5	23	
185	19VE1A04H5	THUPALLI PRANAVI	2	2	1	1	0.5	1						7.5	10	5	23	
186	19VE1A04H6	THYARALA BHAVYA	2	2	1	2	1							8	8.5	5	22	
187	19VE1A04H7	VALLURI SANTOSH KUMAR	1	0.5	0.5				2		1			5	9.5	5	20	
188	19VE1A04H8	VARSHA RAVULAKOLE	2	2	0.5	2	2	1						9.5	10	5	25	
189	19VE1A04H9	YEGOLAPU KRANTHI KUMAR							0.5					0.5	8.5	5	14	
190	19VE1A04J0	YELLANI KARTHIK	2		1	2		1	1					6	8.5	5	20	
191	20VE5A0413	M BALRAJU	2	1	1					1				5	8.5	5	19	
192	20VE5A0414	MAHENDRAS MADHURI				2	2	1	2	0.5	1			8.5	8	5	22	
193	20VE5A0415	MANYAM SHRUTHI		0.5	0.5	0.5								1.5	4.5	5	11	
194	20VE5A0416	MASHA AMANI	2	2	0.5				2	2	1			9.5	8.5	5	23	
195	20VE5A0417	P RIKVITHA REDDY	2	1	1	1.5	2	1						8.5	9.5	5	23	
196	20VE5A0418	PANDLA ANVESH	1.5	2	1				2	1	1			8.5	9.5	5	23	
197	19VE1A04J1	BATTU SUMANTH	1.5	0.5								1		3	10	5	18	
198	19VE1A04J2	BELIDE SHREYA							2	2	1	2	2	1	10	10	5	25
199	19VE1A04J4	BOLLA SAI SUMA CHANDANA	2	2	1	2	2	1						10	9	5	24	
200	19VE1A04J5	BOMMIREDDY SAI KUMARI	2	2	1							2	2	1	10	10	5	25
201	19VE1A04J6	BUJAGOUNI INDIRA	1.5	2	0							2	1.5	0	7	8.5	5	21
202	19VE1A04J7	CHILUKA SUNNY								1.5		1.5	1.5	1	5.5	9.5	5	20
203	19VE1A04J8	CHINTHAKINDI SHIVATEJA	1.5	1.5	1				1.5	1.5				7	9	5	21	
204	19VE1A04J9	CHOWKI AKHIL	1	1	0	0.5			0.5				1.5	0.5	4	8.5	5	18

205	19VE1A04K0	DEVIREDDY MOUNIKA	2	2	1	1.5	1.5	1						9	8.5	5	23	
206	19VE1A04K1	EDELLY DIVYA	2	2	1							1.5	1.5	1	9	8	5	22
207	19VE1A04K2	GALANKI SOWMYA	2	2	1	2	1	0.5						8.5	8.5	5	22	
208	19VE1A04K3	GILLELA SRAVIKA	1	2	0.5		0.5	1						5	9.5	5	20	
209	19VE1A04K4	GITTE VENKATESH	2	2	1	2	1	1						9	9.5	5	24	
210	19VE1A04K5	GOTTIMUKKULA SAI SHESHANK							2		1			3	9	5	17	
211	19VE1A04K6	HANUMANDLA NAVYA	1.5	2	0.5	2	2	0						8	9	5	22	
212	19VE1A04K7	JAGGAVARAPU RITHIKA REDDY	1				2							3	6.5	5	15	
213	19VE1A04K8	K RAVI TEJA REDDY				2	2	1	2	2	1			10	9.5	5	25	
214	19VE1A04K9	KAKIREDDY SRAVANKUMARREDDY	1		1							2	2	1	7	9.5	5	22
215	19VE1A04L0	KALLU MANVITHA	2	2	1	1.5	2	1				2	2	1	10	9.5	5	25
216	19VE1A04L1	KANDADI SAHITH REDDY	2	2	1				1	1.5	0.5			8	9	5	22	
217	19VE1A04L2	KANTHALA VINEETH REDDY							2	2	0.5	2	1	0.5	8	9	5	22
218	19VE1A04L3	KARANAM SREEJA	2	2	0.5	1.5								6	8	5	19	
219	19VE1A04L4	KARUMURI HARSHINI	1	0.5	1	1.5		1						5	9	5	19	
220	19VE1A04L5	KASARLA HARSHITH NIVAS REDDY				2		0.5				2		0.5	5	9	5	19
221	19VE1A04L7	M AKHIL REDDY		2	1							0.5	1	1	5.5	9.5	5	20
222	19VE1A04L8	M D MASOOD	0											0	8.5	5	14	
223	19VE1A04L9	MALE SHASHANK GOUD		1						1	1			3	8.5	5	17	
224	19VE1A04M0	MALLAREDDY JAHNAVI	2	2	1	2	2	1						10	8	5	23	
225	19VE1A04M1	MAMIDI ARUN KUMAR	1	0.5		1								2.5	7.5	5	15	
226	19VE1A04M2	MEDYDOODY TRINATH REDDY	2	2	0				1.5	0.5	1			7	9	5	21	
227	19VE1A04M3	MIDIDODDI SAI TEJA	2		1	2	2	1						8	9	5	22	
228	19VE1A04M4	MOLABANTI RAJESH BABU	2						2					4	9	5	18	
229	19VE1A04M5	MUKKA SHIVA KUMAR	2	1.5	0.5	1								5	9	5	19	
230	19VE1A04M6	NAKKA SIRI PRIYA	2	2	0.5	1.5	2	0.5						8.5	9	5	23	
231	19VE1A04M7	NALLAVOLU SUPRITHA	2	2	1	2	1	1						9	9	5	23	
232	19VE1A04M8	PABBOJI AARTHI	2		0.5				1.5	2				6	8	5	19	
233	19VE1A04M9	PASHAM SRI VARSHA	1.5	1.5	0.5		1					1.5	1	1	7	9.5	5	22
234	19VE1A04N0	PASUPULETI TARUN TEJA				2		1				2		1	6	10	5	21
235	19VE1A04N1	PATHIREDDY SAI CHARAN REDDY	1.5	2	0.5	1.5	0	1						6.5	10	5	22	
236	19VE1A04N2	PINENTY PRAHARSHA	2	2	0.5				2	2	1			9.5	9.5	5	24	
237	19VE1A04N3	POLOJU GANESH	1.5	2	0.5							1.5		5.5	9	5	20	
238	19VE1A04N4	POLSANI VAMSHI	1.5	1	0	0.5								3	7.5	5	16	
239	19VE1A04N5	PREKSHA SARWADE							2	2	1	2	2	1	10	9	5	24
240	19VE1A04N6	R M ANANTH				1	2		2					1	5	9.5	5	20
241	19VE1A04N7	RACHA LIKHITHA	1.5	2	0.5				1.5			2		6	9.5	5	21	
242	19VE1A04N8	SAMA JEEVITHA	2		1							2	2	1	8	9.5	5	23
243	19VE1A04N9	SILVERU MEGHANA	2	2	0.5	2	0	1						7.5	9.5	5	22	
244	19VE1A04P0	SRIRAMULA PRADEEP KUMAR	1.5	2	0.5				1.5	1.5	1			8	8.5	5	22	
245	19VE1A04P1	SRIRAMULA VINAY KUMAR	1									2	2	5	9.5	5	20	
246	19VE1A04P2	SUBBA SRINIKETH	2	2	0.5				1.5	2	1			9	9.5	5	24	

247	19VE1A04P3	SURVI GEETHA MADURI	0											0	AB	5	5	
248	19VE1A04P4	SWAMY SAI NISHANTH	1	1	1	1.5	2							6.5	9	5	21	
249	19VE1A04P5	TADISHETTY LAHARI	1.5	2	0	1	0.5							5	9	5	19	
250	19VE1A04P6	VANDARI RISHI KUMAR	2		0.5		1	1					1	4.5	8	5	18	
251	19VE1A04P7	VANGALA SHIVANI	2	2	1							2	1.5	1	9.5	9	5	24
252	19VE1A04P8	VEERAVALLI MEGHANA	2				1		1.5	1.5	1	0.5	0.5	6	8	5	19	
253	19VE1A04P9	YERUVA TRIPURESWAR REDDY	1.5	1	1	2								5.5	9	5	20	
254	19VE1A04Q0	A AISHWARYA	2	2	0.5	0.5	1	1	1		1			7	9	5	21	
255	20VE5A0420	GADDAM CHANDANA	2	2	0.5				2	0.5	1			8	9	5	22	
256	20VE5A0422	KURRA REVANTH GOUD	2	2	1					1	1			7	9	5	21	
257	20VE5A0423	MARRI SAI DIVYA REDDY				1.5	2	1	2		1			7.5	6.5	5	19	
258	20VE5A0424	THALLA BASANTH	1		0.5								1	3.5	8	5	17	
			CO1	CO2	CO3	CO1	CO2	CO3	CO1	CO2	CO3	CO1	CO2	CO3				
	Total Marks		284.5	234	133	146	110	81	134	93	75.5	70.5	57	38	1420	2065.5	1290	4839
	No of Students Answered		200	159	175	105	89	93	97	73	80	48	43	46	250	254	258	258
	No of Students scoring > threshold		184	141	166	90	71	90	87	56	79	44	40	44	164	244	258	244
	% of students scoring > thershold		92.0	88.7	94.9	85.7	79.8	96.8	89.7	76.7	98.8	91.7	93.0	95.7	65.6	96.1	100.0	94.6

Descriptive Question Wise Marks

Hall Ticket No.	Student Name	Q1			Q2			Q3			Q4			II DES (10)	II OBJ (10)	II ASN (5)	II MID (25)	Intern al (25)	Extern al (75)	GRAD E	
		CO4	CO5	CO6	CO4	CO5	CO6	CO4	CO5	CO6	CO4	CO5	CO6								
		A	B	C	A	B	C	A	B	C	A	B	C								
		2	2	1	2	2	1	2	2	1	2	2	1								
15VE1A04E3	KUNCHALA SAI							1	1				2	2	5	9	7	0	F		
18VE1A04E0	JONNADA NITIN	1											1	3	5	9	11	20	F		
19VE1A0401	AJAY PRANEETH	2	2	1				2	2	1			10	4	5	19	18	12	F		
19VE1A0402	AKSHITHA	2	2	1				2	2	1			10	8	5	23	22	37	B		
19VE1A0403	ALIGOLU MANASA				2	2	1				2	2	1	10	5	5	20	22	45	B+	
19VE1A0404	ALLAM SURESH								2	1			2	1	6	4	5	15	18	34	B
19VE1A0405	ANNAMDAS SONY	2	2	1				2	2	1			10	2.5	5	18	20	34	B		
19VE1A0406	BOMMAKOORI		2	1					2	1			6	3	5	14	14	-1	Ab		
19VE1A0407	C SATYA SAI		2	1		2							2	1	6	4	5	15	15	14	F
19VE1A0408	C V R KOUSHIK		1	1										1	3	2.5	5	11	12	10	F
19VE1A0409	CHALLA SAI NITHIN VARDHA	1		1		1								1	3	2	5	10	12	12	F
19VE1A0410	CHIMALA RAJESH		2										2	2.5	5	10	13	20	20	F	
19VE1A0411	DHARAVATH					1								1	2	5	5	12	14	17	F
19VE1A0412	EGA SATHWIKA		2	1					2	1			6	4.5	5	16	18	32	B		
19VE1A0413	ENUGU KRUTI	2	2	1				2	2	1			10	6.5	5	22	20	44	B+		
19VE1A0414	ERUPAKA AKHILA	2	2	1				2	2	1			10	5	5	20	18	28	C		
19VE1A0415	GADIPARTHI NITESH CHOWI	2		1							2	2	1	8	4.5	5	18	19	42	B+	
19VE1A0416	GANDHAM UDAY		1	1					1	1			4	4.5	5	14	15	26	C		
19VE1A0417	GANGAPURAM		1	1					2	1			5	4	5	14	17	43	B+		
19VE1A0418	GANJI ESHWAR SAI							2	1	1	2		6	3	5	14	16	37	B		
19VE1A0419	GARDAS UDAY	1.5	2								1.5	2	7	4.5	5	17	17	26	C		
19VE1A0420	GARUGU SRIKAR	2	2								2	1	7	3	5	15	16	28	C		
19VE1A0421	GODI VISHNU	2	2					2		1			7	4.5	5	17	18	26	C		
19VE1A0422	GOPATHI SREE							2	1	1	2		7	3	5	15	19	37	B		
19VE1A0423	GUNDU SAI	2	2	1		1		2		1			8	6.5	5	20	19	18	F		
19VE1A0424	KAMATHAM SAI	2	2	1					2	1			8	4	5	17	16	6	F		
19VE1A0425	KANCHUKATLA	2	2	1							2	2	1	10	4.5	5	20	21	27	C	
19VE1A0426	KEERTHI SHARMA				2	2	1	2			2	2	1	10	6.5	5	22	22	28	B	
19VE1A0427	KUNCHALA GOPI	2	2	1							1	2	1	9	5	5	19	17	15	F	
19VE1A0428	LAGUDU SHRUTHI	2	2	1							2	2	1	10	6	5	21	23	40	B+	
19VE1A0429	MASHAPARI	2	2	1		2	1						1	8	4.5	5	18	16	2	F	
19VE1A0430	MALKAPURAM	2	2	1	1	2	1						9	5.5	5	20	18	7	F		
19VE1A0431	MANDA AKASH	2	2	1							2	2	1	10	8	5	23	21	35	B	
19VE1A0432	MANGALAGIRI			1				2		1	2	2	1	8	5	5	18	16	0	F	
19VE1A0433	MEDDLA HARIKA	2	2	1		2		2	2	1			10	5	5	20	20	39	B		
19VE1A0434	MIDIDODDA	2	2	1				2	2	1			10	7	5	22	21	37	B		

19VE1A0435	MOVVA	2	2	1	2	2	1							10	5.5	5	21	21	27	C
19VE1A0436	NAMPALLI RITHIKA				2	2	1	2	2	1				10	5	5	20	22	37	B
19VE1A0437	NARAYANA	2	2	1				2	2	1				10	5	5	20	20	39	B
19VE1A0438	NISHITHA	2	2	1				2	2	1				10	4	5	19	18	32	B
19VE1A0439	P KAVYA REDDY							2	2	1	2	2	1	10	4	5	19	18	31	C
19VE1A0440	PALNATI		2	1								2	1	6	3.5	5	15	17	40	B
19VE1A0441	PERVALA SNIGDHA	2	2	1							2	2	1	10	4.5	5	20	19	26	C
19VE1A0442	POOJARLA PAVAN	2						2	2	1				7	3	5	15	15	16	F
19VE1A0443	POTHANA SINDHU		2	1		2			2	1				6	5	5	16	17	23	F
19VE1A0444	RACHAKONDA		2	1								2	1	6	5	5	16	16	18	F
19VE1A0445	RAMOJU SHILPA	2	2	1							2	2	1	10	4.5	5	20	19	49	B+
19VE1A0446	RENDUCHINTALA										0			AB	A	5	5	5	-1	Ab
19VE1A0447	RUDRARAJU	2		1				2		1				6	4	5	15	18	34	B
19VE1A0448	S RUCHITHA							2	1	1	2	1	1	8	2.5	5	16	18	27	C
19VE1A0449	SAIELLA SAILEELA	2	2	1				2		1				8	3	5	16	18	29	C
19VE1A0450	SALVERU AKHILA	2	2	1				2	2	1				10	5.5	5	21	21	45	B+
19VE1A0451	SAPPIDI SOHAN	2	2											4	4	5	13	15	26	C
19VE1A0452	SINGARAM MANIK	1	2	1				2	2	1				9	2	5	16	18	29	C
19VE1A0453	SPANDANA PAM								1	1		1	1	4	4	5	13	16	26	C
19VE1A0454	SUMANTH VADLA				2	2	1				2	2	1	10	4.5	5	20	20	50	A
19VE1A0455	SURAKANTI	2	2	1							2	2	1	10	4	5	19	20	27	C
19VE1A0456	THUMRUGOTI	2	2	1							2	2	1	10	1.5	5	17	19	26	C
19VE1A0457	VUTUKURI	2	2	1				2	2	1				10	6	5	21	18	27	C
19VE1A0459	UDDAWAR		2	1		2								5	3	5	13	13	33	C
19VE1A0460	YEDULLA PREETHI	2	2	1	2	2	1							10	5	5	20	20	43	B+
19VE5A0409	ERRA BHAVANI	2	2	1							1	2	1	9	4.5	5	19	18	35	B
20VE5A0401	CHANDRAPATI SRI				2	2	1	2	2	1				10	5	5	20	20	33	C
20VE5A0402	DAYAMULLAH		2	1					2	1		2	1	6	3.5	5	15	14	35	B
20VE5A0403	DUBBA HARITHA		1	1			1		2					4	2.5	5	12	15	27	C
20VE5A0404	NADIMPALLY AJAY							2						2	1	5	8	10	21	F
20VE5A0405	P NARSIMHA		2	1	2	1	1							7	3.5	5	16	11	32	B
20VE5A0406	PANTHANGI	2	2		2		1							7	5	5	17	17	33	B
19VE1A0461	AELLA SNIKITHA	2	2	1	2	2	1							10	4.5	5	20	19	38	B+
19VE1A0462	ALLOJU HARISH				2	2			1			1	1	6	4	5	15	16	58	A
19VE1A0463	ANAGANDLA	2	2	1				2	2	1				10	6.5	5	22	23	55	A
19VE1A0464	ANTHATI VENKAT		2					2	2				1	6	5.5	5	17	18	51	A
19VE1A0465	BANDI SAI TARUN		1	1						1				3	6.5	5	15	15	15	F
19VE1A0466	BATCHU AMBIKA	2		1				2	2	1				8	2	5	15	19	27	C
19VE1A0467	CHILUKALA SAI	2	2	1				2	2	1				10	2.5	5	18	19	26	C
19VE1A0468	CHINTHAPALLI	2	2	1				2	2	1				10	4	5	19	22	38	B
19VE1A0469	CHITTARS				2	2	1				2	2	1	10	4	5	19	21	35	B
19VE1A0470	DESU GEETHA SAI					2	1	2	2	1		2	1	8	6	5	19	18	32	B

19VE1A0471	GANDHAM THANU	2	2	1	2	2	1	2					10	3	5	18	19	12	F	
19VE1A0472	GANGAPURAM	2		1				2		1			6	1.5	5	13	13	46	B+	
19VE1A0473	GANIYA SATHVIKA							2	2	1	2	2	1	10	4	5	19	18	43	B+
19VE1A0474	GHATTAMANENI	1		1						1			3	2.5	5	11	15	33	C	
19VE1A0475	GREESHMA				2	2	1	2	2	1			10	4.5	5	20	20	49	B+	
19VE1A0476	GUBBALA SAI SREE	2	2	1	2	2	1						10	2.5	5	18	20	40	B	
19VE1A0477	GURRALA NAGA SURENDRA	2		1							2	1	6	4	5	15	18	30	C	
19VE1A0479	JULURI SAIRAM							0					AB	A	5	5	7	16	F	
19VE1A0480	K SAI SHRIYA	2	2	1							2	2	1	10	5	5	20	22	42	B+
19VE1A0481	KADTHALA				2	2	1	2	2	1			10	5	5	20	22	39	B	
19VE1A0482	KARNATI	1				1							2	1	5	8	9	36	B	
19VE1A0483	KATAKAM AKSHAY	2	2	1	2	2	1						10	2.5	5	18	17	43	B+	
19VE1A0484	KOUDE	2	2		2	2							8	2	5	15	16	55	A	
19VE1A0485	KOWSHIK		2										2	3	5	10	11	54	A	
19VE1A0486	KUNCHALA			1				1	1				3	0.5	5	9	12	58	A	
19VE1A0487	L SHRAVYA	2	2	1							2	2	1	10	4	5	19	22	20	F
19VE1A0488	LENKALA	2	2	1	2	2	1						10	3.5	5	19	20	56	A	
19VE1A0489	MOOLA PAVAN	2	2	1							2	2		9	2	5	16	17	16	F
19VE1A0490	MANDALOJU	2	2	1	2	2	1						10	3.5	5	19	19	26	C	
19VE1A0491	MEDAM AKHIL	2	2	1	2	2	1						10	1.5	5	17	18	38	B	
19VE1A0492	MIRYALA NIKHILA	2	2	1				2	2	1			10	4	5	19	19	36	B	
19VE1A0493	MULAGIRI	2	2	1				2	2	1			10	5	5	20	20	40	B	
19VE1A0494	NAGULA THARUN							1			2	2	1	6	2	5	13	9	28	C
19VE1A0495	NAMA SHRESHTA	2	2	1				2	2	1	2	2	1	10	4	5	19	21	28	C
19VE1A0496	NANDIPETA							0					0	0.5	5	6	11	26	C	
19VE1A0497	NARRA PAVANI	2	2	1	2	2	1						10	5	5	20	20	39	B+	
19VE1A0498	NISHANTH REDDY	2	2		2	2							8	3	5	16	17	42	B+	
19VE1A0499	NITIN THOTA		2			2						2	1	5	4.5	5	15	17	33	B
19VE1A04A0	P CHARAN KUMAR	1	1										2	4	5	11	14	31	C	
19VE1A04A1	PALLI VENKATA	2	2	1				2	2				9	5	5	19	21	36	B	
19VE1A04A2	PANTULU SAI	2	1										3	3	5	11	14	31	C	
19VE1A04A3	PATEL GAUTHAMI				2	2		2		1			7	4.5	5	17	18	14	F	
19VE1A04A4	PATNAM	2	2	1							2	2	1	10	5	5	20	22	29	C
19VE1A04A5	PIPPALAPALLI	2	2	1		2		2		1			8	5	5	18	20	28	C	
19VE1A04A6	RAJAMONI	2	2	1							2	2	1	10	4	5	19	19	35	B
19VE1A04A7	RAMOJU ABHIRAM	2	2	1							2	2		9	4.5	5	19	17	40	B
19VE1A04A8	RAVULA ARTHI	2	2	1							2	2	1	10	5.5	5	21	21	45	B+
19VE1A04A9	SAMUDRALA		1	1								1	1	4	4.5	5	14	18	41	B+
19VE1A04B0	SANDAGALLA						0						0	1	5	6	11	34	B	
19VE1A04B1	SETTIGARI	2	2	1				2	2	1			10	3	5	18	20	29	C	
19VE1A04B2	SRI ABHINAY		2	1					2	1			6	4.5	5	16	16	44	B+	
19VE1A04B3	SUDIREDDY	2	2	1				2	2	1			10	3	5	18	21	39	B+	

19VE1A04B4	THUPPARI VIDYA		2	1				2	2	1				8	5	5	18	18	34	B
19VE1A04B5	TURUPU SHIVA	2	2	1	2	2				1				9	2.5	5	17	18	60	A+
19VE1A04B6	VALAKONDA	2	2					2	2	1				9	4.5	5	19	20	48	B+
19VE1A04B7	VALLALA SAI		2	1				2	2	1				8	6.5	5	20	19	30	B
19VE1A04B8	VUNDHYALA	2	2	1				1	2	1				9	4.5	5	19	19	41	B+
19VE1A04B9	YANALA LIKITHA	2	2	1				2	2	1				10	5	5	20	20	23	F
19VE1A04C0	YASA SATHWIKA	2	2	1				2	2	1				10	4.5	5	20	22	47	B+
20VE5A0407	AMRAI VIKAS	2	1	1					1		2	2		8	5	5	18	17	49	B+
20VE5A0408	BHUKYA SHEKAR	2	2	1				1	1	1		2	1	8	6.5	5	20	19	22	F
20VE5A0409	BOINPALLY	2	2	1				2	2	1				10	6	5	21	22	34	B
20VE5A0410	CHITTIMALLA	2	2	1							2	2	1	10	5.5	5	21	21	35	B
20VE5A0411	GILLA DURGA	2	2	1							2	2	1	10	6	5	21	21	46	B+
20VE5A0412	METTU ROHIT		2	1						1		2	1	6	3.5	5	15	17	27	C
19VE1A04C1	A NIKHIL GOUD	2	2	1							2	2	1	10	7	5	22	19	26	C
19VE1A04C2	AVANCHA SAI	2	2	1				2	2	1		1		10	4	5	19	22	39	B+
19VE1A04C3	ANIREDDY SINDHU	0.5	2	1					1.5	1				6	4.5	5	16	16	0	F
19VE1A04C4	ADDULA HYNDAVI	2	2	1				2	2	1				10	6.5	5	22	22	40	B+
19VE1A04C6	B K V R L	2	2	1	2	2	1							10	6.5	5	22	23	35	B
19VE1A04C7	BEEJANI SHIVA											0		0	1.5	5	7	10	26	C
19VE1A04C8	BEJJANKI SARAYU	2	2	1							2	2	1	10	6.5	5	22	22	51	A
19VE1A04C9	BOLLEPALLI	2	2	1							2	2	1	10	4.5	5	20	20	47	B+
19VE1A04D0	BYADEGERA NEHA							2	2	1	2	2	1	10	3	5	18	19	35	B
19VE1A04D2	D LAHARI	1.5	0.5	1							2	0.5	0.5	6	4	5	15	18	19	F
19VE1A04D3	D PRIYA DARSHINI	2	2	1							2	2	1	10	3.5	5	19	22	56	A
19VE1A04D4	DHARAMKAR		1	1	1	0			0	1				3	2.5	5	11	15	45	B+
19VE1A04D5	DATRIK LOKESH				1				1					2	3.5	5	11	13	18	F
19VE1A04D6	DIDUGU	2	1	1					0.5	1		0.5		5.5	3	5	14	17	32	C
19VE1A04D7	DONGAPURE	2	2	1				2	1.5	1				9.5	3	5	18	21	27	C
19VE1A04D8	GADAPA	0												0	1	5	6	8	11	F
19VE1A04E0	GIRAMONI RAMYA	2	2	1				2	2	1				10	4.5	5	20	20	45	B+
19VE1A04E1	JAMPALA							2	1	1	2	0	1	7	3.5	5	16	19	35	B
19VE1A04E2	JANGAM RAHUL			1						1	1.5	1	1	4.5	4	5	14	15	44	B+
19VE1A04E3	K JAHAVI							2	1	1	2	1	1	8	4.5	5	18	19	27	C
19VE1A04E4	K PREETHI	2	2	1				2	2	1				10	5	5	20	21	34	B
19VE1A04E5	KALVAKOL	2	2	1							2	1.5	0.5	9	3	5	17	18	29	B
19VE1A04E6	KAMINI ASWIN SAI		2											2	2.5	5	10	13	28	C
19VE1A04E7	KANCHARLA				2	2	1	2	2	1				10	2.5	5	18	21	26	C
19VE1A04E8	KANDANURU	1	2	1				0.5	2	1				7.5	4.5	5	17	18	31	C
19VE1A04E9	KOMIRINENI	1								1				2	1.5	5	9	13	35	B
19VE1A04F0	KONDAPARTHI	2	2	1				2	1	0.5				8.5	4	5	18	17	36	B
19VE1A04F1	UMMADI KRISHNA	2			2			1	0.5					4	1.5	5	11	13	36	B
19VE1A04F2	KUNDURU GANESH		0											0	1	5	6	10	31	B

19VE1A04F3	MADIREDDY	2	2	1	2	1	1	2	2	1				10	3	5	18	21	28	
19VE1A04F4	MARUPAKA	2	2	1				1	2					8	3	5	16	18	27	
19VE1A04F5	MITTAPALLY	2	2	1				2	1	0.5				8.5	3.5	5	17	20	39	
19VE1A04F6	MOTHADI	1	2	1				0						4	1.5	5	11	13	7	
19VE1A04F7	NANDYALA AKHILA	2	2	1							1	1	1	8	4	5	17	17	15	
19VE1A04F8	PABHISHETTY SAI							2	2	1			2	1	8	4	5	17	21	29
19VE1A04F9	PEDDAGONI SHIVA		0	1			1						1	1	3	5.5	5	14	16	36
19VE1A04G0	PENDEM SAI		2	1									1.5	1	5.5	5.5	5	16	16	33
19VE1A04G1	POCHAMREDDY		2	1					2	1					6	5	5	16	17	42
19VE1A04G2	POLA NANDHINI	2	2	1				1	2	1					9	4.5	5	19	20	41
19VE1A04G3	PONUGOTHI	2	2	1	2	2	1								10	6.5	5	22	21	40
19VE1A04G4	PULIGILLA TEJA	2	2	0	2	2	1								9	6.5	5	21	22	28
19VE1A04G5	RACHAMALLA	2	2		2	1.5									7.5	2.5	5	15	19	37
19VE1A04G6	RAVULA SHIVA				1	1			1						3	2.5	5	11	13	10
19VE1A04G7	SAIDAM ALEKYA		2	1	1	2	1								7	3	5	15	18	33
19VE1A04G8	SANEM NIKSHITHA				2	2			2	1					7	4	5	16	19	16
19VE1A04G9	SHAIK SAMEER				1	1	1						1		4	3.5	5	13	14	46
19VE1A04H0	SHAKANAMONI		2		1	2									4.5	2.5	5	12	14	48
19VE1A04H1	SHUBHANGI GAUR	2	2	1				2	2	1	1	2	1	10	6.5	5	22	23	35	
19VE1A04H2	SUNDALAM	2	2	1							2	2	1	10	3	5	18	19	31	
19VE1A04H3	TADIKONDA	2	2		2	2									8	2	5	15	18	32
19VE1A04H4	TALARI JYOTHI	2	2	1							2	2	1	10	4.5	5	20	22	43	
19VE1A04H5	THUPALLI PRANAVI	2	2	0.5	2	2									8.5	6.5	5	20	22	30
19VE1A04H6	THYARALA	2	2	1							1.5	2	1	9.5	5.5	5	20	21	38	
19VE1A04H7	VALLURI SANTOSH		2	1							1.5	0.5	1	6	5	5	16	18	36	
19VE1A04H8	VARSHA	2	2	1	2	2	1								10	4	5	19	22	48
19VE1A04H9	YEGOLAPU			1	1	1.5									3	3	5	11	13	26
19VE1A04J0	YELLANI KARTHIK		2	1	1	1.5	1								6	3.5	5	15	18	35
20VE5A0413	M BALRAJU	2	2	1							2	1.5	0.5	9	4	5	18	19	30	
20VE5A0414	MAHENDRAS	2	2	1	1	1	1								8	4	5	17	20	26
20VE5A0415	MANYAM SHRUTHI		2		1	0.5							0.5		3.5	3.5	5	12	12	27
20VE5A0416	MASHA AMANI							1	2	1	1	1.5	0.5	7	4.5	5	17	20	40	
20VE5A0417	P RIKVITHA REDDY	2	2	1	2	2	1			1					10	5.5	5	21	22	31
20VE5A0418	PANDLA ANVESH	1.5	2	1	1	1									6	5	5	16	20	39
19VE1A04J1	BATTU SUMANTH	1.5	2	1	1			2							6.5	3.5	5	15	17	37
19VE1A04J2	BELIDE SHREYA	2	2	1	2	2	1								10	5	5	20	23	43
19VE1A04J4	BOLLA SAI SUMA	2	2	1				2	2	1					10	5	5	20	22	26
19VE1A04J5	BOMMIREDDY SAI	2	2	1				2	2	1					10	4.5	5	20	23	35
19VE1A04J6	BUJAGOUNI	1.5	1	1				1.5	1	1					7	5.5	5	18	20	46
19VE1A04J7	CHILUKA SUNNY	1	1	1				2	2						7	5.5	5	18	19	30
19VE1A04J8	CHINTHAKINDI				2	2	1	2	2	1					10	6	5	21	21	2
19VE1A04J9	CHOWKI AKHIL	2	1.5	1				2	1.5	1	1	0.5		9	4	5	18	18	34	

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19VE1A04K0	DEVIREDDY	2	2	1				2	2	1				10	4	5	19	21	34	B
19VE1A04K1	EDELLY DIVYA	2	2	1				1	1.5	1				8.5	4.5	5	18	20	27	C
19VE1A04K2	GALANKI SOWMYA	2	2	1				2	2	1				10	4.5	5	20	21	32	B
19VE1A04K3	GILLELA SRAVIKA	1.5	2					2		1				6.5	3	5	15	18	38	B+
19VE1A04K4	GITTE VENKATESH	2	2	1				1.5	1.5	1				9	4.5	5	19	22	26	C
19VE1A04K5	GOTTIMUKKULA	2	2					2	2					8	3.5	5	17	17	27	C
19VE1A04K6	HANUMANDLA				2	2		2		1				7	4.5	5	17	20	32	B
19VE1A04K7	JAGGAVARAPU		2	1	2	1	1							7	4.5	5	17	16	41	B+
19VE1A04K8	K RAVI TEJA REDDY	0												AB	A	5	5	15	38	B
19VE1A04K9	KAKIREDDY	2		1	2		1	2		1				6	4.5	5	16	19	37	B
19VE1A04L0	KALLU MANVITHA	2	2	1	2	2	1							10	5.5	5	21	23	31	B
19VE1A04L1	KANDADI SAHITH	2	2	1							2	2	1	10	5.5	5	21	22	36	B
19VE1A04L2	KANTHALA				2	1.5						2	0.5	6	3.5	5	15	19	43	B+
19VE1A04L3	KARANAM SREEJA		2			1			0.5	1				3.5	4.5	5	13	16	36	B
19VE1A04L4	KARUMURI		2									2		4	4.5	5	14	17	26	C
19VE1A04L5	KASARLA	2	2	1							2	2	1	10	6	5	21	20	42	B+
19VE1A04L7	M AKHIL REDDY	2	2	1				2	1	1				9	4	5	18	19	35	B
19VE1A04L8	M D MASOOD							2						2	2.5	5	10	12	32	B
19VE1A04L9	MALE SHASHANK		1			1								2	2	5	9	13	34	B
19VE1A04M0	MALLAREDDY		2								2	2	1	7	4	5	16	20	44	B+
19VE1A04M1	MAMIDI ARUN	1	1											2	3.5	5	11	13	29	C
19VE1A04M2	MEDYDOODY	2	1	1	2					1				6	3.5	5	15	18	33	B
19VE1A04M3	MIDIDODDI SAI	2	2	1							2	2	1	10	6.5	5	22	22	35	B
19VE1A04M4	MOLABANTI	2	2	1				2		1				8	4.5	5	18	18	38	C
19VE1A04M5	MUKKA SHIVA	1	1	0.5	2	2								6.5	4.5	5	16	18	35	B
19VE1A04M6	NAKKA SIRI PRIYA							2		1	2		1	6	5.5	5	17	20	30	B
19VE1A04M7	NALLAVOLU	2	2	1				2	2	1				10	5	5	20	22	37	B
19VE1A04M8	PABBOJI AARTHI	2	2	1				2	2	1				10	5	5	20	20	38	B
19VE1A04M9	PASHAM SRI	2	2								2	2		8	3	5	16	19	26	C
19VE1A04N0	PASUPULETI		2	1								2	1	6	4.5	5	16	19	33	B
19VE1A04N1	PATHIREDDY SAI				2	2	1		2	1				8	4.5	5	18	20	46	B+
19VE1A04N2	PINENTY	2	2	1				2	2	1				10	6	5	21	23	27	C
19VE1A04N3	POLOJU GANESH	2	2	1							2	2	1	10	5	5	20	20	33	B
19VE1A04N4	POLSANI VAMSHI	2	2		2			1.5		1				6.5	5	5	17	17	27	C
19VE1A04N5	PREKSHA	2	2	1				2	2	1				10	5	5	20	22	14	F
19VE1A04N6	R M ANANTH					2						2	1	5	5.5	5	16	18	30	C
19VE1A04N7	RACHA LIKHITHA		2	1				2		1	2	2	1	8	6	5	19	20	29	C
19VE1A04N8	SAMA JEEVITHA	2	2	1	2	2	1							10	4	5	19	21	26	C
19VE1A04N9	SILVERU							2	2	1	2	2	1	10	6	5	21	22	32	C
19VE1A04P0	SRIRAMULA	1	1	1	2				2	1				6	5.5	5	17	20	35	B
19VE1A04P1	SRIRAMULA VINAY	2	1	1							2	0.5		6.5	5	5	17	19	39	B+
19VE1A04P2	SUBBA SRINIKETH	2	2								2	2	1	9	5.5	5	20	22	44	B+

19VE1A04P3	SURVI GEETHA	2	1										3	A	5	8	7	51	A
19VE1A04P4	SWAMY SAI	2	2	1				2	1				8	4.5	5	18	20	36	B
19VE1A04P5	TADISHETTY	2	2	1						2	1	1	9	5.5	5	20	20	34	B
19VE1A04P6	VANDARI RISHI	2	2		0.5		2	1.5			0.5		7.5	5	5	18	18	50	A
19VE1A04P7	VANGALA SHIVANI	2	2	1			1.5	2	0.5				9	3.5	5	18	21	29	C
19VE1A04P8	VEERAVALLI	2	2		2	1	2	2	1				9	2.5	5	17	18	46	B+
19VE1A04P9	YERUVA	1.5	1.5							1	2	1	7	5	5	17	19	42	B+
19VE1A04Q0	A AISHWARYA	2	2	1						2	2	1	10	4	5	19	20	41	B+
20VE5A0420	GADDAM	2	2	1						2	2	1	10	4.5	5	20	21	37	B
20VE5A0422	KURRA REVANTH	2	2	1						2	2	1	10	4	5	19	20	46	B+
20VE5A0423	MARRI SAI DIVYA	2	2	1			2	2	1				10	5	5	20	20	40	B+
20VE5A0424	THALLA BASANTH		2	0.5							2	0.5	5	5.5	5	16	17	27	C

	CO4	CO5	CO6	CO	CO5	CO6	CO4	CO5	CO6	CO4	CO5	CO6								
	307	367	169.5	109	127	43	193.5	190	118	129	161	84.5	1919	1059	1290	4328	4650	0		
	164	197	172	61	74	45	103	111	119	70	94	88	255	254	258	258	258	0		
	161	194	171	57	72	43	101	105	119	69	86	88	212	87	258	222	238	0		
	98.171	98	99.41860465	93	97.3	95.6	98.06	95	100	98.57142857	91	100	83.14	34.25	100	86.05	92.25	0		

		A	B	C	A	B	C	A	B	C	A	B	C	10M	5M	25M
MID 1-INTERNAL THRESHOLD	50	1	1	0.5	1	1	0.5	1	1	0.5	1	1	0.5	5	2.5	12.5
MID 2-INTERNAL THRESHOLD	50	1	1	0.5	1	1	0.5	1	1	0.5	1	1	0.5	5	2.5	12.5
EXTERNAL THRESHOLD	40	30														

CO ATTAINMENT	DES	OBJ	ASN	DES	OBJ	ASN	INT	EXT	DIRECT	INDIRECT	CO_ATT	INT %	25	TARGET
CO1	89.8	96.1	100.0	3	3	3	3.00	3	3.00	2.13	2.83	EXT %	75	2.064
CO2	84.5	96.1	100.0	3	3	3	3.00	3	3.00	2.11	2.82			1.697
CO3	96.5	96.1	100.0	3	3	3	3.00	3	3.00	2.31	2.86	DIRECT %	80	1.697
CO4	97.1	34.3	100.0	3	0	3	1.80	3	2.70	2.13	2.59	INDIRECT %	20	1.697
CO5	95.5	34.3	100.0	3	0	3	1.80	3	2.70	1.57	2.47			2.064
CO6	98.7	34.3	100.0	3	0	3	1.80	3	2.70	2.33	2.63			2.064
COURSE OVERALL CO ATTAINMENT (AVERAGE)											2.70		1.88	

% RANGE	LEVEL
<40%	0
40% to 50%	1
50% to 60%	2
>60%	3

MID -1											
CO1	CO2	CO3	CO1	CO2	CO3	CO1	CO2	CO3	CO1	CO2	CO3
92.0	88.7	94.9	85.7	79.8	96.8	89.7	76.7	98.8	91.7	93.0	95.7
MID-2											
CO4	CO5	CO6	CO4	CO5	CO6	CO4	CO5	CO6	CO4	CO5	CO6
98.2	98.5	99.4	93.4	97.3	95.6	98.1	94.6	100.0	98.6	91.5	100.0

CO1	89.77
CO2	84.55
CO3	96.51
CO4	97.06
CO5	95.46
CO6	98.74

S.No	Hall Ticket No.	CO1	CO2	CO3	CO4	CO5	CO6
1	15VE1A04E3	2	2	2	2	1	3
2	18VE1A04E0	2	2	2	2	1	3
3	19VE1A0401	2	2	2	2	1	3
4	19VE1A0402	2	2	2	2	1	3
5	19VE1A0403	2	2	2	2	1	3
6	19VE1A0404	2	2	2	2	1	3
7	19VE1A0405	2	2	2	2	1	3
8	19VE1A0406	2	2	2	2	1	3
9	19VE1A0407	2	2	2	2	1	3
10	19VE1A0408	2	2	2	2	1	3
11	19VE1A0409	2	2	2	2	1	3
12	19VE1A0410	2	2	2	2	1	3
13	19VE1A0411	2	2	2	2	1	3
14	19VE1A0412	2	2	2	2	1	3
15	19VE1A0413	2	2	2	2	1	3
16	19VE1A0414	2	2	2	2	1	3
17	19VE1A0415	2	2	2	2	1	3
18	19VE1A0416	2	2	2	2	1	3
19	19VE1A0417	2	2	2	2	1	3
20	19VE1A0418	2	2	2	2	1	3
21	19VE1A0419	2	2	2	2	1	3
22	19VE1A0420	2	2	2	2	1	3
23	19VE1A0421	2	2	2	2	1	3
24	19VE1A0422	2	2	2	2	1	3
25	19VE1A0423	2	2	2	2	1	3
26	19VE1A0424	2	2	2	2	1	3
27	19VE1A0425	2	2	2	2	1	3
28	19VE1A0426	2	2	2	2	1	3
29	19VE1A0427	2	2	2	2	1	3
30	19VE1A0428	2	2	2	2	1	3
31	19VE1A0429	2	2	2	2	1	3
32	19VE1A0430	2	2	2	2	1	3
33	19VE1A0431	2	2	2	2	1	3
34	19VE1A0432	2	2	2	2	1	3
35	19VE1A0433	2	2	2	2	1	3
36	19VE1A0434	2	2	2	2	1	3
37	19VE1A0435	2	2	2	2	1	3
38	19VE1A0436	2	2	2	2	1	3
39	19VE1A0437	2	2	2	2	1	3
40	19VE1A0438	2	2	2	2	1	3
41	19VE1A0439	2	2	2	2	1	3
42	19VE1A0440	2	2	2	2	1	3
43	19VE1A0441	2	2	2	2	1	3
44	19VE1A0442	2	2	2	2	1	3
45	19VE1A0443	2	2	2	2	1	3
46	19VE1A0444	2	2	2	2	1	3
47	19VE1A0445	2	2	2	2	1	3

48	19VE1A0446	2	2	2	2	1	3
49	19VE1A0447	2	2	2	2	1	3
50	19VE1A0448	2	2	2	2	1	3
51	19VE1A0449	2	2	2	2	1	3
52	19VE1A0450	2	2	2	2	1	3
53	19VE1A0451	2	2	2	2	1	3
54	19VE1A0452	2	2	2	2	1	3
55	19VE1A0453	2	2	2	2	1	3
56	19VE1A0454	2	2	2	2	1	3
57	19VE1A0455	2	2	2	2	1	3
58	19VE1A0456	2	2	2	2	1	3
59	19VE1A0457	2	2	2	2	1	3
60	19VE1A0459	2	2	2	2	1	3
61	19VE1A0460	2	2	2	2	1	3
62	19VE5A0409	2	2	2	2	1	3
63	20VE5A0401	2	2	2	2	1	3
64	20VE5A0402	2	2	2	2	1	3
65	20VE5A0403	2	2	2	2	1	1
66	20VE5A0404	2	2	2	2	1	1
67	20VE5A0405	2	2	2	2	1	1
68	20VE5A0406	2	2	2	2	1	1
69	19VE1A0461	2	2	2	2	1	1
70	19VE1A0462	2	2	2	2	1	1
71	19VE1A0463	2	2	2	2	1	1
72	19VE1A0464	2	2	2	2	1	1
73	19VE1A0465	2	2	2	2	1	1
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75	19VE1A0467	2	2	2	2	1	1
76	19VE1A0468	2	2	2	2	1	1
77	19VE1A0469	2	2	2	2	1	1
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79	19VE1A0471	2	2	2	2	1	1
80	19VE1A0472	2	2	2	2	1	1
81	19VE1A0473	2	2	2	2	1	1
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83	19VE1A0475	2	2	2	2	1	1
84	19VE1A0476	2	2	2	2	1	1
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88	19VE1A0481	2	2	2	2	1	1
89	19VE1A0482	2	2	2	2	1	1
90	19VE1A0483	2	2	2	2	1	1
91	19VE1A0484	2	2	2	2	1	1
92	19VE1A0485	2	2	2	2	1	1
93	19VE1A0486	2	2	2	2	1	1
94	19VE1A0487	2	2	2	2	1	1
95	19VE1A0488	2	2	2	2	1	1

96	19VE1A0489	2	2	2	2	1	1
97	19VE1A0490	2	2	2	2	1	1
98	19VE1A0491	2	2	2	2	1	1
99	19VE1A0492	2	2	2	2	1	1
100	19VE1A0493	2	2	2	2	1	1
101	19VE1A0494	2	2	2	2	1	1
102	19VE1A0495	2	2	2	2	1	1
103	19VE1A0496	2	2	2	2	1	1
104	19VE1A0497	2	2	2	2	1	1
105	19VE1A0498	2	2	2	2	1	1
106	19VE1A0499	2	2	2	2	1	1
107	19VE1A04A0	2	2	2	2	1	1
108	19VE1A04A1	2	2	2	2	1	3
109	19VE1A04A2	2	2	2	2	1	3
110	19VE1A04A3	2	2	2	2	1	3
111	19VE1A04A4	2	2	2	2	1	3
112	19VE1A04A5	2	2	2	2	1	3
113	19VE1A04A6	2	2	2	2	1	3
114	19VE1A04A7	2	2	2	2	1	3
115	19VE1A04A8	2	2	2	2	1	3
116	19VE1A04A9	2	2	2	2	1	1
117	19VE1A04B0	2	2	2	2	1	1
118	19VE1A04B1	2	2	2	2	1	1
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120	19VE1A04B3	2	2	2	2	1	1
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122	19VE1A04B5	2	2	2	2	1	1
123	19VE1A04B6	2	2	2	2	1	1
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125	19VE1A04B8	2	2	2	2	1	1
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130	20VE5A0409	2	1	3	2	1	3
131	20VE5A0410	2	3	2	2	3	2
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133	20VE5A0412	2	3	3	2	3	3
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135	19VE1A04C2	2	3	3	2	3	3
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137	19VE1A04C4	3	3	2	3	3	2
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155	19VE1A04E5	2	1	3	2	1	3
156	19VE1A04E6	2	3	3	2	3	3
157	19VE1A04E7	2	2	3	2	2	3
158	19VE1A04E8	3	3	2	3	3	2
159	19VE1A04E9	2	1	3	2	1	3
160	19VE1A04F0	2	3	3	2	3	3
161	19VE1A04F1	2	2	3	2	2	3
162	19VE1A04F2	3	3	2	3	3	2
163	19VE1A04F3	2	1	3	2	1	3
164	19VE1A04F4	2	3	3	2	3	3
165	19VE1A04F5	2	2	3	2	2	3
166	19VE1A04F6	3	3	2	3	3	2
167	19VE1A04F7	2	1	3	2	1	3
168	19VE1A04F8	2	3	3	2	3	3
169	19VE1A04F9	2	2	3	2	2	3
170	19VE1A04G0	3	3	2	3	3	2
171	19VE1A04G1	2	1	3	2	1	3
172	19VE1A04G2	2	3	3	2	3	3
173	19VE1A04G3	2	2	3	2	2	3
174	19VE1A04G4	3	3	2	3	3	2
175	19VE1A04G5	2	1	3	2	1	3
176	19VE1A04G6	2	3	3	2	3	3
177	19VE1A04G7	2	2	3	2	2	3
178	19VE1A04G8	3	3	2	3	3	2
179	19VE1A04G9	2	1	3	2	1	3
180	19VE1A04H0	2	3	3	2	3	3
181	19VE1A04H1	2	2	3	2	2	3
182	19VE1A04H2	3	3	2	3	3	2
183	19VE1A04H3	2	1	3	2	1	3
184	19VE1A04H4	2	3	3	2	3	3
185	19VE1A04H5	2	2	3	2	2	3
186	19VE1A04H6	3	3	2	3	3	2
187	19VE1A04H7	2	1	3	2	1	3
188	19VE1A04H8	2	3	3	2	3	3
189	19VE1A04H9	2	2	3	2	2	3
190	19VE1A04J0	3	3	2	3	3	2
191	20VE5A0413	2	3	3	2	3	3

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193	20VE5A0415	2	3	3	2	3	3
194	20VE5A0416	2	2	3	2	2	3
195	20VE5A0417	3	3	2	3	3	2
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197	19VE1A04J1	3	2	3	3	2	3
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199	19VE1A04J4	2	1	3	2	1	3
200	19VE1A04J5	2	3	2	2	3	2
201	19VE1A04J6	2	1	3	2	1	3
202	19VE1A04J7	2	3	3	2	3	3
203	19VE1A04J8	2	2	3	2	2	3
204	19VE1A04J9	3	3	2	3	3	2
205	19VE1A04K0	2	1	3	2	1	3
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207	19VE1A04K2	2	2	3	2	2	3
208	19VE1A04K3	3	3	2	3	3	2
209	19VE1A04K4	2	1	3	2	1	3
210	19VE1A04K5	2	3	3	2	3	3
211	19VE1A04K6	2	2	3	2	2	3
212	19VE1A04K7	3	3	2	3	3	2
213	19VE1A04K8	2	1	3	2	1	3
214	19VE1A04K9	2	3	3	2	3	3
215	19VE1A04L0	2	2	3	2	2	3
216	19VE1A04L1	3	3	2	3	3	2
217	19VE1A04L2	2	3	2	2	3	2
218	19VE1A04L3	3	2	2	3	2	2
219	19VE1A04L4	2	3	3	2	3	3
220	19VE1A04L5	2	1	3	2	1	3
221	19VE1A04L7	2	3	3	2	3	3
222	19VE1A04L8	2	2	3	2	2	3
223	19VE1A04L9	3	3	2	3	3	2
224	19VE1A04M0	3	2	3	3	2	3
225	19VE1A04M1	3	2	3	3	2	3
226	19VE1A04M2	2	3	2	2	3	2
227	19VE1A04M3	2	1	3	2	1	3
228	19VE1A04M4	2	3	2	2	3	2
229	19VE1A04M5	2	1	3	2	1	3
230	19VE1A04M6	2	3	3	2	3	3
231	19VE1A04M7	2	2	3	2	2	3
232	19VE1A04M8	3	3	2	3	3	2
233	19VE1A04M9	2	1	3	2	1	3
234	19VE1A04N0	2	3	2	2	3	2
235	19VE1A04N1	3	2	2	3	2	2
236	19VE1A04N2	2	3	3	2	3	3
237	19VE1A04N3	2	1	3	2	1	3
238	19VE1A04N4	2	3	3	2	3	3
239	19VE1A04N5	2	2	3	2	2	3

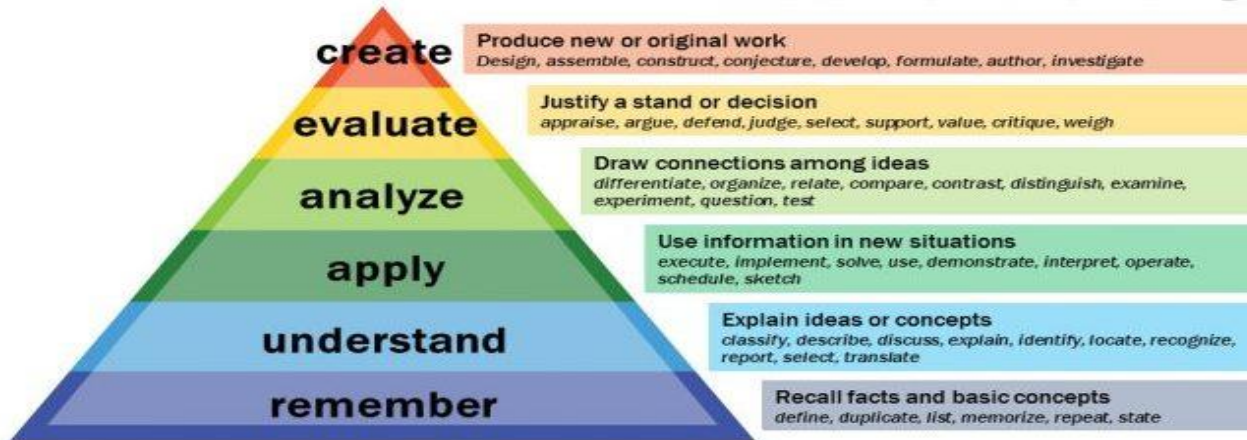
240	19VE1A04N6	3	3	2	3	3	2
241	19VE1A04N7	3	2	3	3	2	3
242	19VE1A04N8	3	2	3	3	2	3
243	19VE1A04N9	2	3	2	2	3	2
244	19VE1A04P0	2	1	3	2	1	3
245	19VE1A04P1	2	3	2	2	3	2
246	19VE1A04P2	2	1	3	2	1	3
247	19VE1A04P3	2	3	2	2	3	2
248	19VE1A04P4	3	2	2	3	2	2
249	19VE1A04P5	2	3	3	2	3	3
250	19VE1A04P6	2	1	3	2	1	3
251	19VE1A04P7	2	3	3	2	3	3
252	19VE1A04P8	2	2	3	2	2	3
253	19VE1A04P9	3	3	2	3	3	2
254	19VE1A04Q0	3	2	3	3	2	3
255	20VE5A0420	3	2	3	3	2	3
256	20VE5A0422	2	3	2	2	3	2
257	20VE5A0423	2	1	3	2	1	3
258	20VE5A0424	2	3	2	2	3	2
	AVG	2.13	2.11	2.31	2.13	1.57	2.33

CO1	2.13
CO2	2.11
CO3	2.31
CO4	2.13
CO5	1.57
CO6	2.33

		Mid-1 Question Paper - Descriptive	Marks	CO	Cognitive Process Dimension
Answer any two of the following:					
1	a)	Describe the mechanism of velocity modulation in a two cavity Klystron with a neat structure.	2	CO1	understand
	b)	Explain the construction and working principle of 8 cavity cylindrical Magnetron.	2	CO2	Analyze
	c)	Define matched load? Give few examples of waveguide loads.	1	CO3	Remember
2	a)	What is need of Helix in TWT? Describe the Amplification process for TWT.	2	CO1	understand
	b)	Explain about the separation of PI-Mode of magnetron.	2	CO2	Analyze
	c)	Discuss about any one Coupling mechanism of a waveguide?	1	CO3	understand
3	a)	Illustrate the working of reflex Klystron and Discuss its output characteristics	2	CO1	Apply
	b)	Explain the construction of the GUNN diode using RWH theory?	2	CO2	Analyze
	c)	What are waveguide Windows? Give the types of Waveguide Windows.	1	CO3	Remember
4	a)	Discuss about the limitations of conventional tubes at microwave frequencies.	2	CO1	Apply
	b)	Explain the principle of operation of IMPATT Device.	2	CO2	Analyze
	c)	What is the Faraday rotation? Give the list of ferrite components.	1	CO3	Remember

		Mid-2 Question Paper - Descriptive	Marks	CO	Cognitive Process Dimension
Answer any two of the following:					
1	a)	Explain the RF substitution method of measurement of Attenuation?	2	CO5	Analyze
	b)	Explain About Classification of Optical Fiber?	2	CO6	Analyze
	c)	Explain the characteristics of Ferrites?	1	CO4	Analyze
2	a)	Explain Circulator with S-Matrix?	2	CO5	Analyze
	b)	Explain Optical Source with its Characteristics?	2	CO6	Analyze
	c)	Explain the principle of Faraday rotation?	1	CO4	Analyze
3	a)	Explain the measurement of attenuation using power ratio method	2	CO5	Analyze
	b)	Explain Light Detector with its Characteristics?	2	CO6	Analyze
	c)	Explain Isolator with S-Matrix?	1	CO4	Analyze
4	a)	Determined the method of measurement of VSWR.	2	CO5	understand
	b)	Writ about Optical Fiber Types?	2	CO6	understand
	c)	Draw E-Plane Tee Junction Diagram and represent S-Matrix?	1	CO4	understand

Bloom's Taxonomy



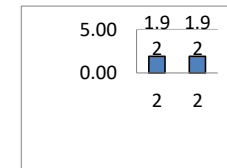
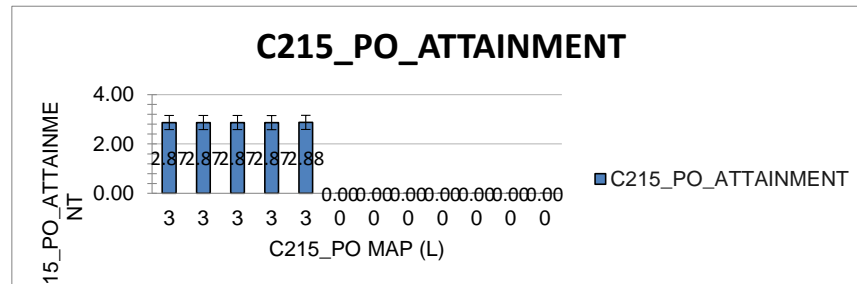
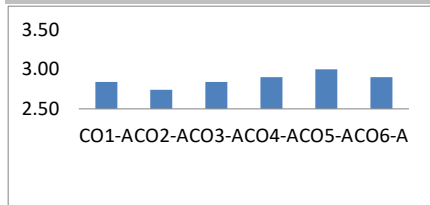
COURSE TITLE	ELECTRO MAGNETIC FIELDS AND WAVES	COURSE CODE	
NAME & DESIGNATION	S.ASHALATHA , Assistant Professor	SECTION	
NAME & DESIGNATION		SECTION	A & B
DEPARTMENT	ECE	REGULATION	R18
BATCH	2020-24	YEAR & SEMESTER	II-II
ACADEMIC YEAR	2022-23		

COURSE NAME	COURSE OUTCOMES	BTL	HOURS
C101.1	Able to explain the concepts related to static electric field and to apply them for various applications.	TL3	15
C101.2	Explain the concepts related to static magnetic field and to apply them for various applications. Demonstrate and analyze the Maxwell's equations for time varying fields.	TL3	10
C101.3	Analyze the Wave Equations for good conductors and good dielectrics, and evaluate the UPW Characteristics for several practical media of interest	TL4	10
C101.4	Determine the polarization features, reflection and transmission coefficients for UPW propagation, distinguish between Brewster and Critical Angles, and acquire knowledge of waveguides.	TL4	12
C101.5	Determine the Transmission Line parameters for different lines, characterize the distortions and estimate the characteristics for different lines.	TL2	16
C101.6	Analyze the RF Line features and configure them as SC, OC Lines, QWTs and HWTs, and design the same for effective impedance transformation.	TL4	12

COURSE TITLE	LECTURE	TUTORIAL	PRACTICAL	HOURS	CREDITS	CO1-T	CO2-T	CO3-T	CO4-T	CO5-T	CO6-T	CO1-A	CO2-A	CO3-A	CO4-A	CO5-A	CO6-A
ELECTRO MAGNETIC FIELD	3	0	0	75	3	2.38	2.20	2.02	1.83	2.38	2.20	2.84	2.74	2.84	2.90	3.00	2.90

CO PO MAPPING	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
C101.1	X	X	X	X	-	-	-	-	-	-	-	-	X	X
C101.2	X	X	X	X	X	-	-	-	-	-	-	-	X	X
C101.3	X	X	X	X	X	-	-	-	-	-	-	-	X	X
C101.4	X	X	X	X	X	-	-	-	-	-	-	-	X	X
C101.5	X	X	X	X	X	-	-	-	-	-	-	-	X	X
C101.6	X	X	X	X	X	-	-	-	-	-	-	-	X	X
C215_CO PO MAP	X	X	X	X	X	-	-	-	-	-	-	-	X	X

C PO ATTAINMENT	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	CO_ATT
C101.1	3	3	3	3	-	-	-	-	-	-	-	-	1	1	2.84
C101.2	3	3	3	3	3	-	-	-	-	-	-	-	1	1	2.74
C101.3	3	3	3	3	3	-	-	-	-	-	-	-	1	1	2.84
C101.4	3	3	3	3	3	-	-	-	-	-	-	-	2	2	2.90
C101.5	3	3	3	3	3	-	-	-	-	-	-	-	1	1	3.00
C101.6	3	3	3	3	1	3	-	-	-	-	-	-	1	1	2.90
C215_PO MAP (L)	3	3	3	3	3	0	0	0	0	0	0	0	2	2	2.87
C215_PO_ATTAINMENT	2.87	2.87	2.87	2.87	2.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.92	1.92	



PRE REQUISITES	GAPS IF ANY	ACTION TAKEN	DATE	RESOURCE PERSON	%ST ATTENDED	RELEVENCE TO Pos	RELEVENCE TO PSOs

	CO1	CO2	CO3	CO4	CO5	CO6
Domain Expert Feedback	2	2	1	1	2	2
Student Feedback	3.00	2.50	3.00	2.50	3.00	2.50
University Results	1.5	1.5	1.5	1.5	1.5	1.5
Average	2.17	2.00	1.83	1.67	2.17	2.00
Enhancement %						
10	2.4	2.2	2.0	1.8	2.4	2.2

UNI	CO	L NO	TOPIC	COURSE OBJECTIVES	COURSE OUTCOMES	KEY NO:	KEY WORD
Unit-I:							
UNIT - 1	CO - 1	1	Coulomb's Law	To learn the Basic Laws,	Able to explain the concepts related to static electric field and to apply them for various applications.	1	Coulomb's Law
		2	Electric Field Intensity – Fields	Concepts and proofs related to Electrostatic Fields and		2	Gauss Law and Applications
		3	Electric Flux Density	Magnetostatic Fields, and		3	Capacitance
		4	Gauss Law and Applications	apply them to solve physics and engineering problems			
		5	Electric Potential, Relations Be				
		6	Maxwell's Two Equations for E				
		7	Energy Density				
		8	Convection and Conduction C				
		9	Dielectric Constant				
		10	Isotropic and Homogeneous D				
		11	Continuity Equation				
		12	Relaxation Time, Poisson's an				
		13	Capacitance – Parallel Plate				
		14	Coaxial, Spherical Capacitors				
UNIT-II:							
UNIT - 2	CO - 2	1	Magnetostatics	To learn the Basic Laws,	Able to explain the concepts related to static magnetic field and to apply them for various applications.	1	Biot Savart Law
		2	Biot Savart Law	Concepts and proofs related to Magnetostatic Fields and		2	Amperes Circuit Law
		3	Amperes Circuit Law and Applicat	Magnetostatic Fields, and		3	Magnetic scalar and vector Po
		4	Magnetic Flux Density	apply them to solve physics and engineering problems			
		5	Maxwell's Two Equations for Magn				
		6	Magnetic Scalar and Vector Potent				
		7	Forces due to Magnetic fields				
		8	Amperes Force Law				
UNIT-III:							
UNIT - 3	CO - 3	1	Faradays law and Transformer emf	To distinguish between static and time-varying fields, and understand the significance and utility of Maxwell's Equations and	Distinguish the static and time-varying fields, establish the corresponding sets of maxwells equations and	1	Faradays Law
		2	Inconsistency of Amperes Law			2	Inconsistency of Amperes Law
		3	Displacement Current Density			3	Maxwells equations
		4	Maxwells Equations in Different fo				
		5	Conditions at Boundary Surface-Dielect				
UNIT-IV:							
UNIT - 4	CO - 4	1	EM Wave Characteristics	To analyze the characteristics of Uniform Plane Waves (UPW),	Analyze the Wave Equations for good conductors and good dielectrics, and evaluate the UPW Characteristics for several practical media of interest	1	EM Wave characteristics
		2	Wave equations for conducting an	determine their propagation parameters and estimate the same for dielectric and dissipative media.		2	wave Propagation
		3	Uniform plane waves			3	Polarization
		4	Wave Propagation in lossless and				
		5	Conductors and Dielectrics Chara				
		6	Wave Propagation in Good Condu				
		7	Polarization				

UNIT		UNIT-IV:						
UNIT - 5	CO - 5	1	Reflection and Refraction of Plane	To conceptually understand the UPW Polarization features and Poynting Theorem, and apply them for practical problems.	Establish the proof and estimate the polarization features, reflection and transmission coefficients for UPW propagation, distinguish between Brewster and Critical Angles, and acquire	1 2 3	Reflection and refraction of wave	
		2	Normal Incidence for both perfect					Total internal Reflection
		3	Oblique Incidence for both perfect					Poynting theorem
		4	Brewster angle, Critical angle					
		5	Total Internal Reflection					
		6	Surface Impedance					
		7	Poynting Theorem					
		8						
		UNIT-V:						
UNIT - 5	CO - 6	1	Electromagnetic Spectrum and Rectangular waveguide	To Conceptually understand the Waveguides and to determine the characteristics of waveguides and microstrips	To analyse completely the rectangular waveguides, their mode characteristics, and design waveguides for solving problems	1 2 3	Wave Equation in rectangular	
		2						Dominant and Degenerate mo
		3	Wave Equation in Rectangular Co					Phase and Group Velocities
		4	TE/TM mode analysis, Expression					
		5	Characteristic Equation and Cutoff f					
		6	Dominant and Degenerate modes					
		7	Sketches of TE and TM Mode fields					
		8	Phase and group velocities					
		9	Wavelengths and Impedance relat					

CO PO MAPP	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	CO_A
C215.1	3	3	3	3	0	0	0	0	0	0	0	0	1	1	2.84
C215.2	3	3	3	3	3	0	0	0	0	0	0	0	1	1	2.74
C215.3	3	3	3	3	3	0	0	0	0	0	0	0	1	1	2.84
C215.4	3	3	3	3	3	0	0	0	0	0	0	0	2	2	2.90
C215.5	3	3	3	3	3	0	0	0	0	0	0	0	1	1	3.00
C215.6	3	3	3	1	3	0	0	0	0	0	0	0	1	1	2.90
SUM	18	18	18	16	15	0	0	0	0	0	0	0	7	7	
CO_PO MAP	3	3	3	3	3	0	0	0	0	0	0	0	2	2	0
C_PO ATT	2.87	2.87	2.87	2.87	2.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.92	1.92	

SUM RANGE	CO_PO(L)
0	0
1-3	1
4-11	2
12-18	3

Descriptive Question Wise Marks

S.No	Yr/Br/Sc	Hall Ticket No.	Student Name	Q1			Q2			Q3			Q4			I DES (10)	I OBJ (10)	I ASN (5)	I MID (25)
				CO1	CO2	CO3	CO1	CO2	CO3	CO1	CO2	CO3	CO1	CO2	CO3				
				A	B	C	A	B	C	A	B	C	A	B	C				
				2	2	1	2	2	1	2	2	1	2	2	1				
1	II-II ECE-A	21VE1A0401	A SANDHYA	1	1.5	1	0.5	1.5	1							6.5	5	5	17
2	II-II ECE-A	21VE1A0402	CHARY														AB	0	A
3	II-II ECE-A	21VE1A0403	ADLA GOVARDHAN	1			0.5	1								2.5	4	5	12
4	II-II ECE-A	21VE1A0404	ALASAKANI LEHYA	1.5				2	0.5		2			1.5		4.5	6	5	16
5	II-II ECE-A	21VE1A0405	AMUKA SAI KIRAN	0.5												0.5	4	5	10
6	II-II ECE-A	21VE1A0406	ANAGANTI KARTHIK	1		0.5		1	0	1.5	1	0				4	5.5	5	15
7	II-II ECE-A	21VE1A0407	BACHU SAI HRUTHIK	0.5	0.5	0.5	1.5	1								4	3.5	5	13
8	II-II ECE-A	21VE1A0409	BAIKANI CHANDRAM																
9	II-II ECE-A	21VE1A0410	BATHUKA LOKESH				1.5	1.5		1.5	0					4.5	3.5	5	13
10	II-II ECE-A	21VE1A0411	BATHULA VISWASREE	1	1.5	1						0.5				4	2.5	5	12
11	II-II ECE-A	21VE1A0413	BIJIGA DHARANISREE														AB	0	A
12	II-II ECE-A	21VE1A0414	RAVI TEJA	0												0	3	5	8
13	II-II ECE-A	21VE1A0415	C JAYKANTH	0.5				0.5								1	4	5	10
14	II-II ECE-A	21VE1A0416	MOUNIKA	1	0.5	0.5				0.5						2.5	3	5	11
15	II-II ECE-A	21VE1A0417	CHITIPALLI SHASHANK	1.5				0.5		0.5						2	3	5	10
16	II-II ECE-A	21VE1A0418	CHOLLETTI SREEJA	2	1.5		2	1.5								7	3.5	5	16
17	II-II ECE-A	21VE1A0419	KUMAR GOUD	0												0	2.5	5	8
18	II-II ECE-A	21VE1A0420	DAYALA SHIRISHA					1.5					1			2.5	3	5	11
19	II-II ECE-A	21VE1A0421	NISHANTH					1								1	6	5	12
20	II-II ECE-A	21VE1A0422	DONGAPURE KEERTHI				2	2	0.5	2						6.5	6.5	5	18
21	II-II ECE-A	21VE1A0423	DYAVANAPELLI THRISHA				1.5			1			0.5			2.5	5.5	5	13
22	II-II ECE-A	21VE1A0424	BABU	0.5	1	1	1.5	2	1							7	6	5	18
23	II-II ECE-A	21VE1A0425	GANDLA CHARAN				1	0.5								1.5	3	5	10
24	II-II ECE-A	21VE1A0426	SHIVA RAMA KRISHNA			1	2	2								5	3.5	5	14
25	II-II ECE-A	21VE1A0427	GAVVALA ANUSHA				2	1.5	1			1.5	1.5			7.5	5.5	5	18
26	II-II ECE-A	21VE1A0428	GODHA NIKHITHA	2	0.5	1	2	2	1	2						8.5	6	5	20
27	II-II ECE-A	21VE1A0429	GOLCONDA LOKESH	1		1		1.5	1							4.5	4	5	14
28	II-II ECE-A	21VE1A0430	GOLKONDA AISHWARYA	2	1	1				1.5	1.5					7	5.5	5	18
29	II-II ECE-A	21VE1A0431	GUMMADI NARENDHER	2		1	2	2								7	7	5	19
30	II-II ECE-A	21VE1A0432	SRINIVAS											0		0	1	5	6
31	II-II ECE-A	21VE1A0433	GUNTOJU SHIVA SAI	2	0.5	1	2	1	1							7.5	7	5	20
32	II-II ECE-A	21VE1A0434	GURRAM ASHISH						1							1	5.5	5	12
33	II-II ECE-A	21VE1A0435	JAIDAPURAM KARTHIK	0.5		0.5		0.5	1							2.5	4.5	5	12
34	II-II ECE-A	21VE1A0436	KAKUMARI TEJASHWAR	2	0	1	0.5	2	1							6.5	5	5	17
35	II-II ECE-A	21VE1A0437	KADIYAM VIJAY				1									1	3	5	9
36	II-II ECE-A	21VE1A0438	KALYANI B	2		1	2	2								7	5.5	5	18
37	II-II ECE-A	21VE1A0439	SANTHOSHI				2	2	1	2	2	1				10	8.5	5	24
38	II-II ECE-A	21VE1A0440	KATTA PRAJITH REDDY	1		1		1.5	0.5							4	4.5	5	14
39	II-II ECE-A	21VE1A0441	THANUJA	1.5	0	1	1.5	1		1	0.5					5	3	5	13
40	II-II ECE-A	21VE1A0442	MEDHINI DHORI	2	1	1		1.5								5.5	3.5	5	14
41	II-II ECE-A	21VE1A0443	SURARCHITH	1		0.5		2		1						3.5	1.5	5	10
42	II-II ECE-A	21VE1A0444	NARAYANA					0.5								0.5	3.5	5	9
43	II-II ECE-A	21VE1A0445	N VARSHAA				2	2	1				1.5	0.5		7	5	5	17
44	II-II ECE-A	21VE1A0446	NADIKUDI RAMYASREE				1.5		1	2						4.5	6	5	16
45	II-II ECE-A	21VE1A0447	SAI	2	1.5	1		2	1	1		0.5	0.5			7.5	4	5	17
46	II-II ECE-A	21VE1A0448	NARMETA ABHINAY	0.5	0.5		1	1.5	0.5							4	6	5	15
47	II-II ECE-A	21VE1A0449	NEELAM RUSHIK			1	1.5		1							3.5	5	5	14
48	II-II ECE-A	21VE1A0450	PAPANI AKHIRANANDAN				2	1.5		1.5						5	3	5	13
49	II-II ECE-A	21VE1A0451	VAMSHI	1	0.5	0		1	0.5							3	3.5	5	12
50	II-II ECE-A	21VE1A0452	REDDY	2		1	2	1								6	3.5	5	15
51	II-II ECE-A	21VE1A0453	POLA NAVYA	2	2	1						2	2	1		10	9	5	24
52	II-II ECE-A	21VE1A0454	POLAKONDA DANUSHA	2		0.5						2	0.5			5	8.5	5	19
53	II-II ECE-A	21VE1A0455	POLEPALLY AKHIL	1			0.5									1.5	2.5	5	9
54	II-II ECE-A	21VE1A0456	SAIKAM NEHA	2	0		1	2	0.5							5.5	3.5	5	14
55	II-II ECE-A	21VE1A0457	SANGISHETTI MURALI	2	2	1	2	2	1							10	7	5	22
56	II-II ECE-A	21VE1A0458	SYED ARIS HUSSAIN	0.5			2	1.5								4	4	5	13
57	II-II ECE-A	21VE1A0459	QUADRI	1			2	1.5		0.5						4.5	6	5	16
58	II-II ECE-A	21VE1A0460	REDDY	2	1.5	1						2	1.5			8	6	5	19
59	II-II ECE-A	21VE1A0461	VAMSHIDHAR REDDY											0		0	1	5	6
60	II-II ECE-A	21VE1A0462	YEGGE MADHU	2			2	2								6	2	5	13
61	II-II ECE-A	21VE1A0463	YELAGAPURI GEETHIKA	1	2	1						1.5	1.5			7	8.5	5	21
62	II-II ECE-A	22VESAO401	ADDU SRI CHARAN									0	0			0	2.5	5	8
63	II-II ECE-A	22VESAO402	ANEM SAI KRISHNA					1								1	3.5	5	10
64	II-II ECE-A	22VESAO404	CHILIVERU NISHA	2	1.5	1				1	1	0				6.5	5.5	5	17
65	II-II ECE-A	22VESAO405	RAJ														AB	5	A
66	II-II ECE-A	22VESAO406	LOSHARAM LOKESH	2	0.5	1	2	2		2	1					7.5	6.5	5	19
67	II-II ECE-A	22VESAO407	PUJITHA	2	2	1	1.5	2	1							9.5	7.5	5	22
68	II-II ECE-B	21VE1A0464	ADUSUMILLI SRILEKHA				2	2	1	2	1.5	1				9.5	7.5	5	22
69	II-II ECE-B	21VE1A0465	AKENDRA BOGATI				1.5	1.5				0.5				3.5	3.5	5	12
70	II-II ECE-B	21VE1A0466	SURYA DEVA	0.5		1						0.5				2	2.5	5	10
71	II-II ECE-B	21VE1A0467	BACHU ARCHANA	2	2	1						1	1.5	0.5		8	4.5	5	18
72	II-II ECE-B	21VE1A0468	LIKHITH							0.5				0.5		1	3	5	9
73	II-II ECE-B	21VE1A0469	REDDY	1												1	3	5	9
74	II-II ECE-B	21VE1A0470	BANDLA SRIRAM					1								1	2	5	8
75	II-II ECE-B	21VE1A0471	BARLA NAVEEN KUMAR	0												0	2	5	7
76	II-II ECE-B	21VE1A0472	BOCHU AKHIL TEJA							0.5			2			2.5	3.5	5	11
77	II-II ECE-B	21VE1A0473	BOLLA MAHESHWAR	1			2		1	2						5	3	5	13
78	II-II ECE-B	21VE1A0474	REDDY									0				0	2	5	7
79	II-II ECE-B	21VE1A0475	REDDY				2	2	1				2	0.5		7.5	6	5	19
80	II-II ECE-B	21VE1A0476	BUKHYA BHAVANI	1.5	1	1	1.5	0	1	1.5						6	4	5	15
81	II-II ECE-B	21VE1A0477	CHAVAN KARTHIK				0									0	2.5	5	8
82	II-II ECE-B	21VE1A0478	CHETTY AROHAN				2									2	2	5	9
83	II-II ECE-B	21VE1A0479	YASHWANTH				1									1	1.5	5	8

84	II-II ECE-B	21VE1A0480	CHIMARLA RAHUL					2	2	1						2	2	0.5	9.5	6	5	21	
85	II-II ECE-B	21VE1A0481	SRICHANDANA					1.5	1.5	1	1	1	0.5						6.5	3	5	15	
86	II-II ECE-B	21VE1A0482	DUBBAKA ANJAN REDDY	0.5															0.5	1.5	5	7	
87	II-II ECE-B	21VE1A0483	EMMADI AJAY					0											0	2	5	7	
88	II-II ECE-B	21VE1A0484	GADDALA MAHESH									0.5							0.5	5	5	11	
89	II-II ECE-B	21VE1A0485	GANJI VARSHINI	0.5	1.5	0.5	0.5			1									4	7	5	16	
90	II-II ECE-B	21VE1A0486	GARAPANA DILIP REDDY					2	2	1	1					2	2	1	10	9.5	5	25	
91	II-II ECE-B	21VE1A0487	REDDY	2						2									4	4	5	13	
92	II-II ECE-B	21VE1A0488	GOSHIKA HEMANTH	2	1.5	1	2	2	2	1									9.5	6	5	21	
93	II-II ECE-B	21VE1A0489	GUNDU VINAY KUMAR		2			2	1.5	0.5	0.5	0.5					1		6	3	5	14	
94	II-II ECE-B	21VE1A0490	JAKKA ABHINAV							1						1.5	0.5		3	4	5	12	
95	II-II ECE-B	21VE1A0491	JAKKULA MAHESH	2	0.5	1	2	2	2	0.5									8	1	5	14	
96	II-II ECE-B	21VE1A0492	JINUKALA ARAVIND																AB	0		A	
97	II-II ECE-B	21VE1A0493	JOSHI CHAITANYA					1					0.5						1.5	3.5	5	10	
98	II-II ECE-B	21VE1A0494	YADAV					0.5											0.5	3	5	9	
99	II-II ECE-B	21VE1A0496	KAKUNURI NEERAJA	1.5	1	1	2	1.5	1	1.5	0.5								8	7	5	20	
100	II-II ECE-B	21VE1A0497	KALA SAI NITHIN	0.5	0.5	0.5	1	0											2.5	4	5	12	
101	II-II ECE-B	21VE1A0498	KAMALLA MADHU					2											2	3.5	5	11	
102	II-II ECE-B	21VE1A0499	REDDY	2		0.5	2									2	0.5	0	5	3.5	5	14	
103	II-II ECE-B	21VE1A04A0	RAM MOHAN CHARY	0.5		1	2	0.5	1										5	6	5	16	
104	II-II ECE-B	21VE1A04A1	KOTA CHAITHANYA	1.5	2	1	2	2	1										9.5	8.5	5	23	
105	II-II ECE-B	21VE1A04A2	SHAKER	0															0	2	5	7	
106	II-II ECE-B	21VE1A04A3	SESHA MUDDAMSETTY					1		1						1.5	0.5		4	4.5	5	14	
107	II-II ECE-B	21VE1A04A4	SAKETH GOWTHAM															0	0	1.5	5	7	
108	II-II ECE-B	21VE1A04A5	MALOTH ASHOK	0.5		0.5	0	1.5								1	1		3.5	3	5	12	
109	II-II ECE-B	21VE1A04A6	MINA E					1.5	2	1	2	2				1	1		8.5	5	5	19	
110	II-II ECE-B	21VE1A04A7	MOTAKATLA MEGHANA					2	1	0.5	0.5					1			5	4	5	14	
111	II-II ECE-B	21VE1A04A8	MUNGI VENNELA	1.5		0.5	2												4	3.5	5	13	
112	II-II ECE-B	21VE1A04A9	MURUGANI KOUSHIK															0	0	2	5	7	
113	II-II ECE-B	21VE1A04B0	NAKARIKANTI SWETHA	1	1	1	2	2	1							2			8	8.5	5	22	
114	II-II ECE-B	21VE1A04B1	YADAV			0.5													0.5	2.5	5	8	
115	II-II ECE-B	21VE1A04B3	PALLERLA SWATHI					0.5	1.5	1						0.5	1.5	1	6	8	5	19	
116	II-II ECE-B	21VE1A04B4	PAPALA AKASH	2		1	1.5	1.5	0.5										6.5	8	5	20	
117	II-II ECE-B	21VE1A04B5	PARLAPALLY BHUVIKA					2	2	1	2					1			8	6	5	19	
118	II-II ECE-B	21VE1A04B6	PREETHIKA CHIRATLA							0.5	2	1	1						4.5	6.5	5	16	
119	II-II ECE-B	21VE1A04B7	RAGAM SHIVA KUMAR						1.5								0.5		2	5.5	5	13	
120	II-II ECE-B	21VE1A04B8	RAHUL		1	1	1.5												3.5	4	5	13	
121	II-II ECE-B	21VE1A04B9	SANGEM SRILEKHA	0	1.5	1					1	2	0	1	1.5				5.5	4.5	5	15	
122	II-II ECE-B	21VE1A04C0	SHANIGARAPU VISHNU					2	2	1	1.5		0.5						7	7	5	19	
123	II-II ECE-B	21VE1A04C1	SIDDAM SRI HARSHINI					2	2	1	2	0.5							7.5	5.5	5	18	
124	II-II ECE-B	21VE1A04C2	SRITEJA REDDY			1	1	0.5											2.5	4	5	12	
125	II-II ECE-B	21VE1A04C3	THALARI GREESHMA					1.5	2	1	2		1						7.5	4.5	5	17	
126	II-II ECE-B	21VE1A04C4	SMITHA					1.5	2		1	1				0.5	1.5		5.5	2	5	13	
127	II-II ECE-B	21VE1A04C5	VAMSHI GAJJALA			0.5	1	2								0.5			3.5	4	5	13	
128	II-II ECE-B	21VE1A04C6	KUMAR REDDY					2									1.5		3.5	5.5	5	14	
129	II-II ECE-B	21VE1A04C7	YANNAM VINAY													1	0.5		5.5	4.5	5	15	
130	II-II ECE-B	22VESAO408	C KIRON REDDY	2		1	1.5	1											5.5	7	5	18	
131	II-II ECE-B	22VESAO409	KOTTAM MOKSHAGNA																AB	0		A	
132	II-II ECE-B	22VESAO410	MACHA TRISHITA	1.5	1	1	2	1.5	1	1									8	5.5	5	19	
133	II-II ECE-B	22VESAO411	MANDA SHIVANI	0	0	0	1.5	1	0	1.5									4	4.4	5	14	
134	II-II ECE-B	22VESAO412	SHASHIKANTH				0.5									1.5			2	3	5	10	
135	II-II ECE-B	22VESAO413	SEETHA YAMUNA YADAV					1	2	1	2	1.5	0.5						8	8.5	5	22	
				CO1	CO2	CO3	CO1	CO2	CO3	CO1	CO2	CO3	CO1	CO2	CO3								
Total Marks				85.5	40	45.5	127	114.5	43.5	53.5	19	8.5	30	31.5	6	569	577.9	650	1823				
No of Students Answered				68	37	54	83	77	51	39	18	14	27	24	14	129	129	134	129				
No of Students scoring > threshold				49	24	52	72	67	49	32	12	11	17	19	9	59	52	130	81				
% of students scoring > threshold				72.1	64.9	96.3	86.7	87.0	96.1	82.1	66.7	78.6	63.0	79.2	64.3	45.7	40.3	97.0	62.8				

Descriptive Question Wise Marks

S.No	Yr/Br/Sc	Hall Ticket No.	Student Name	Q1			Q2			Q3			Q4			II DES (10)	II OBJ (10)	II ASN (5)	II MID (25)	Internal (25)	External (75)	GRADE			
				CO4	CO5	CO6	CO4	CO5	CO6	CO4	CO5	CO6	CO4	CO5	CO6										
				A	B	C	A	B	C	A	B	C	A	B	C										
1	II-II ECE-A	21VE1A0401	A SANDHYA	2	2	1				1.5	2	1			9.5	10	5	25	21	72	A				
2	II-II ECE-A	21VE1A0402	ADDOJU BHARADWAJ CHARY	1.5	1.5	1					1	1			6	9.5	5	21	21	12	F				
3	II-II ECE-A	21VE1A0403	ADLA GOVARDHAN	1	2	1			1			1	1		5	10	5	20	16	57	B				
4	II-II ECE-A	21VE1A0404	ALASAKAM LEHYA	1	2	1						1	1.5		6.5	10	5	22	19	59	B				
5	II-II ECE-A	21VE1A0405	AMUKA SAI KIRAN		1	1			1			1.5	1		4.5	9.5	5	19	14.5	41	C				
6	II-II ECE-A	21VE1A0406	ANAGANTI KARTHIK		2	1								2	2	1		8	9	5	22	18.5	B+		
7	II-II ECE-A	21VE1A0407	BACHU SAI HRUTHIK	2	2			2	2	1					1			9	10	5	24	18.5	C		
9	II-II ECE-A	21VE1A0410	BATHUKA LOKESH	2	2	1								2	2			9	10	5	24	18.5	C		
10	II-II ECE-A	21VE1A0411	BATHULA VISWASREE			1			1						2	10	5	17	14.5	51	B				
11	II-II ECE-A	21VE1A0413	BIJGA DHARANISREE																						
12	II-II ECE-A	21VE1A0414	BISABATTINI VENKATA RAVI TEJA					2	1	2					5	9	5	19	13.5	29	F				
13	II-II ECE-A	21VE1A0415	C JAYKANTH	1								1	1		2	8	5	15	12.5	27	F				
14	II-II ECE-A	21VE1A0416	CHINTALAPATI MOUNIKA	2	2	1						2	1		8	8.5	5	22	16.5	45	C				
15	II-II ECE-A	21VE1A0417	CHITIPALLI SHASHANK	2	2	1	2			1					8	10	5	23	16.5	57	B				
16	II-II ECE-A	21VE1A0418	CHOLLETI SREEJA	2	2	1			2	1					8	10	5	23	19.5	59	B				
17	II-II ECE-A	21VE1A0419	DANTHURI CHARAN KUMAR GOUD									1			1	9	5	15	11.5	27	F				
18	II-II ECE-A	21VE1A0420	DAYYALA SHRISHA	2	1	1			2				1		6	8.5	5	20	15.5	42	C				
19	II-II ECE-A	21VE1A0421	DHARAVATH SAI NISHANTH	2	1										4	10	5	19	15.5	21	F				
20	II-II ECE-A	21VE1A0422	DONGAPURE KEERTHI	2	2	1				2	2	1			10	10	5	25	21.5	74	A				
21	II-II ECE-A	21VE1A0423	DYAVANAPELLI THIRISHA	2	2	1				2	2	1			10	10	5	25	19	67	B+				
22	II-II ECE-A	21VE1A0424	ERRABELLY PRANEETH BABU	2	2	1	2	1.5	1						9.5	10	5	25	21.5	71	A				
23	II-II ECE-A	21VE1A0425	GANDLA CHARAN		2	1						2	1		6	9.5	5	21	15.5	42	C				
24	II-II ECE-A	21VE1A0426	GARAPATI PREETHAM SHIVA RAMA KRISHNA	1	2	1						2	1		7	10	5	22	18	44	C				
25	II-II ECE-A	21VE1A0427	GAVVALA ANUSHA	2	2	1	2	2	1						10	10	5	25	21.5	71	A				
26	II-II ECE-A	21VE1A0428	GODHA NIKHITHA	2	2	1							2	2	1	10	10	5	25	22.5	66	B+			
27	II-II ECE-A	21VE1A0429	GOLCONDA LOKESH	2	2	1			2	1					8	10	5	23	18.5	53	B				
28	II-II ECE-A	21VE1A0430	GOLKONDA AISHWARYA	2	2	1	2	2	1						10	10	5	25	21.5	57	B				
29	II-II ECE-A	21VE1A0431	GUMMADI NARENDER			1	2	2	1					2	2	1		10	10	5	25	22	56	B	
30	II-II ECE-A	21VE1A0432	GUNDA KALYAN SRINIVAS					2	1						2	1		6	9	5	20	13	25	F	
31	II-II ECE-A	21VE1A0433	GUNTOJU SHIVA SAI	2	2	1	1.5							2	2	1		10	10	5	25	22.5	64	B+	
32	II-II ECE-A	21VE1A0434	GURRAM ASHISH	2	2										2	2	1		9	9.5	5	24	18	44	C
33	II-II ECE-A	21VE1A0435	JADAPURAM KARTHIK	2	2	1	2	2	1						10	9	5	24	18	50	B				
34	II-II ECE-A	21VE1A0436	KAKUMARI TEJASHWAR	2	2	1	2	2	1						10	10	5	25	21	57	B				
35	II-II ECE-A	21VE1A0437	KADYAM VIJAY			0.5			1			2	1		4	9	5	18	13.5	16	F				
36	II-II ECE-A	21VE1A0438	KALYANI B	2	2							2	1		7	10	5	22	20	47	C				
37	II-II ECE-A	21VE1A0439	KARRA HARINI SANTHOSHI	2	2	1								2	2	1		10	10	5	25	24.5	68	B+	
38	II-II ECE-A	21VE1A0440	KATTA PRAITH REDDY	2	2	1	0.5	2	1						8.5	10	5	24	19	45	C				
39	II-II ECE-A	21VE1A0441	KUKUTLAPALLY THANUJJA	2	1.5	1	0.5	2	1						8	9.5	5	23	18	44	C				
40	II-II ECE-A	21VE1A0442	MEDHINI DHORI	2	2	1	2	2	1						10	9	5	24	19	48	C				
41	II-II ECE-A	21VE1A0443	MEDISETTI SHRIRAM SURARCHITH	2	2	1			2	0.5					7.5	8.5	5	21	15.5	42	C				
42	II-II ECE-A	21VE1A0444	MERUVA VENKAT NARAYANA		2	1								2			5	8	5	18	13.5	14	F		
43	II-II ECE-A	21VE1A0445	N VARSHAA	2	2	1			2	1					8	9	5	22	19.5	47	C				
44	II-II ECE-A	21VE1A0446	NADIJUDI RAMYASREE	2	2	1	2	2	1						10	9	5	24	20	60	B+				
45	II-II ECE-A	21VE1A0447	NANUPATRUNI NIKHIL SAI	2	2	1	2	1.5	1						9.5	9.5	5	24	20.5	57	B				
46	II-II ECE-A	21VE1A0448	NARMETA ABHINAV	2	2	1	2	2	1						10	10	5	25	20	73	A				
47	II-II ECE-A	21VE1A0449	NEELAM RUSHIK	2	2	1								2			7	10	5	22	18	44	C		
48	II-II ECE-A	21VE1A0450	PAPANI AKHARANANDAN	2	2	1									5	9	5	19	16	22	F				
49	II-II ECE-A	21VE1A0451	PATHARLA YEDU VAMSHI	2	2									2	1		7	9	5	21	16.5	45	C		
50	II-II ECE-A	21VE1A0452	PINKESH PRANAY REDDY	2		1						2	1	2	2		7	10	5	22	18.5	46	C		
51	II-II ECE-A	21VE1A0453	POLA NAVYA	2	2	1				2	2	1			10	10	5	25	24.5	67	B+				
52	II-II ECE-A	21VE1A0454	POLAKONDA DANUSHA	2	2	1				2	2	1			10	10	5	25	22	67	B+				
53	II-II ECE-A	21VE1A0455	POLEPALLY AKHIL			1									1	9.5	5	16	12.5	40	C				
54	II-II ECE-A	21VE1A0456	SAIKAM NEHA	2	2	1				2	2	1			8	9.5	5	23	18.5	45	C				
55	II-II ECE-A	21VE1A0457	SANGISHETTI MURALI	2	2	1	2	2	1						10	10	5	25	23.5	52	B				
56	II-II ECE-A	21VE1A0458	SYED ARIS HUSSAIN	2	2	1						1	2	2	1		10	5.5	5	21	17	32	F		
57	II-II ECE-A	21VE1A0459	SYED NOORUDIN QADWI	2	2	1	2	2	1						10	9.5	5	25	20.5	53	B				
58	II-II ECE-A	21VE1A0460	THUMMA BALA ROHIT REDDY				2	2	1	2	2	1			10	7	5	22	20.5	56	B				
59	II-II ECE-A	21VE1A0461	VANNAWADA VAMSHIDHAR REDDY			1									2	9	5	16	11	29	F				
60	II-II ECE-A	21VE1A0462	YEGGE MADHU														AB	5	5	9	28	F			
61	II-II ECE-A	21VE1A0463	YELAGAPURI GEETHIKA	2	2	1	2	2	1						10	9	5	24	22.5	61	B+				
62	II-II ECE-A	22VESAO401	ADDU SRI CHARAN	2	1.5										3.5	9	5	18	13	40	C				
63	II-II ECE-A	22VESAO402	ANEM SAI KRISHNA	0.5	0.5	1					0.5			2			4	8.5	5	18	14	40	C		
64	II-II ECE-A	22VESAO404	CHILVERU NISHA				2	2	1					2	2	1		10	10	5	25	21	58	B	
65	II-II ECE-A	22VESAO405	GUNUKONDA EDWIN RAJ																		0				
66	II-II ECE-A	22VESAO406	LOSHARAM LOKESH	2	2	1	2	2	1					2			10	10	5	25	22	52	B		
67	II-II ECE-A	22VESAO407	PILLANAGROVILA PUJITHA				2	2	1					2	2	1		10	10	5	25	23.5	76	A	
68	II-II ECE-B	21VE1A0464	ADUSUMILLI SRILEKHA	2	2	1								2	2	1		10	9.5	5	25	23.5	70	A	
69	II-II ECE-B	21VE1A0465	AKENDRA BOGATI	2	2	1	2	2	1						10	8.5	5	24	18	65	B+				
70	II-II ECE-B	21VE1A0466	AKUPATI BHARGAVA SURYA DEVA	0.5						1.5	2	1	2		1		7.5	4.5	5	17	13.5	25	F		
71	II-II ECE-B	21VE1A0467	BACHU ARCHANA	2	2	1				2	2	1			10	10	5	25	21.5	66	B+				
72	II-II ECE-B	21VE1A0468	BALLA VENKATA SAI UKRITH														AB	5	5	7	29	F			
73	II-II ECE-B	21VE1A0469	BANDELA ANIRUDH REDDY						1				1		2	8	5	15	12	25	F				
74	II-II ECE-B	21VE1A0470	BANDLA SRIRAM									1	2		3	9	5	17	12.5	31	F				
75	II-II ECE-B	21VE1A0471	BARLA NAVEEN KUMAR			1.5									2.5	6.5	5	14	10.5	40	C				
76	II-II ECE-B	21VE1A0472	BOCHU AKHIL TEJA			2						2	1		5	8	5	18	14.5	41	C				
77	II-II ECE-B	21VE1A0473	BOLLA MAHESHWAR	2	2	1			2	1					8	10	5	23	18	49	C				
78	II-II ECE-B	21VE1A0474	BUDATI AJAY KUMAR REDDY			0.5	1							0.5			2	6.5	5	14	10.5	40	C		
79	II-II ECE-B	21VE1A0475	BUDATI VENUGOPAL REDDY	2	2	1				2	2	1			10	9	5	24	21.5	52	B				
80	II-II ECE-B	21VE1A0476	BURUYA BHAVANI	2	2	1				2															

84	II-II ECE-B	21VE1A0480	CHIMARLA RAHUL	2	2	1				2	2	1				10	10	5	25	23	63	B+
85	II-II ECE-B	21VE1A0481	DASARADHI SRICHANDANA	2	2	1							2	2	1	10	9.5	5	25	20	67	B+
86	II-II ECE-B	21VE1A0482	DUBBAKA ANJAN REDDY										2			2	7.5	5	15	11	13	F
87	II-II ECE-B	21VE1A0483	EMMADI AJAY									1	2			3	8	5	16	11.5	40	C
88	II-II ECE-B	21VE1A0484	GADDALA MAHESH	1.5	2	1				2	1	0.5				7.5	10	5	23	17	49	C
89	II-II ECE-B	21VE1A0485	GANJI VARSHINI	2	2	1	1	2	1							9	10	5	24	20	54	B
90	II-II ECE-B	21VE1A0486	GARAPANA DILIP REDDY	2	2	1	2	2	1							10	10	5	25	25	68	B+
91	II-II ECE-B	21VE1A0487	GILIKAPALLY NITESH REDDY	2	2	1							2	2		7	10	5	22	17.5	44	C
92	II-II ECE-B	21VE1A0488	GOSHIKA HEMANTH	2	2	1	2	2	1							10	10	5	25	23	82	A+
93	II-II ECE-B	21VE1A0489	GUNDU VINAY KUMAR	2	2	1						1	2		1	8	10	5	23	18.5	49	C
94	II-II ECE-B	21VE1A0490	JAKKA ABHINAV	2	1.5	1				2	1					7.5	8	5	21	16.5	52	B
95	II-II ECE-B	21VE1A0491	JAKKULA MAHESH	2	2	1						2		1	8	9	5	22	18	52	B	
96	II-II ECE-B	21VE1A0492	JINUKALA ARAVINDO													AB	5	5	5			
97	II-II ECE-B	21VE1A0493	JOSHI CHAITANYA													AB	5	5	7.5	17	17	F
98	II-II ECE-B	21VE1A0494	KADARI SURYA VAMSHI YADAV									1	1			2	10	5	17	13	17	F
99	II-II ECE-B	21VE1A0496	KAKUNURI NEERAJA	2	2	1			2	2	1					10	10	5	25	22.5	75	A
100	II-II ECE-B	21VE1A0497	KALA SAI NITHIN		1				1	2	1	2				5	7	5	17	14.5	41	C
101	II-II ECE-B	21VE1A0498	KAMALLA MADHU							1.5					1	2.5	10	5	18	14.5	29	F
102	II-II ECE-B	21VE1A0499	KANUKUNTLA DEESHA REDDY	2	2							2	2	1		9	10	5	24	19	46	C
103	II-II ECE-B	21VE1A04A0	KOMMOJU ANUPAM RAM MOHAN CHARY	0.5	2	1			2	1						6.5	9.5	5	21	18.5	45	C
104	II-II ECE-B	21VE1A04A1	KOTA CHAITANYA	2	2	1	2	2	1							10	10	5	25	24	75	A
105	II-II ECE-B	21VE1A04A2	LAVOORI CHANDRA SHAKER	2	2	1					1	2		1		6	8.5	5	20	13.5	40	C
106	II-II ECE-B	21VE1A04A3	MADHU MANASA SAI SETHA MUDDAMSETTY	2	2	1	2	2	1							10	9.5	5	25	19.5	51	B
107	II-II ECE-B	21VE1A04A4	MAHADEVA VENKATA SAKETH GOWTHAM		0.5							2				2.5	5	5	13	10	13	F
108	II-II ECE-B	21VE1A04A5	MALOTH ASHOK	2	2	1		1		2	1					6	9.5	5	21	16.5	50	B
109	II-II ECE-B	21VE1A04A6	MINA E	2	2	1				2	2	1				10	10	5	25	22	60	B+
110	II-II ECE-B	21VE1A04A7	MOTARATLA MEGHANA	2	2	1				2	2	1				10	10	5	25	19.5	49	C
111	II-II ECE-B	21VE1A04A8	MUNGI VENNELA	2							1	2		1		5	4.5	5	15	14	16	F
112	II-II ECE-B	21VE1A04A9	MURUGANI KUSHIK		2	1			1		1			1		4	4	5	13	10	22	F
113	II-II ECE-B	21VE1A04B0	NAKARIKANTI SWETHA				2	2	1	2	2	1				10	10	5	25	23.5	61	B+
114	II-II ECE-B	21VE1A04B1	NANAVALA MAHESH YADAV				1	1		1	0.5	2				4.5	9.5	5	19	13.5	16	F
115	II-II ECE-B	21VE1A04B3	PALLERLA SWATHI	2	2	1	2	2	1							10	10	5	25	22	48	C
116	II-II ECE-B	21VE1A04B4	PAPALA AKASH	2	2	1				2	2	1				10	10	5	25	22.5	56	B
117	II-II ECE-B	21VE1A04B5	PARLAPALLY BHUWKA	2	2	1				2	2	1				10	9.5	5	25	22	63	B+
118	II-II ECE-B	21VE1A04B6	PREEETHIKA CHRITLA	2	2	1				2	2	1				10	10	5	25	20.5	47	C
119	II-II ECE-B	21VE1A04B7	RAGAM SHIVA KUMAR							2	1	1.5	2	1		7.5	7.5	5	20	16.5	34	F
120	II-II ECE-B	21VE1A04B8	RAYASAM VISHWANTH RAHUL							2	1	2	1	1		7	8.5	5	21	17	23	F
121	II-II ECE-B	21VE1A04B9	SANGEM SRILEKHA	2	2	1				2	2	1				10	10	5	25	20	60	B+
122	II-II ECE-B	21VE1A04C0	SHANGARAPU VISHNU	2	2	1				2	2	1				10	10	5	25	22	48	C
123	II-II ECE-B	21VE1A04C1	SIDDAM SRI HARSHINI	2	2	1	2	2	1							10	10	5	25	21.5	55	B
124	II-II ECE-B	21VE1A04C2	SRITEJA REDDY				2	1		2	2	1				8	8.5	5	22	17	29	F
125	II-II ECE-B	21VE1A04C3	THALARI GRESHMA	2	2	1				2	2	1				10	10	5	25	21	57	B
126	II-II ECE-B	21VE1A04C4	THAMALAM SUSAN SMITHA	2	2	1							2		1	6	10	5	21	17	32	F
127	II-II ECE-B	21VE1A04C5	VAMSHI GAJALA	2	2	1				2	2	1				10	10	5	25	19	56	B
128	II-II ECE-B	21VE1A04C6	VANMAMPALLY NITHIN KUMAR REDDY	2	2	1							2		1	8	9.5	5	23	18.5	48	C
129	II-II ECE-B	21VE1A04C7	YANNAM VINAY	2	2	1	2	2	1							10	9.5	5	25	20	46	C
130	II-II ECE-B	22VESAO408	KIRON REDDY							2	2	1				8	8	5	21	19.5	46	C
131	II-II ECE-B	22VESAO409	KOTTAM MOGHAGINA													AB	5	5	5			
132	II-II ECE-B	22VESAO410	MACHA TRISHITA	2	2	1	2	2	1							10	9	5	24	21.5	60	B+
133	II-II ECE-B	22VESAO411	MANDA SHIVANI	2	1	1	2	2	1							9	10	5	24	19	45	C
134	II-II ECE-B	22VESAO412	RACHULURI SHASHIKANTH	2	2	1			1				2		1	6	9	5	20	15	41	C
135	II-II ECE-B	22VESAO413	SEETHA YAMUNA YADAV	2	2	1										10	9.5	5	25	23.5	74	A
Total Marks				172.5	174	92.5	63.5	85	49.5	54	80.5	61	78	43	33	950.5	1163	660	2792	2323	5800	
No of Students Answered				91	93	93	34	44	50	28	42	61	44	22	34	127	127	132	132	132	125	
No of Students scoring > threshold				88	90	93	32	44	50	28	41	61	41	22	34	103	123	132	126	116	98	
% of students scoring > threshold				96.703	96.774	100	94.118	100	100	100	97.619	100	93.182	100	100	81.102	96.85	100	95.455	87.879	78.4	

	A	B	C	A	B	C	A	B	C	A	B	C	10M	5M	25M	
MID 1-INTERNAL THRESHOLD	50	1	1	0.5	1	1	0.5	1	1	0.5	1	1	0.5	5	2.5	12.5
MID 2-INTERNAL THRESHOLD	50	1	1	0.5	1	1	0.5	1	1	0.5	1	1	0.5	5	2.5	12.5
EXTERNAL THRESHOLD	40	30														

CO ATTAINMENT	DES	OBJ	ASN	DES	OBJ	ASN	INT	EXT	DIRECT	INDIRECT	CO_ATT	INT %	25	TARGET
CO1	76.0	40.3	97.0	3	1	3	2.20	3	2.80	3.00	2.84	EXT %	75	2.38
CO2	74.4	40.3	97.0	3	1	3	2.20	3	2.80	2.50	2.74			2.20
CO3	83.8	40.3	97.0	3	1	3	2.20	3	2.80	3.00	2.84	DIRECT %	80	2.02
CO4	96.0	96.9	100.0	3	3	3	3.00	3	3.00	2.50	2.90	INDIRECT %	20	1.83
CO5	98.6	96.9	100.0	3	3	3	3.00	3	3.00	3.00	3.00			2.38
CO6	100.0	96.9	100.0	3	3	3	3.00	3	3.00	2.50	2.90			2.20
COURSE OVERALL CO ATTAINMENT (AVERAGE)														2.17

% RANGE	LEVEL
<40%	0
40% to 50%	1
50% to 60%	2
>60%	3

| | |

S.No	Hall Ticket No.	CO1	CO2	CO3	CO4	CO5	CO6
1	21VE1A0401	3	2	3	3	3	2
2	21VE1A0402	3	3	3	2	3	3
3	21VE1A0403	3	2	3	3	3	2
4	21VE1A0404	3	3	3	2	3	3
5	21VE1A0405	3	2	3	3	3	2
6	21VE1A0406	3	3	3	2	3	3
7	21VE1A0407	3	2	3	3	3	2
8	21VE1A0409	3	3	3	2	3	3
9	21VE1A0410	3	2	3	3	3	2
10	21VE1A0411	3	3	3	2	3	3
11	21VE1A0413	3	2	3	3	3	2
12	21VE1A0414	3	3	3	2	3	3
13	21VE1A0415	3	2	3	3	3	2
14	21VE1A0416	3	3	3	2	3	3
15	21VE1A0417	3	2	3	3	3	2
16	21VE1A0418	3	3	3	2	3	3
17	21VE1A0419	3	2	3	3	3	2
18	21VE1A0420	3	3	3	2	3	3
19	21VE1A0421	3	2	3	3	3	2
20	21VE1A0422	3	3	3	2	3	3
21	21VE1A0423	3	2	3	3	3	2
22	21VE1A0424	3	3	3	2	3	3
23	21VE1A0425	3	2	3	3	3	2
24	21VE1A0426	3	3	3	2	3	3
25	21VE1A0427	3	2	3	3	3	2
26	21VE1A0428	3	3	3	2	3	3
27	21VE1A0429	3	2	3	3	3	2
28	21VE1A0430	3	3	3	2	3	3
29	21VE1A0431	3	2	3	3	3	2
30	21VE1A0432	3	3	3	2	3	3
31	21VE1A0433	3	2	3	3	3	2
32	21VE1A0434	3	3	3	2	3	3
33	21VE1A0435	3	2	3	3	3	2
34	21VE1A0436	3	3	3	2	3	3
35	21VE1A0437	3	2	3	3	3	2
36	21VE1A0438	3	3	3	2	3	3
37	21VE1A0439	3	2	3	3	3	2
38	21VE1A0440	3	3	3	2	3	3
39	21VE1A0441	3	2	3	3	3	2
40	21VE1A0442	3	3	3	2	3	3
41	21VE1A0443	3	2	3	3	3	2
42	21VE1A0444	3	3	3	2	3	3
43	21VE1A0445	3	2	3	3	3	2

44	21VE1A0446	3	3	3	2	3	3
45	21VE1A0447	3	2	3	3	3	2
46	21VE1A0448	3	3	3	2	3	3
47	21VE1A0449	3	2	3	3	3	2
48	21VE1A0450	3	3	3	2	3	3
49	21VE1A0451	3	2	3	3	3	2
50	21VE1A0452	3	3	3	2	3	3
51	21VE1A0453	3	2	3	3	3	2
52	21VE1A0454	3	3	3	2	3	3
53	21VE1A0455	3	2	3	3	3	2
54	21VE1A0456	3	3	3	2	3	3
55	21VE1A0457	3	2	3	3	3	2
56	21VE1A0458	3	3	3	2	3	3
57	21VE1A0459	3	2	3	3	3	2
58	21VE1A0460	3	3	3	2	3	3
59	21VE1A0461	3	2	3	3	3	2
60	21VE1A0462	3	3	3	2	3	3
61	21VE1A0463	3	2	3	3	3	2
62	22VE5A0401	3	3	3	2	3	3
63	22VE5A0402	3	2	3	3	3	2
64	22VE5A0404	3	3	3	2	3	3
65	22VE5A0405	3	2	3	3	3	2
66	22VE5A0406	3	3	3	2	3	3
67	22VE5A0407	3	2	3	3	3	2
68	21VE1A0464	3	3	3	2	3	3
69	21VE1A0465	3	2	3	3	3	2
70	21VE1A0466	3	3	3	2	3	3
71	21VE1A0467	3	2	3	3	3	2
72	21VE1A0468	3	3	3	2	3	3
73	21VE1A0469	3	2	3	3	3	2
74	21VE1A0470	3	3	3	2	3	3
75	21VE1A0471	3	2	3	3	3	2
76	21VE1A0472	3	3	3	2	3	3
77	21VE1A0473	3	2	3	3	3	2
78	21VE1A0474	3	3	3	2	3	3
79	21VE1A0475	3	2	3	3	3	2
80	21VE1A0476	3	3	3	2	3	3
81	21VE1A0477	3	2	3	3	3	2
82	21VE1A0478	3	3	3	2	3	3
83	21VE1A0479	3	2	3	3	3	2
84	21VE1A0480	3	3	3	2	3	3
85	21VE1A0481	3	2	3	3	3	2
86	21VE1A0482	3	3	3	2	3	3
87	21VE1A0483	3	2	3	3	3	2

88	21VE1A0484	3	3	3	2	3	3
89	21VE1A0485	3	2	3	3	3	2
90	21VE1A0486	3	3	3	2	3	3
91	21VE1A0487	3	2	3	3	3	2
92	21VE1A0488	3	3	3	2	3	3
93	21VE1A0489	3	2	3	3	3	2
94	21VE1A0490	3	3	3	2	3	3
95	21VE1A0491	3	2	3	3	3	2
96	21VE1A0492	3	3	3	2	3	3
97	21VE1A0493	3	2	3	3	3	2
98	21VE1A0494	3	3	3	2	3	3
99	21VE1A0496	3	2	3	3	3	2
100	21VE1A0497	3	3	3	2	3	3
101	21VE1A0498	3	2	3	3	3	2
102	21VE1A0499	3	3	3	2	3	3
103	21VE1A04A0	3	2	3	3	3	2
104	21VE1A04A1	3	3	3	2	3	3
105	21VE1A04A2	3	2	3	3	3	2
106	21VE1A04A3	3	3	3	2	3	3
107	21VE1A04A4	3	2	3	3	3	2
108	21VE1A04A5	3	3	3	2	3	3
109	21VE1A04A6	3	2	3	3	3	2
110	21VE1A04A7	3	3	3	2	3	3
111	21VE1A04A8	3	2	3	3	3	2
112	21VE1A04A9	3	3	3	2	3	3
113	21VE1A04B0	3	2	3	3	3	2
114	21VE1A04B1	3	3	3	2	3	3
115	21VE1A04B3	3	2	3	3	3	2
116	21VE1A04B4	3	3	3	2	3	3
117	21VE1A04B5	3	2	3	3	3	2
118	21VE1A04B6	3	3	3	2	3	3
119	21VE1A04B7	3	2	3	3	3	2
120	21VE1A04B8	3	3	3	2	3	3
121	21VE1A04B9	3	2	3	3	3	2
122	21VE1A04C0	3	3	3	2	3	3
123	21VE1A04C1	3	2	3	3	3	2
124	21VE1A04C2	3	3	3	2	3	3
125	21VE1A04C3	3	2	3	3	3	2
126	21VE1A04C4	3	3	3	2	3	3
127	21VE1A04C5	3	2	3	3	3	2
128	21VE1A04C6	3	3	3	2	3	3
129	21VE1A04C7	3	3	3	2	3	3
130	22VE5A0408	3	2	3	3	3	2
131	22VE5A0409	3	3	3	2	3	3

132	22VE5A0410	3	2	3	3	3	2
133	22VE5A0411	3	3	3	2	3	3
134	22VE5A0412	3	2	3	3	3	2
135	22VE5A0413	3	3	3	2	3	3
	AVG	3.00	2.50	3.00	2.50	3.00	2.50

DATE:10-7-2023	Mid-1 Question Paper - Descriptive	Marks	CO	Cognitive Process Dimension
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Answer any two of the following:

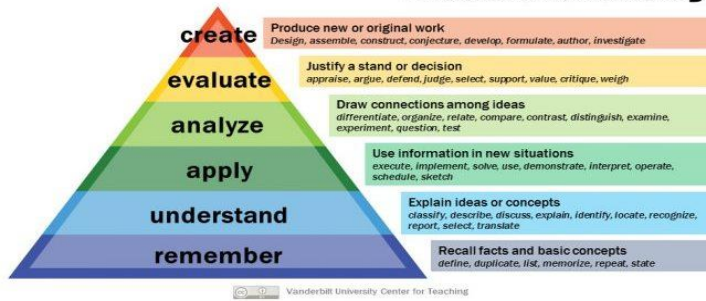
1	a)	Derive the Capacitance value of a Coaxial cable?	2	co1	BTL-6
	b)	State Ampere's Circuital Law and explain any two applications.	2	co2	BTL-1
	c)	Write four Maxwell's equations for static fields in integral form.	1	co3	BTL-1
2	a)	Determine the electric field intensity due to infinite line charge, at a point perpendicular to its plane at a distance r from the line.	2	co1	BTL-3
	b)	State and explain Biot - Savart's law?	2	co2	BTL-1
	c)	Define Faraday's law for time varying fields?	1	co3	BTL-2
3	a)	Demonstrate Gauss's law in both integral and differential forms.	2	co1	BTL-3
	b)	Define and explain the terms scalar and vector magnetic potential. How to determine these quantities?	2	co2	BTL-1
	c)	What is inconsistency of Ampere's law?	1	co3	BTL-1
4	a)	Derive Poisson's and Laplace's equations starting from Gauss's law.	2	co1	BTL-6
	b)	Define Magnetic flux and Magnetic flux density and state the relation between Magnetic flux and Magnetic flux density.	2	co2	BTL-1
	c)	Derive the equation for displacement current density	1	co3	BTL-6

DATE: 12-09-2023	Mid-2 Question Paper - Descriptive	Marks	CO	Cognitive Process Dimension
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Answer any two of the following:

1	a)	State and prove Poynting theorem	2	co5	BTL-4
	b)	A rectangular waveguide has a cross-sectional area of 2.29×1.45 cm and the operating frequency is 10GHz. Calculate i) free space wavelength ii) cutoff wavelength iii) cutoff wavelength iv) guided wavelength	2	co6	BTL-5
	c)	Explain Modified Ampere's law for time varying fields	1	co4	BTL-2
2	a)	Derive an expression for reflection coefficient when a wave incident on a dielectric obliquely with parallel polarization	2	co5	BTL-4
	b)	Explain about dominant and degenerate modes	2	co6	BTL-2
	c)	Write the integral and point forms of Faraday's law	1	co4	BTL-1
3	a)	Discuss the electromagnetic wave propagation in a lossy dielectric medium	2	co5	BTL-3
	b)	Explain the solution of wave equation in a rectangular waveguide	2	co6	BTL-2
	c)	Obtain Maxwell's equations in different forms for time varying fields	1	co4	BTL-4
4	a)	Explain different types of polarization	2	co5	BTL-2
	b)	Derive the field components for TE waves in a metal rectangular waveguide	2	co6	BTL-4
	c)	Explain i) Conduction Current ii) Displacement current	1	co4	BTL-2

Bloom's Taxonomy



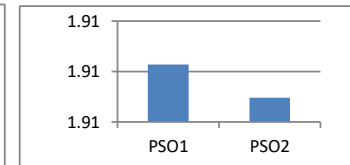
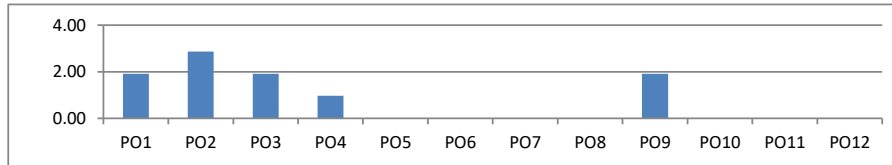
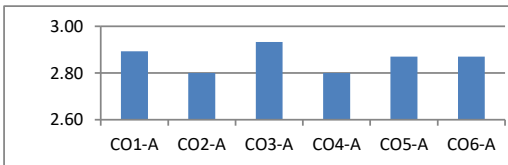
COURSE TITLE	IC APPLICATIONS LAB	COURSE CODE	EC407PC
NAME & DESIGNATION	Mrs.D.Divya(Asst.Prof)	SECTION	A&B
NAME & DESIGNATION		SECTION	A&B
DEPARTMENT	ELECTRONICS AND COMMUNICATION ENGINEERING	REGULATION	R18
BATCH	2021-2025	YEAR & SEMESTER	II-II
ACADEMIC YEAR	2022-2023		

COURSE NAME	COURSE OUTCOMES	CPD	HOURS
C207.1	Design and analyze various combinational circuits using Op Amp IC-741	TL3	9
C207.2	Design and analyze various combinational circuits like adder, subtractor, Comparator, integrator, Differentiator and Schmitt trigger using IC741	TL4	9
C207.3	Design and analyze for ACTIVE FILTERS Applications and Wave Form Generators using IC 741	TL4	6
C207.4	Design multi vibrators using IC555	TL3	3
C207.5	Design waveform generators and PLL circuits using Ics	TL3	6
C207.6	Analyze the practical applications of Voltage Regulator using various Ics	TL2	9

COURSE TITLE	LECTURE	TUTORIAL	PRACTICA	HOURS	CREDITS	CO1-T	CO2-T	CO3-T	CO4-T	CO5-T	CO6-T	CO1-A	CO2-A	CO3-A	CO4-A	CO5-A	CO6-A
IC APPLICATIONS LAB	0	0	3	42	2	3	3	3	3	3	3	2.89	2.80	2.93	2.80	2.87	2.87

CO PO MAPPING	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2			
C207.1	X	X	X		-				X			-	-	-			
C207.2	X	X	X		-				X			-	-	-			
C207.3	X	X	X	X	-				X			-	X	X			
C207.4	X	X	X	X	-				X			-	X	X			
C207.5	X	X	X		-				X			-	X	X			
C207.6	X	X	X		-				X			-	X	X			
C207.7	X	X	X	X	-	-	-	-	X	-	-	-	X	X			

C_PO ATTAINMENT	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	CO_ATT		
C207.1	2	2	1			-	-	-	1	-	-			0	2.89		
C207.2	2	2	2			-	-	-	1	-	-		0	0	2.80		
C207.3	1	3	3	1		-	-	-	1	-	-		1	1	2.93		
C207.4	1	1	1	0		-	-	-	1	-	-		1	1	2.80		
C207.5	2	2	2	1	0	-	-	-	1	-	-		2	2	2.87		
C207.6	1	2	2	1	0	-	-	-	1	-	-		2	1	2.87		
C217_PO MAP (L)	2	3	2	1	0	0	0	0	2	0	0	0	2	2			
C217_PO_ATTAINMENT	1.91	2.87	1.91	0.96	0.00	0.00	0.00	0.00	1.91	0.00	0.00	0.00	1.91	1.91			



PRE REQUISITES	GAPS IF ANY	ACTION TAKEN	DATE	RESOURCE PERSON	%ST ATTENDED	RELEVENCE TO Pos	RELEVENCE TO PSOs

KEY WORDS	CO1				CO2				CO3				CO4				CO5				CO6				
	OP-AMP 7411C	COMBINATIONAL CIRCUITS AC-DC	CHARACTERISTICS	M	APPLICATIONS	CONVERTERS	INTEGRATORS-DIFFERENTIATORS	M	LPF	HPF	WAVEFORM GENERATORS	M	555 IC TIMERS	MULTIVIBRATORS	SCHMITT TRIGGERS	M	565IC	PLL	OPERATIONS	M	IC 723	VOLTAGE REGULATORS	THREE TERMINAL REGULATORS	M	
PO1	Mathematical Expression/Application	1	1	1	1.00	1	1	1	1.00	1	0	0	0.33	1	1	1	1.00	0	0	0	0.00	0	0	0	0.00
	Scientific Knowledge	1	1	1	1.00	1	1	1	1.00	1	0	0	0.33	1	1	1	1.00	0	0	0	0.00	0	0	0	0.00
	Engineering Fundamentals And Specialization	1	1	1	1.00	1	1	1	1.00	1	0	0	0.33	1	1	1	1.00	1	1	1	1.00	1	1	1	1.00
PO2	Problem Identification & Analysis	1	1	1	1.00	1	1	1	1.00	1	1	1	1.00	1	1	1	1.00	1	1	1	1.00	1	1	1	1.00
	Research Literature	1	1	1	1.00	1	1	1	1.00	1	1	1	1.00	1	1	1	1.00	1	1	1	1.00	1	1	1	1.00
	Applying Sciences & Engineering Principles	1	1	1	1.00	1	1	1	1.00	1	1	1	1.00	1	1	1	1.00	1	1	1	1.00	1	1	1	1.00
PO3	Design Solutions	1	1	1	1.00	1	1	1	1.00	1	1	1	1.00	0	0	0	0.00	1	1	1	1.00	1	1	1	1.00
	Societal & Environmental Consideration	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00
	Public Welfare	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00
PO4	Research Based Knowledge & Methods	1	1	1	1.00	1	1	1	1.00	1	1	1	1.00	1	1	1	1.00	1	1	1	1.00	1	1	1	1.00
	Design & Analysis Of Data	1	1	1	1.00	1	1	1	1.00	0	0	0	0.00	1	1	1	1.00	1	1	1	1.00	1	1	1	1.00
	Valid Conclusion	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	1	1	1	1.00	1	1	1	1.00	1	1	1	1.00
PO5	Use Modern Resources	1	1	1	1.00	1	1	1	1.00	1	1	1	1.00	1	1	1	1.00	1	1	1	1.00	1	1	1	1.00
	Engineering Tools & Techniques	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	1	1	1	1.00	1	1	1	1.00
	Knowledge Of Limitations	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	1	1	1	1.00	1	1	1	1.00
PO6	Contextual Knowledge	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00
	Assessment Of Legal And Cultural Issues	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00
	Professional Engg. Practice	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00
PO7	Demonstration Of Knowledge	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00
	Impact Of Engg. Solutions	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00
	Sustainable Development	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00
PO8	Ethical Principles	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00
	Professional Ethics	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00
	Norms Of Engg. Practice	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00
PO9	Individual Efficiency	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00
	Active Member In A Team	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00
	Leader In Multi Disciplinary Settings	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00
PO10	Professional Communication	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00
	Effective Writing Skills	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00
	Comprehending Skills	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00
PO11	Demonstrating Management Principles	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00
	Application As Individual Or In A Team	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00
	Managing Projects	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00
PO12	Need Of Technology	1	1	1	1.00	1	1	1	1.00	1	1	1	1.00	1	1	1	1.00	1	1	1	1.00	1	1	1	1.00
	Independent Learning	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00
	Life -Long Learning	1	1	1	1.00	1	1	1	1.00	1	1	1	1.00	1	1	1	1.00	1	1	1	1.00	1	1	1	1.00
PSO1	Design of modules in Adv Electronics & Comm	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	1	1	1	1.00	1	1	1	1.00
	Analysis of Adv Electronics & Comm systems	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	1	1	1	1.00	1	1	1	1.00
	Development of Adv Electronics & Comm systems	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	1	1	1	1.00	1	1	1	1.00
PSO2	Modern tool usage	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	1	1	1	1.00	1	1	1	1.00
	Modern tool usage in Modeling of ICs & in	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	1	1	1	1.00	1	1	1	1.00
	Modern tool usage in Computations of ICs & in	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	1	1	1	1.00	1	1	1	1.00
	Modern tool usage in Fabrication of ICs & in	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	1	1	1	1.00	1	1	1	1.00

CO PO MAPPING	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
C207.1	2	2	1	-	-	-	-	-	1	-	-	-	-	-
C207.2	2	2	2	-	-	-	-	-	1	-	-	-	-	-
C207.3	1	3	3	1	-	-	-	-	1	-	-	-	1	1
C207.4	1	1	1	-	-	-	-	-	1	-	-	-	1	1
C207.5	2	2	2	1	-	-	-	-	1	-	-	-	2	2
C207.6	1	2	2	1	-	-	-	-	1	-	-	-	2	1
SUM	9	12	11	3	0	0	0	0	6	0	0	0	6	5

CO PO MAPPING	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	CO_A
C207.1	2	2	1			-	-	-	1	-	-	0			2.89
C207.2	2	2	2			-	-	-	1	-	-	0			2.80
C207.3	1	3	3	1		-	-	-	1	-	-	0	1	1	2.93
C207.4	1	1	1	0		-	-	-	1	-	-	0	1	1	2.80
C207.5	2	2	2	1	0	-	-	-	1	-	-	0	2	2	2.87
C207.6	1	2	2	1	0	-	-	-	1	-	-	0	2	1	2.87
C217 PO MAP (L)	2	3	2	1	0	0	0	0	2	0	0	0	2	2	2.86
C_PO ATT	1.91	2.87	1.91	0.96	#####	#####	#####	#####	1.91	#####	#####	#####	1.91	1.91	

	CO1	CO2	CO3	CO4	CO5	CO6
PO1	3	3	1	3	1	1
PO2	3	3	3	3	3	3
PO3	1	1	1	0	1	1
PO4	2	2	1	3	3	3
PO5	1	1	1	1	3	3
PO6	0	0	0	0	0	0
PO7	0	0	0	0	0	0
PO8	0	0	0	0	0	0
PO9	0	0	0	0	0	0
PO10	0	0	0	0	0	0
PO11	0	0	0	0	0	0
PO12	2	2	2	2	2	2
PSO1	0	0	0	0	3	3
PSO2	0	0	0	0	3	3

S.No	Hall Ticket No.	Student Name	ATT & PERF	REC & OBS	VIVA	WRITE UP	I MID TOTAL
			5M	5M	5M	10M	25M
			1	21VE1A0401	A SANDHYA	5	5
2	21VE1A0402	ADDOJU BHARADWAJ CHARY	4	4			8
3	21VE1A0403	ADLA GOVARDHAN	5	5	5	7	22
4	21VE1A0404	ALASAKANI LEHYA	5	5	5	8	23
5	21VE1A0405	AMUKA SAI KIRAN	5	5	5	6	21
6	21VE1A0406	ANAGANTI KARTHIK	5	5	5	8	23
7	21VE1A0407	BACHU SAI HRUTHIK	5	5	5	10	25
8	21VE1A0409	BAIKANI CHANDRAM					
9	21VE1A0410	BATHUKA LOKESH	5	5	5	7	22
10	21VE1A0411	BATHULA VISWASREE	5	5	5	7	22
11	21VE1A0413	BIJIGA DHARANISREE					
12	21VE1A0414	BISABATTINI VENKATA RAVI TEJA	4	4			8
13	21VE1A0415	C JAYKANTH	4	4			8
14	21VE1A0416	CHINTALAPATI MOUNIKA	5	5	5	8	23
15	21VE1A0417	CHITTIPALLI SHASHANK	5	5	5	8	23
16	21VE1A0418	CHOLLETI SREEJA	5	5	5	7	22
17	21VE1A0419	DANTHURI CHARAN KUMAR GOUD	5	5	5	7	22
18	21VE1A0420	DAYYALA SHIRISHA	5	5	5	7	22
19	21VE1A0421	DHARAVATH SAI NISHANTH	5	5	5	7	22
20	21VE1A0422	DONGAPURE KEERTHI	5	5	5	10	25
21	21VE1A0423	DYAVANAPELLI THRISHA	5	5	5	8	23
22	21VE1A0424	ERRABELLY PRANEETH BABU	5	5	5	6	21
23	21VE1A0425	GANDLA CHARAN	4	4			8
24	21VE1A0426	GARAPATI PREETHAM SHIVA RAMA	5	5	5	8	23
25	21VE1A0427	GAVVALA ANUSHA	5	5	5	8	23
26	21VE1A0428	GODHA NIKHITHA	5	5	5	10	25
27	21VE1A0429	GOLCONDA LOKESH	5	5	5	8	23
28	21VE1A0430	GOLKONDA AISHWARYA	5	5	5	7	22
29	21VE1A0431	GUMMADI NARENDER	5	5	5	9	24
30	21VE1A0432	GUNDA KALYAN SRINIVAS	4	4			8
31	21VE1A0433	GUNTOJU SHIVA SAI	5	5	5	8	23
32	21VE1A0434	GURRAM ASHISH	4	4			8
33	21VE1A0435	JAIDAPURAM KARTHIK	5	5	5	8	23
34	21VE1A0436	KAKUMARI TEJASWAR	5	5	4	10	24
35	21VE1A0437	KADIYAM VIJAY	4	3			7
36	21VE1A0438	KALYANI B	5	5	3	7	20
37	21VE1A0439	KARRA HARINI SANTHOSHI	5	5	4	10	24
38	21VE1A0440	KATTA PRAJITH REDDY	5	5	4	8	22
39	21VE1A0441	KUKUTLAPALLY THANUJA	5	5	3	7	20
40	21VE1A0442	MEDHINI DHORI	5	5	4	9	23
41	21VE1A0443	MEDISETTI SRIRAM SURARCHITH	5	5	3	7	20
42	21VE1A0444	MERUVA VENKAT NARAYANA	4	4			8
43	21VE1A0445	N VARSHAA	5	5	5	10	25
44	21VE1A0446	NADIKUDI RAMYASREE	5	5	3	8	21
45	21VE1A0447	NANUPATRUNI NIKHIL SAI	5	5	4	8	22
46	21VE1A0448	NARMETA ABHINAY	5	5	5	9	24

Hall Ticket No.	Student Name	ATT & PERF	REC & OBS	VIVA	WRITE UP	II MID TOTAL	INT	EXT	Grade/Ext mark
		5M	5M	5M	10M	25M	25	75	
		21VE1A0401	A SANDHYA	5	5	5	10	25	25
21VE1A0402	ADDOJU BHARADWAJ	5	3	2	4	14	11		50 B+
21VE1A0403	ADLA GOVARDHAN	5	5	5	8	23	23		60 A+
21VE1A0404	ALASAKANI LEHYA	5	5	5	10	25	24		70 O
21VE1A0405	AMUKA SAI KIRAN	5	5	4	6	20	21		60 A+
21VE1A0406	ANAGANTI KARTHIK	5	5	5	10	25	24		62 A+
21VE1A0407	BACHU SAI HRUTHIK	5	5	5	10	25	25		72 O
21VE1A0409	BAIKANI CHANDRAM								
21VE1A0410	BATHUKA LOKESH	5	5	4	9	23	23		72 O
21VE1A0411	BATHULA VISWASREE	5	5	4	8	22	22		67 A+
21VE1A0413	BIJIGA DHARANISREE								
21VE1A0414	BISABATTINI	5	5	4	10	24	16		55 A
21VE1A0415	C JAYKANTH	5	5	3	7	20	14		55 A
21VE1A0416	CHINTALAPATI	5	5	5	10	25	24		71 O
21VE1A0417	CHITTIPALLI	5	5	4	8	22	23		71 O
21VE1A0418	CHOLLETI SREEJA	5	5	4	8	22	22		68 O
21VE1A0419	DANTHURI CHARAN	5	5	4	8	22	22		55 A
21VE1A0420	DAYYALA SHIRISHA	5	5	5	10	25	24		60 A+
21VE1A0421	DHARAVATH SAI	5	5	3	8	21	22		60 A+
21VE1A0422	DONGAPURE KEERTHI	5	5	5	10	25	25		74 O
21VE1A0423	DYAVANAPELLI	5	5	5	9	24	24		70 O
21VE1A0424	ERRABELLY	5	5	5	10	25	23		74 O
21VE1A0425	GANDLA CHARAN	5	5	5	9	24	16		60 A+
21VE1A0426	GARAPATI PREETHAM	5	5	4	7	21	22		65 A+
21VE1A0427	GAVVALA ANUSHA	5	5	4	8	22	23		68 O
21VE1A0428	GODHA NIKHITHA	5	5	5	10	25	25		73 O
21VE1A0429	GOLCONDA LOKESH	5	5	5	9	24	24		71 O
21VE1A0430	GOLKONDA	5	5	5	10	25	24		71 O
21VE1A0431	GUMMADI	5	5	4	8	22	23		70 O
21VE1A0432	GUNDA KALYAN	5	5	5	5	20	14		55 A
21VE1A0433	GUNTOJU SHIVA SAI	5	5	5	10	25	24		73 O
21VE1A0434	GURRAM ASHISH	5	5	5	10	25	17		68 O
21VE1A0435	JAIDAPURAM	5	5	4	10	24	24		67 O
21VE1A0436	KAKUMARI	5	5	4	10	24	24		68 O
21VE1A0437	KADIYAM VIJAY	4	4			8	8		50 B
21VE1A0438	KALYANI B	5	5	5	10	25	23		63 A+
21VE1A0439	KARRA HARINI	5	5	5	10	25	25		74 O
21VE1A0440	KATTA PRAJITH	5	5	4	9	23	23		71 O
21VE1A0441	KUKUTLAPALLY	5	5	5	10	25	23		72 O
21VE1A0442	MEDHINI DHORI	5	5	4	10	24	24		70 O
21VE1A0443	MEDISETTI SRIRAM	5	5	5	9	24	22		50 A
21VE1A0444	MERUVA VENKAT	5	5	4	9	23	16		55 A
21VE1A0445	N VARSHAA	5	5	5	10	25	25		74 O
21VE1A0446	NADIKUDI	5	5	5	9	24	23		74 O
21VE1A0447	NANUPATRUNI	5	5	4	10	24	23		74 O
21VE1A0448	NARMETA ABHINAY	5	5	5	10	25	25		71 O

47	21VE1A0449	NEELAM RUSHIK	5	5	4	8	22
48	21VE1A0450	PAPANI AKHIRANANDAN	4	4			8
49	21VE1A0451	PATHARLA YEDU VAMSHI	5	5	4	7	21
50	21VE1A0452	PINIKESHI PRANAY REDDY	5	5	4	8	22
51	21VE1A0453	POLA. NAVYA	5	5	4	7	21
52	21VE1A0454	POLAKONDA DANUSHA	5	5	4	10	24
53	21VE1A0455	POLEPALLY AKHIL	5	4	2	8	19
54	21VE1A0456	SAIKAM NEHA	5	5	4	7	21
55	21VE1A0457	SANGISHETTI MURALI	5	5	5	8	23
56	21VE1A0458	SYED ARIS HUSSAIN	4	4			8
57	21VE1A0459	SYED NOORUDDIN QUADRI	4	4			8
58	21VE1A0460	THUMMA BALA ROHIT REDDY	5	5	4	7	21
59	21VE1A0461	VANNAWADA VAMSHIDHAR REDDY	5	3	2	8	18
60	21VE1A0462	YEGGE MADHU	5	5	4	7	21
61	21VE1A0463	YELAGAPURI GEETHIKA	5	5	5	7	22
62	22VE5A0401	ADDU SRI CHARAN	4	4			8
63	22VE5A0402	ANEM SAI KRISHNA	4	4			8
64	22VE5A0404	CHILIVERU NISHA	5	5	5	10	25
65	22VE5A0405	GUNUKONDA EDWIN RAJ					
66	22VE5A0406	LOSHARAM LOKESH	5	5	5	8	23
67	22VE5A0407	PILLANAGROVILA PUJITHA	5	5	5	9	24
68	21VE1A0464	ADUSUMILLI SRILEKHA	5	5	5	10	25
69	21VE1A0465	AKENDRA BOGATI	4	4	3	7	18
70	21VE1A0466	AKUPATI BHARGAVA SURYA DEVA	3	3	3	6	15
71	21VE1A0467	BACHU ARCHANA	4	4	4	6	18
72	21VE1A0468	BALLA VENKATA SAI LIKHITH	4	3	3	4	14
73	21VE1A0469	BANDELA ANIRUDH REDDY					
74	21VE1A0470	BANDLA SRIRAM					
75	21VE1A0471	BARLA NAVEEN KUMAR	4	3	3	3	13
76	21VE1A0472	BOCHU AKHIL TEJA	4	3	3	4	14
77	21VE1A0473	BOLLA MAHESHWAR	5	4	4	7	20
78	21VE1A0474	BUDATI AJAY KUMAR REDDY	2	2	1	2	7
79	21VE1A0475	BUDATI VENUGOPAL REDDY	5	5	5	9.5	24.5
80	21VE1A0476	BUKHYA BHAVANI	5	5	5	8	23
81	21VE1A0477	CHAVAN KARTHIK	3	3	3	3	12
82	21VE1A0478	CHETTY AROHAN	4	4	5	7	20
83	21VE1A0479	CHIKILAMETLA YASHWANTH					
84	21VE1A0480	CHIMARLA RAHUL	5	5	3	7	20
85	21VE1A0481	DASARADHI SRICHANDANA	5	5	5	8	23
86	21VE1A0482	DUBBAKA ANJAN REDDY	3	3	3	2	11
87	21VE1A0483	EMMADI AJAY	3	3	3	5	14
88	21VE1A0484	GADDALA MAHESH	3	3	2	6	14
89	21VE1A0485	GANJI VARSHINI	5	5	3	7	20
90	21VE1A0486	GARAPANA DILIP REDDY	5	5	5	9	24
91	21VE1A0487	GILUKAPALLY NITESH REDDY	3	3	2	7	15
92	21VE1A0488	GOSHIKA HEMANTH	5	5	5	9	24
93	21VE1A0489	GUNDU VINAY KUMAR	5	5	4	8	22
94	21VE1A0490	JAKKA ABHINAV	3	3	3	6.5	15.5
95	21VE1A0491	JAKKULA MAHESH	5	5	3	7	20
96	21VE1A0492	JINUKALA ARAVIND					
97	21VE1A0493	JOSHI CHAITANYA					

21VE1A0449	NEELAM RUSHIK	5	5	4	10	24	23	71 O
21VE1A0450	PAPANI	5	5	5	8	23	16	60 A+
21VE1A0451	PATHARLA YEDU	5	5	5	9	24	23	67 O
21VE1A0452	PINIKESHI PRANAY	5	5	4	10	24	23	68 O
21VE1A0453	POLA. NAVYA	5	5	4	10	24	23	70 O
21VE1A0454	POLAKONDA	5	5	5	10	25	25	71 O
21VE1A0455	POLEPALLY AKHIL	5	5	5	9	24	22	60 A+
21VE1A0456	SAIKAM NEHA	5	5	4	9	23	22	68 O
21VE1A0457	SANGISHETTI MURALI	5	5	5	9	24	24	73 O
21VE1A0458	SYED ARIS HUSSAIN	5	5	5	9	24	16	67 O
21VE1A0459	SYED NOORUDDIN	5	5	4	9	23	16	62 A+
21VE1A0460	THUMMA BALA	5	5	5	10	25	23	72 O
21VE1A0461	VANNAWADA	5	5	5	9	24	21	57 A+
21VE1A0462	YEGGE MADHU	5	5	3	9	22	22	57 A
21VE1A0463	YELAGAPURI	5	5	4	10	24	23	55 A
22VE5A0401	ADDU SRI CHARAN	5	5	3	7	20	14	62 A+
22VE5A0402	ANEM SAI KRISHNA	5	5	5	6	21	15	68 A+
22VE5A0404	CHILIVERU NISHA	5	5	5	10	25	25	72 O
22VE5A0405	GUNUKONDA EDWIN							-1 Ab
22VE5A0406	LOSHARAM LOKESH	5	5	4	10	24	24	72 O
22VE5A0407	PILLANAGROVILA	5	5	5	9	24	24	74 O
21VE1A0464	ADUSUMILLI	5	5	5	10	25	25	73 O
21VE1A0465	AKENDRA BOGATI	4	4	4	7	19	19	69 A+
21VE1A0466	AKUPATI BHARGAVA	4	4	2	7	17	16	48 B+
21VE1A0467	BACHU ARCHANA	4	4	3	6	17	18	64 A+
21VE1A0468	BALLA VENKATA SAI	4	3	3	5	15	15	55 A
21VE1A0469	BANDELA ANIRUDH	4	4	2	6	16	16	48 B+
21VE1A0470	BANDLA SRIRAM	4	4	3	5	16	16	45 B+
21VE1A0471	BARLA NAVEEN	3	3	3	5	14	14	44 B
21VE1A0472	BOCHU AKHIL TEJA	3	3	2	6	14	14	42 B
21VE1A0473	BOLLA MAHESHWAR	5	5	3.5	8	21.5	21	73 O
21VE1A0474	BUDATI AJAY KUMAR	4	4	2	5	15	11	47 B+
21VE1A0475	BUDATI VENUGOPAL	5	5	3	10	23	24	70 O
21VE1A0476	BUKHYA BHAVANI	5	5	4	8	22	23	70 O
21VE1A0477	CHAVAN KARTHIK	4	4	2	5	15	14	48 B+
21VE1A0478	CHETTY AROHAN	4	3	3	5	15	18	49 B+
21VE1A0479	CHIKILAMETLA	4	3	3	5	15	15	42 B
21VE1A0480	CHIMARLA RAHUL	5	4	4	7.5	20.5	21	62 A+
21VE1A0481	DASARADHI	5	5	3.5	10	23.5	24	73 O
21VE1A0482	DUBBAKA ANJAN	4	3	2	5	14	13	44 B
21VE1A0483	EMMADI AJAY	4	4	2	5	15	15	58 A
21VE1A0484	GADDALA MAHESH	4	4	3	7	18	16	55 A
21VE1A0485	GANJI VARSHINI	5	4	4	8	21	21	70 O
21VE1A0486	GARAPANA DILIP	5	5	5	10	25	25	74 O
21VE1A0487	GILUKAPALLY NITESH						15	58 A
21VE1A0488	GOSHIKA HEMANTH	5	5	4.5	10	24.5	25	70 O
21VE1A0489	GUNDU VINAY	5	5	4	9	23	23	68 O
21VE1A0490	JAKKA ABHINAV	4.5	4	4	7	19.5	18	58 A
21VE1A0491	JAKKULA MAHESH	4	4	2	6.5	16.5	19	58 A
21VE1A0492	JINUKALA ARAVIND							
21VE1A0493	JOSHI CHAITANYA	5	4	3	2	14	14	40 B

INTERNAL THRESHOLD	60	3	1.8	1.2	9	15
EXTERNAL THRESHOLD	40	30				

CO ATTAINMENT	MID-1	MID-2	INT	EXT	DIRECT	INDIRECT	CO_ATT	INT %	25	TARGET
CO1	100.0		3	3	3.00	2.47	2.89	EXT %	75	3
CO2	100.0		3	3	3.00	2.00	2.80			3
CO3	100.0		3	3	3.00	2.67	2.93	DIRECT %	80	3
CO4		100.0	3	3	3.00	2.00	2.80	INDIRECT %	20	3
CO5		100.0	3	3	3.00	2.35	2.87			3
CO6		100.0	3	3	3.00	2.35	2.87			3
COURSE OVERALL CO ATTAINMENT (AVERAGE)										
							2.86			3.00

S.No	Hall Ticket No.	CO1	CO2	CO3	CO4	CO5	CO6
1	21VE1A0401	3	2	2	2	2	2
2	21VE1A0402	3	2	2	2	2	2
3	21VE1A0403	3	2	2	2	2	2
4	21VE1A0404	3	2	2	2	2	2
5	21VE1A0405	3	2	2	2	2	2
6	21VE1A0406	3	2	2	2	2	2
7	21VE1A0407	3	2	2	2	2	2
8	21VE1A0409	3	2	2	2	2	2
9	21VE1A0410	3	2	2	2	2	2
10	21VE1A0411	3	2	2	2	2	2
11	21VE1A0413	3	2	2	2	2	2
12	21VE1A0414	3	2	2	2	2	2
13	21VE1A0415	3	2	2	2	2	2
14	21VE1A0416	3	2	2	2	2	2
15	21VE1A0417	3	2	2	2	2	2
16	21VE1A0418	2	2	3	2	2	2
17	21VE1A0419	2	2	3	2	2	2
18	21VE1A0420	2	2	3	2	2	2
19	21VE1A0421	2	2	3	2	2	2
20	21VE1A0422	2	2	3	2	2	2
21	21VE1A0423	2	2	3	2	2	2
22	21VE1A0424	2	2	3	2	2	2
23	21VE1A0425	2	2	3	2	2	2
24	21VE1A0426	2	2	3	2	2	2
25	21VE1A0427	2	2	3	2	2	2
26	21VE1A0428	2	2	3	2	2	2
27	21VE1A0429	2	2	3	2	2	2
28	21VE1A0430	2	2	3	2	2	2
29	21VE1A0431	2	2	3	2	2	2
30	21VE1A0432	2	2	3	2	2	2
31	21VE1A0433	2	2	3	2	2	2
32	21VE1A0434	2	2	3	2	2	2
33	21VE1A0435	2	2	3	2	2	2
34	21VE1A0436	2	2	3	2	2	2
35	21VE1A0437	2	2	3	2	2	2
36	21VE1A0438	2	2	3	2	2	2
37	21VE1A0439	2	2	3	2	2	2
38	21VE1A0440	2	2	3	2	2	2
39	21VE1A0441	2	2	3	2	2	2
40	21VE1A0442	2	2	3	2	2	2
41	21VE1A0443	2	2	3	2	2	2
42	21VE1A0444	2	2	3	2	2	2
43	21VE1A0445	2	2	3	2	2	2
44	21VE1A0446	2	2	3	2	2	2
45	21VE1A0447	2	2	3	2	2	2
46	21VE1A0448	2	2	3	2	2	2
47	21VE1A0449	2	2	3	2	2	2
48	21VE1A0450	2	2	3	2	2	2
49	21VE1A0451	2	2	3	2	2	2

50	21VE1A0452	2	2	3	2	3	3
51	21VE1A0453	2	2	3	2	3	3
52	21VE1A0454	2	2	3	2	3	3
53	21VE1A0455	2	2	3	2	3	3
54	21VE1A0456	2	2	3	2	3	3
55	21VE1A0457	2	2	3	2	3	3
56	21VE1A0458	2	2	3	2	3	3
57	21VE1A0459	2	2	3	2	3	3
58	21VE1A0460	2	2	3	2	3	3
59	21VE1A0461	2	2	3	2	3	3
60	21VE1A0462	2	2	3	2	3	3
61	21VE1A0463	2	2	3	2	3	3
62	22VE5A0401	2	2	3	2	3	3
63	22VE5A0402	2	2	3	2	3	3
64	22VE5A0404	3	2	3	2	3	3
65	22VE5A0405	3	2	3	2	3	3
66	22VE5A0406	3	2	3	2	3	3
67	22VE5A0407	3	2	3	2	3	3
68	21VE1A0464	3	2	3	2	3	3
69	21VE1A0465	3	2	3	2	3	3
70	21VE1A0466	3	2	3	2	3	3
71	21VE1A0467	3	2	3	2	3	3
72	21VE1A0468	3	2	3	2	3	3
73	21VE1A0469	3	2	3	2	3	3
74	21VE1A0470	3	2	3	2	3	3
75	21VE1A0471	3	2	3	2	3	3
76	21VE1A0472	3	2	3	2	3	3
77	21VE1A0473	3	2	3	2	3	3
78	21VE1A0474	3	2	3	2	3	3
79	21VE1A0475	3	2	3	2	3	3
80	21VE1A0476	3	2	3	2	3	3
81	21VE1A0477	3	2	3	2	3	3
82	21VE1A0478	3	2	3	2	3	3
83	21VE1A0479	3	2	3	2	3	3
84	21VE1A0480	3	2	3	2	3	3
85	21VE1A0481	3	2	3	2	3	3
86	21VE1A0482	3	2	3	2	3	3
87	21VE1A0483	3	2	3	2	3	3
88	21VE1A0484	3	2	3	2	3	3
89	21VE1A0485	3	2	3	2	3	3
90	21VE1A0486	3	2	3	2	3	3
91	21VE1A0487	3	2	3	2	3	3
92	21VE1A0488	3	2	3	2	3	3
93	21VE1A0489	3	2	3	2	3	3
94	21VE1A0490	3	2	3	2	3	3
95	21VE1A0491	3	2	3	2	3	3
96	21VE1A0492	3	2	3	2	3	3
97	21VE1A0493	3	2	1	2	2	2
98	21VE1A0494	3	2	1	2	2	2
99	21VE1A0496	3	2	1	2	2	2

100	21VE1A0497	3	2	1	2	2	2
101	21VE1A0498	3	2	1	2	2	2
102	21VE1A0499	3	2	1	2	2	2
103	21VE1A04A0	3	2	1	2	2	2
104	21VE1A04A1	3	2	1	2	2	2
105	21VE1A04A2	3	2	1	2	2	2
106	21VE1A04A3	3	2	1	2	2	2
107	21VE1A04A4	3	2	1	2	2	2
108	21VE1A04A5	3	2	1	2	2	2
109	21VE1A04A6	3	2	1	2	2	2
110	21VE1A04A7	3	2	1	2	2	2
111	21VE1A04A8	3	2	1	2	2	2
112	21VE1A04A9	2	2	3	2	2	2
113	21VE1A04B0	2	2	3	2	2	2
114	21VE1A04B1	2	2	3	2	2	2
115	21VE1A04B3	2	2	3	2	2	2
116	21VE1A04B4	2	2	3	2	2	2
117	21VE1A04B5	2	2	3	2	2	2
118	21VE1A04B6	2	2	3	2	2	2
119	21VE1A04B7	2	2	3	2	2	2
120	21VE1A04B8	2	2	3	2	2	2
121	21VE1A04B9	2	2	3	2	2	2
122	21VE1A04C0	2	2	3	2	2	2
123	21VE1A04C1	2	2	3	2	2	2
124	21VE1A04C2	2	2	3	2	2	2
125	21VE1A04C3	2	2	3	2	2	2
126	21VE1A04C4	2	2	3	2	2	2
127	21VE1A04C5	2	2	3	2	2	2
128	21VE1A04C6	2	2	3	2	2	2
129	21VE1A04C7	2	2	3	2	2	2
130	22VE5A0408	2	2	3	2	2	2
131	22VE5A0409	2	2	3	2	2	2
132	22VE5A0410	2	2	3	2	2	2
133	22VE5A0411	2	2	3	2	2	2
134	22VE5A0412	2	2	3	2	2	2
135	22VE5A0413	2	2	3	2	2	2
		2.47	2.00	2.67	2.00	2.35	2.35

CO1	2.47
CO2	2.00
CO3	2.67
CO4	2.00
CO5	2.35
CO6	2.35

	Mid-1 Question Paper - Descriptive	Marks	CO	Cognitive Process Dimension
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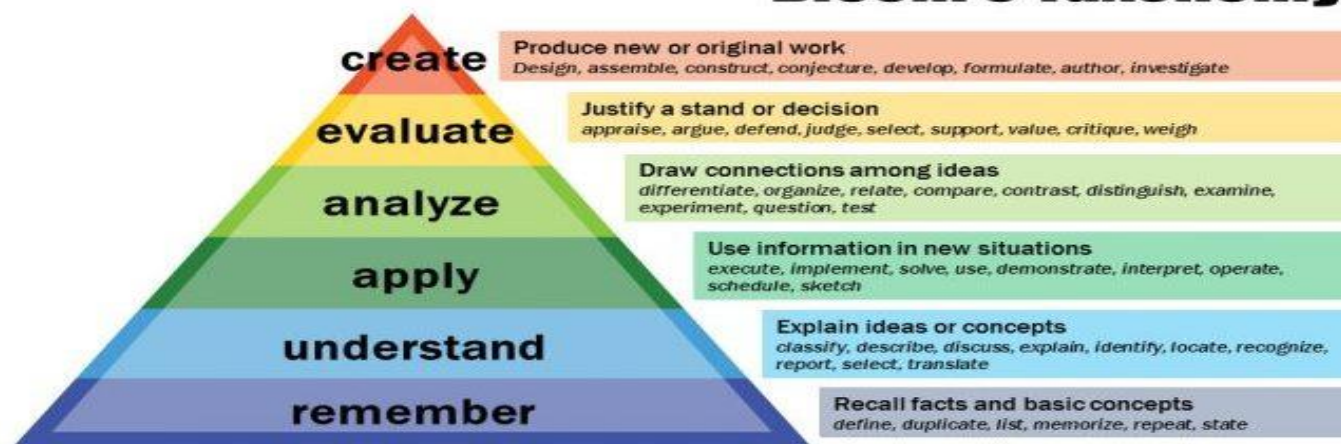
Answer any two of the following:

1	Inverting and Non inverting Amplifier using opAmp	5	co1	Create
2	Adder and Subtractor using Op amp	5	co2	Create
3	Integrator Circuit using OP Amp	5	co3	Create
4	Differentiator Circuit using Op amp	5	co5	Create
5	Comparators using Op Amp	5	co5	Create
6	Active filter Applications-LPF, HPF (First Order	5	co5	Create
	Mid-2 Question Paper - Descriptive	Marks	CO	Cognitive Process Dimension

Answer any two of the following:

1	IC 741 waveform Generators-Sine, Square wave and Triangular Waves	5	co4	Create
2	Mono-Stable Multivibrator using IC 555.	5	co4	Create
3	Astable multivibrator using IC 555.	5	co6	Create
4	Schmitt Trigger Circuits using IC 741.	5	co6	Create
5	IC 565-PLL Applications	5	co6	Create
6	Voltage Regulator using IC 723	5	co4	Create

Bloom's Taxonomy

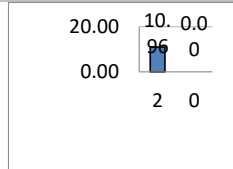
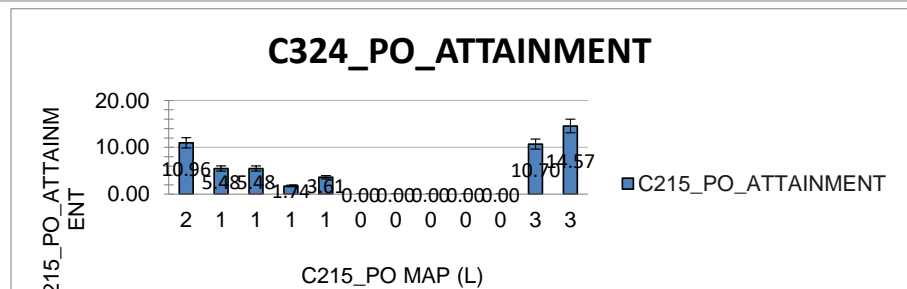


COURSE TITLE	EMBEDDED SYSTEM DESIGN	COURSE CODE	EC613PE
NAME & DESIGNATION	Talla Ashwini Kumari , Asst.Prof	SECTION	A&B
NAME & DESIGNATION		SECTION	
DEPARTMENT	Electronics and Communication Engineering	REGULATION	R18
BATCH	2020 - 24	YEAR & SEMESTER	III - II
ACADEMIC YEAR	2022-23		
COURSE NAME	COURSE OUTCOMES		BTL
C324.1	Analyze the quality attributes of the Embedded Systems		
C324.2	Design embedded system with customized processors, Commercial Off-The-Shelf Components(COTS) and memory		
C324.3	Efficiently utilise system components such as Reset circuit, Brownout protection circuit, Real Time Clock, Watch Dogtimer in building embedded		
C324.4	Develop Embedded Firmware using various design approaches and development languages		
C324.5	Classify operating systems used for Embedded Systems		
C324.6	Analyze the importance of task communication, task synchronization in operating systems		

COURSE TITLE	LECTURE	TUTORIAL	PRACTICAL	HOURS	CREDITS	CO1-T	CO2-T	CO3-T	CO4-T	CO5-T	CO6-T	CO1-A	CO2-A	CO3-A	CO4-A	CO5-A	CO6-A
EMBEDDED SYSTEM DESIG	4	0	0	62	4	1.33	1.33	1.00	1.00	1.33	1.33	0.00	0.00	3.00	2.80	3.00	2.80

CO PO MAPPING	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2			
C324.1	X	X	X	-	X	-	-	-	-	-	X	X	X	-			
C324.2	X	X	X	-	-	-	-	-	-	-	X	X	X	-			
C324.3	X	X	X	-	-	-	-	-	-	-	X	X	X	-			
C324.4	X	X	X	X	X	-	-	-	-	-	X	X	X	-			
C324.5	X	X	X	-	X	-	-	-	-	-	X	X	X	-			
C324.6	X	X	X	X	X	-	-	-	-	-	X	X	X	-			
C215_CO PO MAP	X	X	X	X	X	-	-	-	-	-	X	X	X	-			

C PO ATTAINMENT	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	CO ATT		
C324.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00		
C324.2	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	0.00		
C324.3	2	1	1	0	1	0	0	0	0	0	1	3	2	0	3.00		
C324.4	2	1	1	0	0	0	0	0	0	0	1	2	2	0	2.80		
C324.5	2	1	1	0	0	0	0	0	0	0	1	2	2	0	3.00		
C324.6	2	1	1	1	1	0	0	0	0	0	3	3	2	0	2.80		
C215_PO MAP (L)	2	1	1	1	1	0	0	0	0	0	3	3	2	0	2.87		
C215_PO_ATTAINMENT	10.96	5.48	5.48	1.74	3.61	0.00	0.00	0.00	0.00	0.00	10.70	14.57	10.96	0.00			



PRE REQUISITES	GAPS IF ANY	ACTION TAKEN	DATE	RESOURCE PERSON	%ST ATTENDED	RELEVENCE TO Pos	RELEVENCE TO PSOs

	CO1	CO2	CO3	CO4	CO5	CO6
Domain Expert Feedback	2	2	1	1	2	2
Student Feedback	0.00	0.00	0.00	0.00	0.00	0.00
University Results	2	2	2	2	2	2
Average	1.33	1.33	1.00	1.00	1.33	1.33
Enhancement %						
10	1.3	1.3	1.0	1.0	1.3	1.3

UNI	CO	L NO:	TOPIC	COURSE OBJECTIVES	COURSE OUTCOMES	KEY NO:
UNIT- I - Introdeded Systems:						
UNIT - 1	CO - 1	1	Definition of Embedded System	Enable the Students to understand the basics of Embedded system and learn about the quality attributes of an embedded system.	Analyze the quality attributes of the Embedded Systems	1
		2	Embedded systems vs General Computing Systems			2
		3	History of Embedded Systems			3
		4	Classification			
		5	Major Application Areas			
		6	Purpose of Embedded Systems			
		7	Characteristics of Embedded Systems			
		8	Quality Attributes of Embedded Systems			
UNIT- II - Typical Embedded System:						
UNIT - 2	CO - 2	1	Core of the Embedded System	Enable the students to list the various types of components in the design of an Embedded System including various communication interfaces.	Design embedded system with customized processors, Commercial Off-The-Shelf Components(COTS) and memory	1
		2	Specific Processors			2
		3	ASICs			3
		4	PLDs			
		5	Components (COTS)			
		6	Memory: ROM			
		7	RAM			
		8	Memory according to the type of			
		9	Memory Shadowing			
		10	Systems			
		11	Sensors and Actuators			
		12	Communication Interface. Onboard and External			
UNIT- III : Embedded Firmware:						
UNIT - 3	CO - 3	1	Reset Circuit	Enable the students to learn about various protection and monitoring circuits (Clock)	Efficiently utilise other system components such as Reset circuit, Brownout protection circuit, Real Time Clock, Watch Dogtimer in building embedded system	1
		2	Brown-out Protection Circuit			2
		3	Oscillator Unit			3
		4	Real Time Clock			
		5	Watchdog Timer			

UNIT-III: Embedded Firmware Design						
	CO - 4	6	Embedded Firmware Design Approaches and Development	Enable the students to learn the firmware programming for an Embedded System (C & Assembly)	Develop Embedded Firmware using various design approaches and development languages	1
		7	Same as Above			2
		8	Same as Above			3
UNIT-IV:RTOS Based Embedded System Design:						
UNIT - 4	CO - 5	1	Operating System Basics	Enable the students to understand the basic concepts of Operating systems, classify them and learn the methods of scheduling among various tasks	Classify various types of operating systems used for Embedded Systems	1
		2	Types of Operating Systems			2
		3	Tasks			3
		4	Process and Threads			
		5	Multiprocessing and Multitasking			
		6	Task Scheduling			
UNIT-V: Task Communication:						
UNIT - 5	CO - 6	1	Shared Memory	Enable the students to understand the various inter-process communication and synchronization techniques	Analyze the importance of task communication, task synchronization in operating systems	1
		2	Message Passing			2
		3	Sockets			3
		4	Communication Synchronization			
		5	Task Synchronization Techniques			
		6	Device Drivers			
		7	How to Choose an RTOS			

Firmware
Design Approaches
Development Languages
Operating System
Tasks
Processing & Scheduling
Inter-Process Communication
Task synchronization
Device drivers

	KEY WORDS	CO1				CO2				CO3				CO4				CO5				Inter-Process Commun
		Embedded System	Attributes	Applications	M	Memory	Communication Interfaces	Components	M	Timer	Protection Circuit	Oscillator	M	Firmware	Design Approaches	Development Languages	M	Operating System	Tasks	Processing & Scheduling	M	
PO1	Mathematical Expression/Application	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0
	Scientific Knowledge	1	0	1	0.67	1	1	1	1.00	1	1	1	1.00	1	1	1	1.00	1	1	1	1.00	1
	Engineering Fundamentals And Specialization	1	1	1	1.00	1	1	1	1.00	1	1	1	1.00	1	1	1	1.00	1	1	1	1.00	1
PO2	Problem Identification & Analysis	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0
	Research Literature	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0
	Applying Sciences & Engineering Principles	1	1	1	1.00	1	1	1	1.00	1	1	1	1.00	1	1	1	1.00	1	1	1	1.00	1
PO3	Design Solutions	0	0	1	0.33	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0
	Design System Components	0	0	1	0.33	1	1	1	1.00	1	1	1	1.00	0	0	1	0.33	0	1	0	0.33	0
	Processes to meet specified needs	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0
PO4	Use of Research Based Knowledge & Methods	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0
	Design & Analysis Of Data	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	1	0	0.33	0	0	1	0.33	0
	Synthesis of Information	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0
PO5	Application of Modern Techniques & Resources	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0
	Use of Engineering Tools & Techniques	0	0	1	0.33	0	0	0	0.00	0	0	0	0.00	1	0	1	0.67	1	0	0	0.33	0
	Modeling complex engineering activities	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0
PO6	Apply reasoning to assess societal issues	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0
	Apply reasoning to assess Health & Safety Issues	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0
	Apply reasoning to assess Legal & Cultural Issues	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0
PO7	Demonstration of knowledge towards societal & Environmental Concerns	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0
	Impact of Intel Solutions towards societal & Environmental Concerns	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0
	Sustainable Development in concern with Societal & Environmental Concerns	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0
PO8	Ethical Principles in Engineering Practice	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0
	Professional Ethics & responsibilities in the Engineering Practice	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0
	Commit to Norms of Engg. Practice	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0
PO9	Individual Efficiency as a member in team	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0
	Efficiency as a leader in diverse teams	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0
	Leader In Multi Disciplinary Settings	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0
PO10	Professional Communication	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0
	Effective Writing Skills	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0
	Comprehending Skills	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0
PO11	Understanding, Demonstrating and application of Bread of knowledge of Engg & management Principles	0	0	1	0.33	0	1	0	0.33	1	1	1	1.00	1	1	1	1.00	1	1	1	1.00	1
	Understanding, Demonstrating and application of Bread of knowledge of Engg & management Principles	0	0	1	0.33	0	0	0	0.00	0	0	0	0.00	1	1	1	1.00	1	1	1	1.00	1
	Understanding, Demonstrating and application of Bread of knowledge of Engg & management Principles	0	0	1	0.33	0	0	0	0.00	0	0	0	0.00	1	1	1	1.00	1	1	1	1.00	1
PO12	Need Of Technology	1	1	1	1.00	1	1	1	1.00	1	1	1	1.00	1	1	1	1.00	1	1	1	1.00	1
	Independent Learning	1	1	1	1.00	1	1	1	1.00	1	1	1	1.00	1	1	1	1.00	1	1	1	1.00	1
	Life -Long Learning	0	1	1	0.67	0	0	0	0.00	0	0	0	0.00	1	0	1	0.67	1	0	0	0.33	0
PSO1	Design of modules in Adv Electronics & Comm systems	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0
	Analysis of Adv Electronics & Comm systems	1	1	1	1.00	1	1	1	1.00	1	1	1	1.00	1	1	1	1.00	1	1	1	1.00	1
	Development of Adv Electronics & Comm systems	1	1	0	0.67	1	1	0	0.67	1	1	0	0.67	1	1	0	0.67	1	1	0	0.67	1
PSO2	Modern tool usage	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0
	Modern tool usage in modeling of ICs & IC packages	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0
	Modern tool usage in Computations of ICs & IC packages	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0

Descriptive Question Wise Marks

S.No	Yr/Br/Sc	Hall Ticket No.	Student Name	Descriptive Question Wise Marks									I DES (10)	I OBJ (10)			
				Q1			Q2			Q3					Q4		
				CO1	CO2	CO3	CO1	CO2	CO3	CO1	CO2	CO3			CO1	CO2	CO3
				A	B	C	A	B	C	A	B	C	A	B	C		
				2	2	1	2	2	1	2	2	1	2	2	1		
1	III-II ECE-A	20VE1A0401	AKKENAPALLY SHIVA BHANU	2	1	1				2	2	1				9	9.5
2	III-II ECE-A	20VE1A0402	ALUGUVELLI RUCHITHA	2	1	1							2	2	1	9	9
3	III-II ECE-A	20VE1A0403	AMANCHI MANI MEKHALA				2	2	0.5	2	1	1				8.5	9.5
4	III-II ECE-A	20VE1A0404	APPIDI YOGESHWAR REDDY	1	1								1			3	9.5
5	III-II ECE-A	20VE1A0405	B SOWMYA	2	2	1				1	1		1	1	1	8	9.5
6	III-II ECE-A	20VE1A0406	BHOOMI REDDY VARUN REDDY	2		1							2	1	1	7	9.5
7	III-II ECE-A	20VE1A0407	BUKKALA PRAVALYA	2	2								2	1	1	8	9
8	III-II ECE-A	20VE1A0408	GOLKONDA RACHANA	2	2	0.5	2	2	0.5							9	8
9	III-II ECE-A	20VE1A0409	GOPI REDDY MANASA REDDY	2	1					1	2	1		2		7	10
10	III-II ECE-A	20VE1A0410	GUNTI NAGARAJU	2				1								3	8.5
11	III-II ECE-A	20VE1A0411	KOLANU VARUN RAJU	2		1							1	1	1	6	9
12	III-II ECE-A	20VE1A0413	KONDOJU VAISHNAVI		2	1	1			1			2	2	1	8	9.5
13	III-II ECE-A	20VE1A0414	KORIPPELLY SHIVANANDH REDDY	2	2	1	2	2	0.5							9.5	9.5
14	III-II ECE-A	20VE1A0415	MAHAMMAD NAZEERUDDIN	1	2		1				1					4	5
15	III-II ECE-A	20VE1A0416	MARAGANI GANESH MAHA DEV										1	2		3	9
16	III-II ECE-A	20VE1A0417	MARAGANI RUKMINI	1	1	1							1	2	1	7	9
17	III-II ECE-A	20VE1A0418	MARKU SAI HRUSHIK		1											2	9
18	III-II ECE-A	20VE1A0419	MUDDAM CHITTI TEJASWINI	2		0.5				2	1	1				6.5	8.5
19	III-II ECE-A	20VE1A0420	MUSKU MANISHA	2	2	1	2						1	1	1	8	8.5
20	III-II ECE-A	20VE1A0421	NALLA PRIYA	1	2	1	2	2		2	1	1				8	9
21	III-II ECE-A	20VE1A0422	NALLABOINA MUNI SAI									1				1	7.5
22	III-II ECE-A	20VE1A0423	NAMDHAR VISHAL	A												AB	
23	III-II ECE-A	20VE1A0424	NYAYAM SANTHOSH REDDY	A												AB	
24	III-II ECE-A	20VE1A0425	PADARAJU VAISHNAVI	2	2	1	2	2	1							10	8.5
25	III-II ECE-A	20VE1A0426	PAGIDIMARRY CHARAN		1	1										2	8
26	III-II ECE-A	20VE1A0427	PANAKANTI NANDU	2	1	1							2	1	1	8	9
27	III-II ECE-A	20VE1A0428	PARSHI SRAVYA	2	2	1	2	2	1							10	8
28	III-II ECE-A	20VE1A0429	PARVATHANENI SNEHA SREE	2	2	1	2	2	1							10	7.5
29	III-II ECE-A	20VE1A0430	POKALA MANIK PRABHU				2	2	1				1	2	1	9	8.5
30	III-II ECE-A	20VE1A0431	POKALA SAI GOPAL	2	2	1	2	2	1							10	8.5
31	III-II ECE-A	20VE1A0432	POLICE PATEL RAVINDER REDDY	1						1						2	9.5
32	III-II ECE-A	20VE1A0433	POLOJU MANASA				2	0.5	0.5				2	1	1	7	8.5
33	III-II ECE-A	20VE1A0434	POTHULA GOURINATH REDDY				2	2	1	1	1	0.5				7.5	8
34	III-II ECE-A	20VE1A0435	PRADYUMNA KINHALKAR	2	2	1	2	1	1							9	9
35	III-II ECE-A	20VE1A0436	PULLURI MAHALAXMI	2		1				2	2	1				8	8
36	III-II ECE-A	20VE1A0437	PUPPALA BHANU PRASAD	2	1	1							2	2	1	9	8.5
37	III-II ECE-A	20VE1A0438	RACHAKONDA HARI VARMA	1		1										2	8.5
38	III-II ECE-A	20VE1A0439	RAJNISH CHAUBEY									1				1	8.5
39	III-II ECE-A	20VE1A0440	RAMAVATH ABHINAY			1								1		2	8.5
40	III-II ECE-A	20VE1A0441	RAMAVATH DHARMA TEJA	2	2	1	2	2	1							10	8.5
41	III-II ECE-A	20VE1A0443	SAMA VIGNESH REDDY	2	2	1							2	2		9	8.5
42	III-II ECE-A	20VE1A0444	SAMANURI SRIHARI VARMA	2	1	1	2	1								7	7
43	III-II ECE-A	20VE1A0445	SAMUDRAM HARSHITH TEJA		2	1	2	2					2			7	8.5
44	III-II ECE-A	20VE1A0446	SEELAM SAKET	2	1	1	2	1								7	8.5
45	III-II ECE-A	20VE1A0447	SHATHAM SANDEEP KUMAR	2									2	2		6	8
46	III-II ECE-A	20VE1A0448	SIPATHI MANOJ KUMAR	2	1	1				1	2					7	8.5
47	III-II ECE-A	20VE1A0449	SRIRAMOJU SRIKAR	2	2	1				1	1	1				8	8.5
48	III-II ECE-A	20VE1A0450	SUNKARA HARIKA	2	2	1				2	2	1				10	9
49	III-II ECE-A	20VE1A0451	SURABHI MAHESH				1									1	9
50	III-II ECE-A	20VE1A0452	TALLA SRI SWAPNA REDDY	2		1	2						1		1	5	9
51	III-II ECE-A	20VE1A0453	TANNERU HEMA LATHA		A											AB	
52	III-II ECE-A	20VE1A0454	THOKALA GANESH							1	1	1				3	9
53	III-II ECE-A	20VE1A0455	THUDI MANASWI				2			2		1				5	9
54	III-II ECE-A	20VE1A0456	THUMMALAPALLI HIMABINDHU	1	1	1				2	2	1				8	9
55	III-II ECE-A	20VE1A0459	YELLAMPALLI VENKATA NAGA LAKSHMAN		2					1	1					5	9
56	III-II ECE-A	20VE1A0460	YELLAMPALLI VENKATA SIVA SAI RAM				2	1	1					2	1	7	9.5
57	III-II ECE-A	21VE5A0401	ALUGADDA VIGNESH YADAV	2		1	1	1								5	9

58	III-II ECE-A	21VE5A0403	BOODIDA KIREETI				2			1	1	1				5	8.5
59	III-II ECE-A	21VE5A0404	BUNREDDY VISHNU VARDHAN REDDY	2	2	1	2	2	0.5							9.5	9.5
60	III-II ECE-A	21VE5A0405	DEVUNOORI PRIYANKA	2	2	1	2	2	1							10	9.5
61	III-II ECE-A	21VE5A0406	KODALI SHALEM				2	2	1				2	2	1	10	8.5
62	III-II ECE-A	21VE5A0407	VALLALA MOHITH	2	2	1	2	2	1							10	9.5
1	III-II ECE-B	20VE1A0461	ADDALA VIMALA KUMARI				2	2	1				2	2	1	10	8.5
2	III-II ECE-B	20VE1A0462	ADLA DEEPTHI				2		1	2	1	1				7	9
3	III-II ECE-B	20VE1A0463	AKARAPU YAMINI	2	2	1							2	2	1	10	9
4	III-II ECE-B	20VE1A0464	AKSHAY RAGIPHANI	1		1	1		1			1			2	4	8.5
5	III-II ECE-B	20VE1A0465	AMDRA HARSHITHA	2	2	1							2	2	1	10	8.5
6	III-II ECE-B	20VE1A0466	AVULA PALLAVI							1	2	1	2	2	1	9	9
7	III-II ECE-B	20VE1A0467	BACHSHANKAR YUVRAJ SINGH	1	1						1					3	9
8	III-II ECE-B	20VE1A0468	BANDARI KUSHI	1	1	1	2	1				1				6	7.5
9	III-II ECE-B	20VE1A0469	BARAKA CHARAN KUMAR	1				1								2	8.5
10	III-II ECE-B	20VE1A0471	BODDUPALLY NANDINI		1	1	1						2			4	8.5
11	III-II ECE-B	20VE1A0472	DADINABOYINA AKSHAY YADAV		A											AB	
12	III-II ECE-B	20VE1A0473	DASARI SIDDHARTHA		0											0	9
13	III-II ECE-B	20VE1A0474	DEVULAPALLY SWATHI							2		1				3	9
14	III-II ECE-B	20VE1A0475	DINDU MANI KRISHNA GOUD	A												AB	
15	III-II ECE-B	20VE1A0476	GANDHAM VEERABABU				1									1	8.5
16	III-II ECE-B	20VE1A0477	GATTU SHREYA REDDY				2	2	1				2	2	1	10	8
17	III-II ECE-B	20VE1A0478	GAYANI SATHVIKA VEMPATI	2	2	1	2	2	1					1		10	8.5
18	III-II ECE-B	20VE1A0479	JALLA ANUSHA	2		1	2	2	1							8	8.5
19	III-II ECE-B	20VE1A0480	JEELA NAVEEN		0											0	8
20	III-II ECE-B	20VE1A0482	KOLLIPARA RAJESH	0												0	8.5
21	III-II ECE-B	20VE1A0483	KOTAPATI SATHYA VARA PRASAD								1	1	1	2	1	6	9
22	III-II ECE-B	20VE1A0484	LODANGI RAKESH	2	0.5	0.5							0.5	2	1	6.5	9
23	III-II ECE-B	20VE1A0485	M JAGALINGA			1	2						1	2		5	8.5
24	III-II ECE-B	20VE1A0486	MACHIPEDDI PRAVALIKA										2	2	1	6	8.5
25	III-II ECE-B	20VE1A0487	MANCHALA SAI HARSHITH	0												0	9
26	III-II ECE-B	20VE1A0489	MERUGU PAVAN GOUD	2		1	1							2		5	8.5
27	III-II ECE-B	20VE1A0490	NADIMGERI ANIL KUMAR	0												0	8
28	III-II ECE-B	20VE1A0491	NARAHARI ANUDEEP REDDY				2		1			1	2			5	9
29	III-II ECE-B	20VE1A0492	NELLIKONDI AJAY KUMAR REDDY	2		1							2	2	1	8	7.5
30	III-II ECE-B	20VE1A0494	P PRANATHI	2	2	1	2	1	1							9	9
31	III-II ECE-B	20VE1A0495	PENDYALA MAHANTH					2								2	9
32	III-II ECE-B	20VE1A0497	PONUGOTI SWATHANTRA RAO	1	1								2	2	1	7	8.5
33	III-II ECE-B	20VE1A0498	RAMISETTI KIREETI	1	1	1								2	1	6	8.5
34	III-II ECE-B	20VE1A0499	RANGINEENI YASASWINI SATHYA VAISHNAVI	2	2	1							2	2	1	10	8.5
35	III-II ECE-B	20VE1A04A1	SEELAM SUNIL	1	1	1							1	1		5	7.5
36	III-II ECE-B	20VE1A04A2	SHAIK NASIR HUSSAIN					1						2		3	8.5
37	III-II ECE-B	20VE1A04A3	SHAMPURI BINDHU SRI	2		1							2	2	1	8	8.5
38	III-II ECE-B	20VE1A04A5	SUREPALLY ADITH	1	2	1				1	1	1				7	8.5
39	III-II ECE-B	20VE1A04A6	TADI NAGA BHAGYA SRI				2	2	1				2	2	1	10	8.5
40	III-II ECE-B	20VE1A04A7	THORRURU SONYPRIYA				2	2	1				2	2	1	10	8.5
41	III-II ECE-B	20VE1A04A8	VALLAKATI NANDU				2		1		1	1		1		5	8.5
42	III-II ECE-B	20VE1A04A9	VANJA LAHARI REDDY	2	2	1							2	2	1	10	8.5
43	III-II ECE-B	20VE1A04B0	VIGRAHALA VENKATA DHRITI				2	2	1				2	2	1	10	8
44	III-II ECE-B	20VE1A04B1	VISLAVATH MACHENDER				1	1	1				2	2	1	8	9
45	III-II ECE-B	20VE1A04B2	VYDYULA RISHITHA	2	2	1	2	2	1							10	8.5
46	III-II ECE-B	20VE1A04B3	YEJARLA NARASIMHA	1	1	1							1	1	1	6	8.5
47	III-II ECE-B	20VE1A04B4	B KISHORE CHAND	1	1									1		3	8.5
48	III-II ECE-B	21VE5A0408	BAGANI SHAIK ALTHAF BASHA	2	1	1							1	1	1	7	8
49	III-II ECE-B	21VE5A0409	CHAMBETI VENKATA SAI SHARANYA				2	1					2	2		7	8.5
50	III-II ECE-B	21VE5A0410	GAVVALA SAI TEJA	2	2	1	2	1								8	9
51	III-II ECE-B	21VE5A0411	GUGULOTHU SRINATH	1		1							1	2		5	9
52	III-II ECE-B	21VE5A0412	JINKALA KARTHIK	0.5	1	1	1	1	1							5.5	8.5
53	III-II ECE-B	21VE5A0413	MATAM SAI NITHIN	1	1		1									3	8
54	III-II ECE-B	21VE5A0414	VEERABOMMA PRASANTH	1	1		1									3	8
				CO1	CO2	CO3	CO1	CO2	CO3	CO1	CO2	CO3	CO1	CO2	CO3		
Total Marks				116.5	85.5	60.5	95	64.5	30.5	31	32	22.5	69.5	86	35	701.5	956.5
No of Students Answered				72	58	62	54	40	33	21	25	23	42	50	35	111	111
No of Students scoring > threshold				68	55	62	54	39	33	21	25	23	41	50	35	82	111

% of students scoring > thershold	94.4	94.8	100.0	100.0	97.5	100.0	100.0	100.0	100.0	97.6	100.0	100.0	73.9	100.0
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Descriptive Question Wise Marks

I ASN (5)	I MID (25)	Q1			Q2			Q3			Q4			II DES (10)	II OBJ (10)	II ASN (5)	II MID (25)	Internal (25)	External (75)	GRADE	
		CO4	CO5	CO6	CO4	CO5	CO6	CO4	CO5	CO6	CO4	CO5	CO6								
		A	B	C	A	B	C	A	B	C	A	B	C								
5	24	2	2	1	2	2		2	2	1	2	2	1	8	8	5	21	22.5	35	B	
5	23				2	2			2		2		1	7	7.5	5	20	21.5	31	B	
5	23																	23	33	B	
5	18	2	1	1					1					5	7	5	17	17.5	26	C	
5	23	2		1	1	2					1			6	7.5	5	19	21	26	C	
5	22	1	1	1					2		1		1	5	8	5	18	20	31	B	
5	22	2		1		2			1	1				5	8	5	18	20	34	B	
5	22	1	2	1		2	0.5							6.5	8	5	20	21	36	B	
5	22	2	1	1	2				2	1				7	8.5	5	21	21.5	26	C	
5	17	1			1									2	8	5	15	16	26	C	
5	20																	20			
5	23	2		1		2			1		2		1	6	8	5	19	21	26	C	
5	24	2	2	1	2	2	1							10	8.5	5	24	24	43	B+	
5	14	2	2	1	2	1								8	8	5	21	17.5	36	B	
5	17													AB				17	31	C	
5	21	2			2	2			2	1				7	7.5	5	20	20.5	-1	Ab	
5	16										2	1		3	7.5	5	16	16	26	C	
5	20	2		1							2			5	8	5	18	19	44	B+	
5	22																	22	34	B	
5	22																	22	30	B	
5	14	2		1							2			5	8.5	5	19	16.5	18	F	
5	5																	5	17	F	
5	5	2	1	1							1	1	1	7	8	5	20	12.5	7	F	
5	24							2	2	1	2	2	1	10	7.5	5	23	23.5	36	B+	
5	15	2		1				2	2	1				8	8	5	21	18	27	C	
5	22																	22	37	B+	
5	23																	23			
5	23	2	2	1	1	2	1							9	8	5	22	22.5			
5	23																	23			
5	24																	24			
5	17																	17	26	F	
5	21				1	2	1		2	1				7	7.5	5	20	20.5	35	B	
5	21	1	1	1							1	1	1	6	6	5	17	19	48	B+	
5	23								2	1	2	1	1	7	8.5	5	21	22	35	B	
5	21																	21	33	B	
5	23	1	2		2	2								7	8	5	20	21.5	38	B+	
5	16	2		1		2					2		1	6	8.5	5	20	18	37	B	
5	15										1			1	8	5	14	14.5	2	F	
5	16	1									1		1	3	9	5	17	16.5	30	C	
5	24																	24	31	B	
5	23	2	1	1				2	2	1				9	8.5	5	23	23	48	A	
5	19	0												0	6.5	5	12	15.5	46	B+	
5	21	2	2	1	2	2								9	8	5	22	21.5	54	A	
5	21		1	1					1	1				4	8.5	5	18	19.5	43	B+	
5	19		2			1								3	8.5	5	17	18	46	B+	
5	21	2		1				1		1				5	9	5	19	20	51	A	
5	22	2			1	1								4	9	5	18	20	26	C	
5	24	2	2	1				2	2	1				10	7.5	5	23	23.5	40	B+	
5	15		1											1	8.5	5	15	15	26	C	
5	19		1	1										2	6	5	13	16	6	F	
5	5	1	1	1							1	1	1	6	6.6	5	18	11.5	27	C	
5	17		2											2	8	5	15	16	29	C	
5	19																	19	32	B	
5	22																	22	30	B	
5	19	2	2					2	2					8	8.5	5	22	20.5	28	C	
5	22	1	2	1	2									6	8.5	5	20	21	26	C	
5	19		2	1					2					5	8	5	18	18.5	35	B	

5	19																19	30	B					
5	24	2	2	1		2		1	1								7	7.5	5	20	22	46	B+	
5	25	2	2	1	2	2	1										10	7.5	5	23	24	40	B+	
5	24	2	2	1	2	2											9	6.5	5	21	22.5	52	A	
5	25	2	2	1	2	2											9	7	5	21	23	34	B	
5	24	2	2	1	2	2	1										10	7	5	22	23	26	C	
5	21	2	2	1	2	2	1										10	7	5	22	21.5	40	B+	
5	24	1	2	1				2	2	1							9	7	5	21	22.5	34	B	
5	18	2	2	1				2	1								8	7	5	20	19	26	C	
5	24	2	2	1	2	2											9	7	5	21	22.5	37	B+	
5	23																					23	30	B
5	17	2	2	1						2		1					8	8.5	5	22	19.5	27	C	
5	19	2	2	1						2		1					8	8.5	5	22	20.5	31	B	
5	16	2	2	1				2	2	1							10	8	5	23	19.5	26	C	
5	18	2		1	2	2	1			1	1						8	7.5	5	21	19.5	22	F	
5	5																AB					5	-1	Ab
5	14	2															2	7	5	14	14	15	F	
5	17	2	2	1							2	1					8	8	5	21	19	35	B	
5	5																					5		
5	15																					15	1	F
5	23		2	1							2	2	1				8	8	5	21	22	48	A	
5	24	2	2	1		2		2	2								9	8	5	22	23	28	B	
5	22																AB					22	26	C
5	13																AB					13	43	B
5	14			0													0		5	5	9.5	15	F	
5	20	2	2	1							2		1				8	7.5	5	21	20.5	48	B+	
5	21																					21		
5	19	2		1							2	2					7	7.5	5	20	19.5	53	A	
5	20	2	2	1	2							2		1			8	6	5	19	19.5	45	B+	
5	14	2										2					4	7.5	5	17	15.5	29	C	
5	19	2	2	1				2				2					7	6.5	5	19	19	48	B+	
5	13	1															1	7	5	13	13	45	B	
5	19																					19	30	B
5	21																					21	32	B
5	23	2	2		2	1											7	7	5	19	21	40	B+	
5	16																					16	33	B
5	21	2	2	1	2	2											9	7.5	5	22	21.5	48	A	
5	20																					20	48	B+
5	24	2	2	1	2	2											9	7	5	21	22.5	51	A	
5	18				1		1					2		1			5	7.5	5	18	18	54	A	
5	17																					17	39	B+
5	22	2	2									2		1			7	7.5	5	20	21	59	A+	
5	21																					21	35	B
5	24																					24	30	B
5	24				2	2	1					2		1			8	7.5	5	21	22.5	52	A	
5	19	2	2	1	1	2											8	8	5	21	20	48	B+	
5	24	2	2	1	1	2											8	7.5	5	21	22.5	56	A	
5	23	2	2	1				2	1								8	7.5	5	21	22	35	B	
5	22	2	2	1				2	1								8	7	5	20	21	41	B+	
5	24																					24	35	B
5	20							1	2			2		1			6	8	5	19	19.5	47	B+	
5	17	0															0	7	5	12	14.5	26	C	
5	20	2	2	1	2	2											9	6.5	5	21	20.5	32	B	
5	21																					21	30	B
5	22	1	2					2	2								7	7.5	5	20	21	29	B	
5	19	2	2	1	2	2											9	6.5	5	21	20	31	B	
5	19																					19	30	B
5	16	2	2	1	1	2	1										9	7.5	5	22	19	28	C	
5	16	2	2	1	1	1	1										8	7.5	5	21	18.5	34	B	
		CO4	CO5	CO6	CO4	CO5	CO6	CO4	CO5	CO6	CO4	CO5	CO6											
580	2268	115	98	56	54	65	11.5	23	47	16	49	15	21	542.5	626.6	415	1605	2251	0					
116	116	65	54	57	32	35	12	13	27	16	28	10	21	83	82	83	83	116	0					
116	111	63	54	56	32	35	12	13	27	16	28	10	21	67	82	83	80	111	0					

100.0	95.7	96.923	100	98.246	100	100	100	100	100	100	100	100	100	100	80.723	100	100	96.386	95.69	0	
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	A	B	C	A	B	C	A	B	C	A	B	C	10M	5M	25M	
MID 1-INTERNAL THRESHOLD	50	1	1	0.5	1	1	0.5	1	1	0.5	1	1	0.5	5	2.5	12.5
MID 2-INTERNAL THRESHOLD	50	1	1	0.5	1	1	0.5	1	1	0.5	1	1	0.5	5	2.5	12.5
EXTERNAL THRESHOLD	40	30														

CO ATTAINMENT	DES	OBJ	ASN	DES	OBJ	ASN	INT	EXT	DIRECT	INDIRECT	CO_ATT	INT %	25	TARGET
CO1	98.0	100.0	100.0	3	3	3	3.00	3	3.00	3.00	3.00	EXT %	75	1.33
CO2	98.1	100.0	100.0	3	3	3	3.00	3	3.00	2.00	2.80			1.33
CO3	100.0	100.0	100.0	3	3	3	3.00	3	3.00	3.00	3.00	DIRECT %	80	1.00
CO4	99.2	100.0	100.0	3	3	3	3.00	3	3.00	2.00	2.80	INDIRECT %	20	1.00
CO5	100.0	100.0	100.0	3	3	3	3.00	3	3.00	2.00	2.80			1.33
CO6	99.6	100.0	100.0	3	3	3	3.00	3	3.00	2.00	2.80			1.33
COURSE OVERALL CO ATTAINMENT (AVERAGE)														1.22

% RANGE	LEVEL
<40%	0
40% to 50%	1
50% to 60%	2
>60%	3

| | |

S.No	Hall Ticket No.	CO1	CO2	CO3	CO4	CO5	CO6
1	20VE1A0401	3	2	3	2	2	2
2	20VE1A0402	3	2	3	2	2	2
3	20VE1A0403	3	2	3	2	2	2
4	20VE1A0404	3	2	3	2	2	2
5	20VE1A0405	3	2	3	2	2	2
6	20VE1A0406	3	2	3	2	2	2
7	20VE1A0407	3	2	3	2	2	2
8	20VE1A0408	3	2	3	2	2	2
9	20VE1A0409	3	2	3	2	2	2
10	20VE1A0410	3	2	3	2	2	2
11	20VE1A0411	3	2	3	2	2	2
12	20VE1A0413	3	2	3	2	2	2
13	20VE1A0414	3	2	3	2	2	2
14	20VE1A0415	3	2	3	2	2	2
15	20VE1A0416	3	2	3	2	2	2
16	20VE1A0417	3	2	3	2	2	2
17	20VE1A0418	3	2	3	2	2	2
18	20VE1A0419	3	2	3	2	2	2
19	20VE1A0420	3	2	3	2	2	2
20	20VE1A0421	3	2	3	2	2	2
21	20VE1A0422	3	2	3	2	2	2
22	20VE1A0423	3	2	3	2	2	2
23	20VE1A0424	3	2	3	2	2	2
24	20VE1A0425	3	2	3	2	2	2
25	20VE1A0426	3	2	3	2	2	2
26	20VE1A0427	3	2	3	2	2	2
27	20VE1A0428	3	2	3	2	2	2
28	20VE1A0429	3	2	3	2	2	2
29	20VE1A0430	3	2	3	2	2	2
30	20VE1A0431	3	2	3	2	2	2
31	20VE1A0432	3	2	3	2	2	2
32	20VE1A0433	3	2	3	2	2	2
33	20VE1A0434	3	2	3	2	2	2
34	20VE1A0435	3	2	3	2	2	2
35	20VE1A0436	3	2	3	2	2	2
36	20VE1A0437	3	2	3	2	2	2
37	20VE1A0438	3	2	3	2	2	2
38	20VE1A0439	3	2	3	2	2	2
39	20VE1A0440	3	2	3	2	2	2
40	20VE1A0441	3	2	3	2	2	2
41	20VE1A0443	3	2	3	2	2	2
42	20VE1A0444	3	2	3	2	2	2
43	20VE1A0445	3	2	3	2	2	2

44	20VE1A0446	3	2	3	2	2	2
45	20VE1A0447	3	2	3	2	2	2
46	20VE1A0448	3	2	3	2	2	2
47	20VE1A0449	3	2	3	2	2	2
48	20VE1A0450	3	2	3	2	2	2
49	20VE1A0451	3	2	3	2	2	2
50	20VE1A0452	3	2	3	2	2	2
51	20VE1A0453	3	2	3	2	2	2
52	20VE1A0454	3	2	3	2	2	2
53	20VE1A0455	3	2	3	2	2	2
54	20VE1A0456	3	2	3	2	2	2
55	20VE1A0459	3	2	3	2	2	2
56	20VE1A0460	3	2	3	2	2	2
57	21VE5A0401	3	2	3	2	2	2
58	21VE5A0403	3	2	3	2	2	2
59	21VE5A0404	3	2	3	2	2	2
60	21VE5A0405	3	2	3	2	2	2
61	21VE5A0406	3	2	3	2	2	2
62	21VE5A0407	3	2	3	2	2	2
1	20VE1A0461	3	2	3	2	2	2
2	20VE1A0462	3	2	3	2	2	2
3	20VE1A0463	3	2	3	2	2	2
4	20VE1A0464	3	2	3	2	2	2
5	20VE1A0465	3	2	3	2	2	2
6	20VE1A0466	3	2	3	2	2	2
7	20VE1A0467	3	2	3	2	2	2
8	20VE1A0468	3	2	3	2	2	2
9	20VE1A0469	3	2	3	2	2	2
10	20VE1A0471	3	2	3	2	2	2
11	20VE1A0472	3	2	3	2	2	2
12	20VE1A0473	3	2	3	2	2	2
13	20VE1A0474	3	2	3	2	2	2
14	20VE1A0475	3	2	3	2	2	2
15	20VE1A0476	3	2	3	2	2	2
16	20VE1A0477	3	2	3	2	2	2
17	20VE1A0478	3	2	3	2	2	2
18	20VE1A0479	3	2	3	2	2	2
19	20VE1A0480	3	2	3	2	2	2
20	20VE1A0482	3	2	3	2	2	2
21	20VE1A0483	3	2	3	2	2	2
22	20VE1A0484	3	2	3	2	2	2
23	20VE1A0485	3	2	3	2	2	2
24	20VE1A0486	3	2	3	2	2	2
25	20VE1A0487	3	2	3	2	2	2

DATE: 01-06-21	Mid-1 Question Paper - Descriptive	Marks	CO
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Answer any two of the following:

1	a)	Discuss the characteristics of Embedded Systems.	2	1
	b)	Explain the working of an I2C interface in the onboard communication for embedded systems.	2	2
	c)	Demonstrate the role of a reset circuit in an embedded system?	1	3
2	a)	Discuss the Operational Quality attributes of Embedded Systems.	2	1
	b)	What are the different types of memories used in embedded system design? Explain each with example.	2	2
	c)	Explain the working of an oscillator unit in an embedded system.	1	3
3	a)	Categorize the major application areas of Embedded Systems.	2	1
	b)	Differentiate Microprocessor & Microcontroller, RISC & CISC.	2	2
	c)	Explain the functionality of a watch dog timer in an embedded system.	1	3
4	a)	Define an Embedded System. Classify them based on different criteria.	2	1
	b)	Illustrate the working of a USB.	2	2
	c)	Explain the functionality of a brownout circuit in an embedded system.	1	3

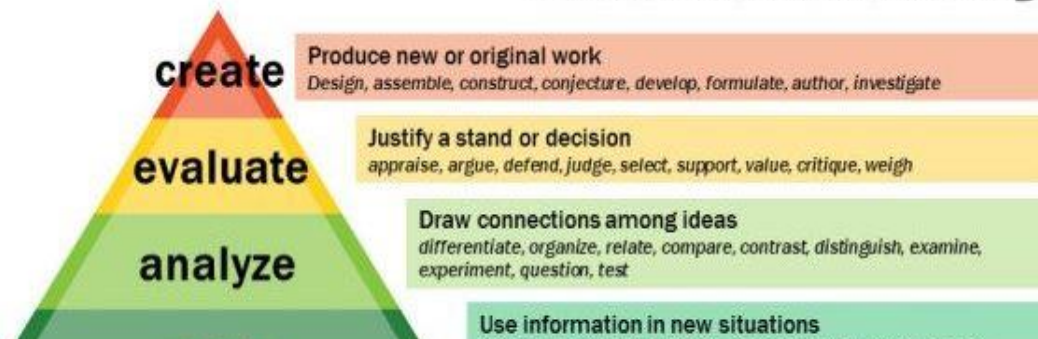
DATE: 20-07-21	Mid-2 Question Paper - Descriptive	Marks	CO
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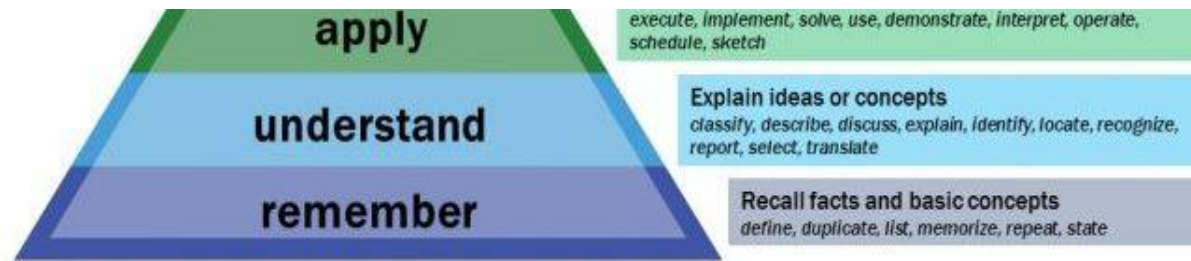
Answer any two of the following:

1	a)	Explain Round Robin process scheduling technique with an example.	2	5
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	b)	What is a device driver? Explain the architecture of Device Driver with neat diagram and give its appli	2	6
	c)	Explain the different Embedded Firmware design approaches with examples.	1	4
2	a)	What is a process? Illustrate the process states and state transition.	2	5
	b)	Explain the different functional and non-functional requirements that need to be evaluated in the selection of an RTOS.	2	6
	c)	Explain the advantages of 'Assembly language' based embedded firmware development.	1	4
3	a)	Explain the different thread binding models for user and kernel level threads.	2	5
	b)	Explain the message passing technique for Inter-Process communication in detail.	2	6
	c)	Explain the advantages of 'High level language' based embedded firmware development.	1	4
4	a)	What is a task? Briefly explain task scheduling mechanism and the various factors to be considered for selecting scheduling criteria.	2	5
	b)	Explain the different methods of handling deadlocks.	2	6
	c)	List the options for Embedded Firmware development languages	1	4

Bloom's Taxonomy





**Cognitive Process
Dimension**

2
2
3
2
1
2
2
4
2
1
3
2

Cognitive Process

2
