

**COs & POs**

**2019-20**

**ODD SEMESTER**



COLLEGE	SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY											
FACULTY NAME	Mr. G. H. RAVIKUMAR											
BRANCH	EEE			ACADEMIC YEAR				2019-20				
COURSE	B.E	SEMESTER		VIII	SECTION			EEE				
SUBJECT	ELECTRIC CIRCUIT ANALYSIS					SUBJECT CODE			18EE32			
CO & PO MAPPING												
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2	3	2	-	-	-	-	-	-	-	-	2
CO2	2	3	2	-	-	-	-	-	-	-	-	2
CO3	1	3	1	-	-	-	-	-	-	-	-	1
CO4	3	3	3	-	-	-	-	-	-	-	-	2
CO5	2	3	2	-	-	-	-	-	-	-	-	2
AVERAGE	2	3	2	-	-	-	-	-	-	-	-	2
OVERALL MAPPING OF SUBJECT												2.25

#### CO AND PO ATTAINMENT

	CO%	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	61.10	1.22	1.83	1.22	-	-	-	-	-	-	-	-	1.22
CO2	44.47	0.889	1.33	0.899	-	-	-	-	-	-	-	-	0.899
CO3	53.00	0.53	1.59	0.53	-	-	-	-	-	-	-	-	0.53
CO4	53.01	1.59	1.59	1.59	-	-	-	-	-	-	-	-	1.06
CO5	47.53	0.95	1.42	0.95	-	-	-	-	-	-	-	-	0.95
AVERAGE		1.035	1.552	1.037	-	-	-	-	-	-	-	-	0.931
FINAL ATTAINMENT LEVEL													1.138

G. H. Ravikumar  
 Head of the Department  
 Electrical & Electronics Engineering  
 Shridevi Institute of Engineering & T  
 TUMKUR-572106.

Principal  
 PRINCIPAL  
 SIET., TUMAKURU.





DEPARTMENT OF EEE

3rd 2019 20

SUBJECT	TRANSFORMER & GENERATOR	SUBJECT CODE	18EE33
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**COURSE OUTCOME**

- CO1. Explain conduction and breakdown phenomenon in gases, liquid dielectrics and breakdown Phenomenon in solid dielectrics.
- CO2. Summarize generation of high voltages and currents .
- CO3. Outline measurement techniques for high voltages and currents
- CO4. Summarize overvoltage phenomenon and insulation coordination in electric power systems.
- CO5. Explain non-destructive testing of materials and electric apparatus, high-voltage testing of electric apparatus

**PROGRAM OUTCOMES**

- PO1 Engineering knowledge: An ability to apply knowledge of mathematics (including probability, statistics and discrete mathematics), science, and engineering for solving Engineering problems and Knowledge.
- PO2 Problem analysis: Identify, formulate, research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
- PO3 Design / development of solutions: An ability to design solution for engineering problems and design system components or process to meet desired specifications and needs.
- PO4 Conduct investigations of complex Problem: An ability to identify, formulate, comprehend, analyze, design synthesis of the information to solve complex engineering problems and provide valid conclusions.
- PO5 Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools, including prediction and modeling to complex engineering activities.
- PO6 The engineer and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal, and cultural issues.
- PO7 Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
- PO8 Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
- PO9 Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
- PO10 Communication: Communicate effectively on complex engineering activities with the engineering community and with the society.
- PO11 Project management and finance: An ability to use the modern engineering tools, techniques, skills and management principles to do work as a member and leader in a team, to manage projects in multidisciplinary environments.
- PO12 Life-long learning: A recognition of the need for, and an ability to engage in, to resolve contemporary issues and acquire lifelong learning.

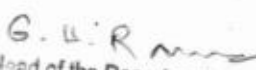
G. H. Ramesh  
Head of the Department  
Electrical & Electronics Engineering  
Shridevi Institute of Engineering & Technology  
TUMKUR-572106.

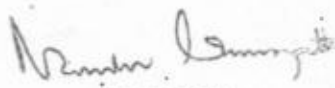
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PRINCIPAL  
SIET, TUMAKURU

COLLEGE	SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY											
FACULTY NAME	MRS. SHWETHA T M											
BRANCH	EEE			ACADEMIC YEAR				2019-20				
COURSE	B.E	SEMESTER		III	SECTION							
SUBJECT	TRANSFORMER & GENERATOR				SUBJECT CODE			18EE33				
CO & PO MAPPING												
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	3	3	2			2				2	1
CO2	2	3	3	2			2				2	1
CO3	1	3	3	1			2				2	1
CO4	2	3	3	2			2				2	1
CO5	2	3	3	2			2				2	1
AVERAGE	2	3	3	1.8			2				2	1
OVERALL MAPPING OF SUBJECT												2.11

#### CO AND PO ATTAINMENT


	CO%	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	51.5	1.545	1.545	1.545	1.03			1.03				1.03	0.515
CO2	48.5	0.97	1.455	1.455	0.97			0.97				0.97	0.485
CO3	50.6	0.506	1.518	1.518	0.506			1.012				1.012	0.506
CO4	45.8	0.916	1.374	1.374	0.916			0.916				0.916	0.458
CO5	39.9	0.798	1.197	1.197	0.798			0.798				0.798	0.399
AVERAGE	47.26	0.947	1.4178	1.4178	0.844			0.9452				0.9452	0.4726
FINAL ATTAINMENT LEVEL													1.0

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SEM: V, EEE	IA TEST 1			IA TEST 2			IA TEST 3			Assignment						SEE T&G 2019-2020					TOTAL					Average					
USN	CO1	CO2	TOTAL	CO3	CO4	TOTAL	CO4	CO5	TOTAL	CO1	CO2	CO3	CO4	GO5	TOTAL	CO1	CO2	CO3	CO4	CO5	TOTAL	CO1(34)	CO2(34)	CO3(34)	CO4(54)	CO5(34)	CO1(34)	CO2(34)	CO3(34)	CO4(54)	CO5(34)
1SV17EE012	8	4	12	15	12	27	8	9	17	2	2	2	2	2	10	4.2	4.2	4.2	4.2	4.2	21	14.2	10.2	21.2	26.2	15.2	42	30	62	49	45
1SV18EE002	10	5	15	7	7	14	10	8	18	2	2	2	2	2	8	5.2	5.2	5.2	5.2	5.2	26	17.2	12.2	14.2	24.2	15.2	51	36	42	45	45
1SV18EE003	16	13	29	10	8	18	12	8	20	2	2	2	2	2	10	6	6	6	6	6	30	24	21	18	28	16	71	62	53	52	47
1SV18EE004	7	9	16	12	8	20	8	5	13	2	2	2	2	2	10	4.4	4.4	4.4	4.4	4.4	22	13.4	15.4	18.4	22.4	11.4	39	45	54	41	34
1SV18EE005	5	7	12	9	17	26	12	3	15	2	2	2	2	2	10	4.2	4.2	4.2	4.2	4.2	21	11.2	13.2	15.2	35.2	9.2	33	39	45	65	27
1SV18EE006	14	12	26	12	14	26	6	8	14	2	2	2	2	2	10	6.4	6.4	6.4	6.4	6.4	32	22.4	20.4	20.4	28.4	16.4	66	60	60	53	48
1SV18EE007	8	10	18	10	6	16	10	5	15	2	2	2	2	2	10	4.2	4.2	4.2	4.2	4.2	21	16.2	15.2	18.2	23.2	11.2	42	48	48	41	33
1SV18EE008	10	9	19	12	13	25	4	5	9	2	2	2	2	2	10	4.2	4.2	4.2	4.2	4.2	21	16.2	15.2	18.2	23.2	11.2	48	45	54	43	33
1SV18EE009	4	3	7	9	12	21	7	7	14	2	2	2	2	2	10	2.4	2.4	2.4	2.4	2.4	12	8.4	7.4	13.4	23.4	11.4	25	22	39	43	34
1SV18EE011	12	14	26	10	4	14	9	5	14	2	2	2	2	2	10	4.2	4.2	4.2	4.2	4.2	21	18.2	20.2	16.2	19.2	11.2	54	59	48	36	33
1SV18EE012	13	14	27	12	5	17	8	11	19	2	2	2	2	2	10	3	3	3	3	3	15	18	19	17	18	16	53	56	50	33	47
1SV19EE400	13	12	25	13	5	18	10	11	21	2	2	2	2	2	10	4.6	4.6	4.6	4.6	4.6	23	19.6	18.6	19.6	21.6	17.6	58	55	58	40	52
1SV19EE401	14	10	24	9	9	18	12	5	17	2	2	2	2	2	10	5.6	5.6	5.6	5.6	5.6	28	21.6	17.6	16.6	28.6	12.6	64	52	49	53	37
1SV19EE402	10	15	25	10	11	21	14	9	23	2	2	2	2	2	10	6	6	6	6	6	30	18	23	18	33	17	53	68	53	61	50
1SV19EE403	10	14	24	14	7	21	9	6	15	2	2	2	2	2	10	4.4	4.4	4.4	4.4	4.4	22	16.4	20.4	20.4	22.4	12.4	48	60	60	41	36
1SV19EE404	17	8	25	8	5	13	8	6	14	2	2	2	2	2	10	4.2	4.2	4.2	4.2	4.2	21	23.2	14.2	14.2	19.2	12.2	68	42	42	36	36
1SV19EE405	15	10	25	9	10	19	9	8	17	2	2	2	2	2	10	4.2	4.2	4.2	4.2	4.2	21	21.2	16.2	15.2	25.2	14.2	62	48	45	47	42
<b>TOTAL</b>	186	169	355	181	153	334	156	119	275	34	34	34	34	34	168	77.4	77.4	77.4	77.4	77.4	387	297.4	280.4	292.4	420.4	230.4	874.71	824.71	860	778.5185	677.6471
Total students	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17
Average	10.9	9.941	20.8824	10.65	9	19.6471	9.18	7	16.176	2	2	2	2	2	9.88	4.55	4.55	4.553	4.55	4.55	22.8	17.49	16.4941	17.2	24.7294	13.553	51	49	51	46	40

### 18EE33 T&G 2019-2020

  
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 Electrical & Electronics Engineering  
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## DEPARTMENT OF EEE

SUBJECT	ANALOG ELECTRONICS CIRCUITS	SUBJECT CODE	18EE34
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### COURSE OUTCOME

CO1	Obtain the output characteristics of clipper and clamper circuits
CO2	Design and compare biasing circuits for transistor amplifiers & explain the transistor switching.
CO3	Explain the concept of feedback, its types and design of feedback circuits
CO4	Design and analyze the power amplifier circuits and oscillators for different frequencies.
CO5	Design and analysis of FET and MOSFET amplifiers

### PROGRAM OUTCOME

- PO1** Engineering knowledge: An ability to apply knowledge of mathematics (including probability, statistics and discrete mathematics), science, and engineering for solving Engineering problems and Knowledge.
- PO2** Problem analysis: Identify, formulate, research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
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- PO4** Conduct investigations of complex Problem: An ability to identify, formulate, comprehend, analyze, design synthesis of the information to solve complex engineering problems and provide valid conclusions.
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- PO6** The engineer and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal, and cultural issues.
- PO7** Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
- PO8** Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
- PO9** Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
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- PO12** Life-long learning: A recognition of the need for, and an ability to engage in, to resolve contemporary issues and acquire lifelong learning.

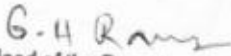
*G. H. Rama*  
Head of the Department  
Electrical & Electronics Engineering  
Shridevi Institute of Engineering & Technology  
TUMKUR-572106.

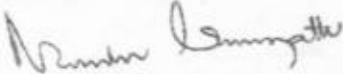
*Manjunath*  
PRINCIPAL  
SIET., TUMAKURU.

COLLEGE		SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY										
FACULTY NAME		RAJESH KUMAR V										
BRANCH		EEE		ACADEMIC YEAR				2019-2020				
COURSE	B.E	SEMESTER		IV	SECTION							
SUBJECT	ANALOG ELECTRONICS CIRCUITS					SUBJECT CODE		18EE34				
CO & PO MAPPING												
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2	3	3	-	-	-	-	-	-	-	-	-
CO2	2	3	3	-	-	-	-	-	-	-	-	-
CO3	-	2	3	-	-	-	-	-	-	-	-	-
CO4	-	2	3	-	-	-	-	-	-	-	-	-
CO5	-	3	3	-	-	-	-	-	-	-	-	-
AVERAGE	2	2.6	3	-	-	-	-	-	-	-	-	-
OVERALL MAPPING OF SUBJECT												2.05

#### CO AND PO ATTAINMENT

	CO%	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	17.6	0.35	0.52	0.52	-	-	-	-	-	-	-	-	-
CO2	17.6	0.35	0.52	0.52	-	-	-	-	-	-	-	-	-
CO3	16.6	-	0.33	0.49	-	-	-	-	-	-	-	-	-
CO4	21.6	-	0.43	0.64	-	-	-	-	-	-	-	-	-
CO5	16.6	-	0.49	0.49	-	-	-	-	-	-	-	-	-
AVERAGE	18	0.35	0.45	0.53	-	-	-	-	-	-	-	-	-
FINAL ATTAINMENT LEVEL													0.43

  
 Head of the Department  
 Electrical & Electronics Engineering  
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## DEPARTMENT OF EEE


<b>SUBJECT</b>	<b>DIGITAL SYSTEM DESIGN</b>	<b>SUBJECT CODE</b>	<b>18EE35</b>
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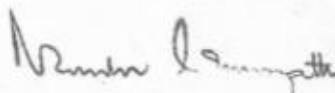
### COURSE OUTCOME

<b>CO1</b>	Develop simplified switching equation using Karnaugh Maps and Quine McClusky techniques.
<b>CO2</b>	Design Multiplexer, Encoder, Decoder, Adder, Subtractors and Comparator as digital combinational control circuits.
<b>CO3</b>	Design flip flops, counters, shift registers as sequential control circuits.
<b>CO4</b>	Develop Mealy/Moore Models and state diagrams for the given clocked sequential circuits.
<b>CO5</b>	Explain the functioning of Read only and Read/Write Memories, Programmable ROM EPROM and Flash memory

### PROGRAM OUTCOME

- PO1** Engineering knowledge: An ability to apply knowledge of mathematics (including probability, statistics and discrete mathematics), science, and engineering for solving Engineering problems and Knowledge.
- PO2** Problem analysis: Identify, formulate, research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
- PO3** Design / development of solutions: An ability to design solution for engineering problems and design system components or process to meet desired specifications and needs.
- PO4** Conduct investigations of complex Problem: An ability to identify, formulate, comprehend, analyze, design synthesis of the information to solve complex engineering problems and provide valid conclusions.
- PO5** Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools, including prediction and modeling to complex engineering activities.
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- PO7** Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
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- PO9** Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
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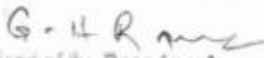
  
G. U. Ramesh  
Head of the Department  
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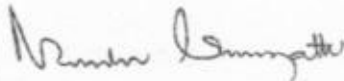
  
PRINCIPAL  
SIET, Tumkur

COLLEGE	SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY											
FACULTY NAME	RAGHAVENDRA											
BRANCH	EEE			ACADEMIC YEAR				2019-2020				
COURSE	B.E	SEMESTER			VI	SECTION						
SUBJECT	DIGITAL SYSTEM DESIGN						SUBJECT CODE		18EE35			
CO & PO MAPPING												
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	3	-	-	-	-	-	-	-	-	-	3
CO2	2	3	3	-	-	-	-	-	-	-	-	2
CO3	2	2	3	-	-	-	-	-	-	-	-	2
CO4	2	2	-	-	-	-	-	-	-	-	-	2
CO5	-	-	3	-	-	-	-	-	-	-	-	2
AVERAGE	2.25	2.5	3	-	-	-	-	-	-	-	-	2.2
OVERALL MAPPING OF SUBJECT												

### CO AND PO ATTAINMENT


	CO%	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	54.97	1.64	1.64	-	-	-	-	-	-	-	-	-	1.64
CO2	44.67	0.89	1.34	1.34	-	-	-	-	-	-	-	-	0.89
CO3	55.29	1.10	1.10	1.65	-	-	-	-	-	-	-	-	1.10
CO4	35.43	0.70	0.70	-	-	-	-	-	-	-	-	-	0.70
CO5	43.20	-	-	1.29	-	-	-	-	-	-	-	-	0.86
AVERAGE	46.71	1.08	1.19	1.42	-	-	-	-	-	-	-	-	1.03
FINAL ATTAINMENT LEVEL													1.18

  
 Head of the Department  
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 Shridevi Institute of Engineering & Technology  
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 PRINCIPAL  
 SIET, TUMAKURU

SEM: III, REF	IA TEST 1			IA TEST 2			IA TEST 3			Assignment						SEE						Total					Average						
	USN	CO1	CO2	TOTAL	CO3	CO4	TOTAL	CO4	CO5	TOTAL	CO1	CO2	CO3	CO4	CO5	TOTAL	CO1	CO2	CO3	CO4	CO5	TOTAL	CO1(34)	CO2(34)	CO3(34)	CO4(54)	CO5(34)	CO1(34)	CO2(34)	CO3(34)	CO4(54)	CO5(34)	
1SV17EE006	12	13	25	12	11	23	11	13	24	2	2	2	2	2	10	5.4	5.4	5.4	5.4	5.4	27	19.4	20.4	19.4	18.4	20.4	0.57	0.600	0.57	0.34	0.60		
1SV17EE012	11	9	20	13	5	18	12	10	22	2	2	2	2	2	10	5.6	5.6	5.6	5.6	5.6	28	18.6	16.6	20.6	19.6	17.6	0.55	0.488	0.61	0.36	0.52		
1SV18EE002	12	3	15	14	0	14	13	0	13	2	2	2	2	2	10	5.4	5.4	5.4	5.4	5.4	27	19.4	10.4	21.4	20.4	7.4	0.57	0.306	0.63	0.38	0.22		
1SV18EE003	13	12	25	15	9	24	13	8	21	2	2	2	2	2	10	4.2	4.2	4.2	4.2	4.2	21	19.2	18.2	21.2	19.2	14.2	0.56	0.535	0.62	0.36	0.42		
1SV18EE004	14	9	23	12	10	22	15	9	24	2	2	2	2	2	10	4.2	4.2	4.2	4.2	4.2	21	20.2	15.2	18.2	21.2	15.2	0.59	0.447	0.54	0.39	0.45		
1SV18EE005	12	6	18	13	6	19	14	3	17	2	2	2	2	2	10	4.6	4.6	4.6	4.6	4.6	23	18.6	12.6	19.6	20.6	9.6	0.55	0.371	0.58	0.38	0.28		
1SV18EE006	13	11	24	14	11	25	12	11	23	2	2	2	2	2	10	4.2	4.2	4.2	4.2	4.2	21	19.2	17.2	20.2	18.2	17.2	0.56	0.506	0.59	0.34	0.51		
1SV18EE007	14	3	17	12	4	16	14	4	18	2	2	2	2	2	10	4.2	4.2	4.2	4.2	4.2	21	20.2	9.2	18.2	20.2	10.2	0.59	0.271	0.54	0.37	0.30		
1SV18EE008	12	9	21	13	7	20	12	10	22	2	2	2	2	2	10	4.2	4.2	4.2	4.2	4.2	21	18.2	15.2	19.2	18.2	16.2	0.54	0.447	0.56	0.34	0.48		
1SV18EE009	12	8	20	14	5	19	15	3	18	2	2	2	2	2	10	4.2	4.2	4.2	4.2	4.2	21	18.2	14.2	20.2	21.2	9.2	0.54	0.418	0.59	0.39	0.27		
1SV18EE011	13	6	19	12	6	18	13	7	20	2	2	2	2	2	10	4.4	4.4	4.4	4.4	4.4	22	19.4	12.4	18.4	19.4	13.4	0.57	0.365	0.54	0.36	0.39		
1SV18EE012	10	9	19	13	4	17	14	6	20	2	2	2	2	2	10	4.2	4.2	4.2	4.2	4.2	21	16.2	15.2	19.2	20.2	12.2	0.48	0.447	0.56	0.37	0.36		
1SV19EE400	14	12	26	11	13	24	14	14	28	2	2	2	2	2	10	4.2	4.2	4.2	4.2	4.2	21	20.2	18.2	17.2	20.2	20.2	0.59	0.535	0.51	0.37	0.59		
1SV19EE401	12	12	24	10	15	25	12	14	26	2	2	2	2	2	10	4.4	4.4	4.4	4.4	4.4	22	18.4	18.4	16.4	18.4	20.4	0.54	0.541	0.48	0.34	0.60		
1SV19EE402	14	12	26	14	9	23	13	16	29	2	2	2	2	2	10	4.2	4.2	4.2	4.2	4.2	21	20.2	18.2	20.2	19.2	22.2	0.59	0.535	0.59	0.36	0.65		
1SV19EE403	12	12	24	12	16	28	14	6	20	2	2	2	2	2	10	4.2	4.2	4.2	4.2	4.2	21	18.2	18.2	18.2	20.2	12.2	0.54	0.535	0.54	0.37	0.36		
1SV19EE404	13	9	22	12	12	24	12	8	20	2	2	2	2	2	10	4.6	4.6	4.6	4.6	4.6	23	19.6	15.6	18.6	18.6	14.6	0.58	0.459	0.55	0.34	0.43		
1SV19EE405	15	10	25	14	10	24	13	14	27	2	2	2	2	2	10	4.4	4.4	4.4	4.4	4.4	22	21.4	16.4	20.4	19.4	20.4	0.63	0.482	0.60	0.36	0.60		
<b>TOTAL</b>		228	165	393	230	153	383	236	156	392	36	36	36	36	36	180	80.8	80.8	80.8	80.8	80.8	404	344.8	281.8	346.8	352.8	272.8	10.14	8.2882	10.2	6.533	8.023529	
<b>Total students</b>	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18
<b>Average</b>		12.67	9.1667	21.83	13	8.5	21.28	13.1	8.67	21.8	2	2	2	2	2	10	4.489	4.489	4.49	4.4889	4.489	22.44	19.156	15.656	19.27	19.6	15.16	56.34	46.05	56.67	36.30	44.58	

18EE35DS 2019-20

  
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<b>COLLEGE</b>	<b>SHRIDEVI INSTITUTE OF ENGINEERING &amp; TECHNOLOGY</b>
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**DEPARTMENT OF EEE**


<b>SUBJECT</b>	Electrical & Electronic Measurement	<b>SUBJECT CODE</b>	18EE36
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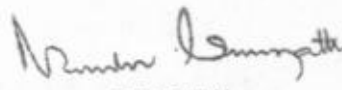
**COURSE OUTCOME**

<b>CO1</b>	Measure resistance, inductance and capacitance using bridges and determine earth resistance.
<b>CO2</b>	Explain the working of various meters used for measurement of Power, Energy & understand the adjustments, calibration & errors in energy meters.
<b>CO3</b>	Understand methods of extending the range of instruments & instrument transformers.
<b>CO4</b>	Explain the working of different electronic instruments.
<b>CO5</b>	Explain the working of different display and recording devices.

**PROGRAM OUTCOME**

- PO1** Engineering knowledge: An ability to apply knowledge of mathematics (including probability, statistics and discrete mathematics), science, and engineering for solving Engineering problems and Knowledge.
- PO2** Problem analysis: Identify, formulate, research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
- PO3** Design / development of solutions: An ability to design solution for engineering problems and design system components or process to meet desired specifications and needs.
- PO4** Conduct investigations of complex Problem: An ability to identify, formulate, comprehend, analyze, design synthesis of the information to solve complex engineering problems and provide valid conclusions.
- PO5** Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools, including prediction and modeling to complex engineering activities.
- PO6** The engineer and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal, and cultural issues.
- PO7** Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
- PO8** Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
- PO9** Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
- PO10** Communication: Communicate effectively on complex engineering activities with the engineering community and with the society.
- PO11** Project management and finance: An ability to use the modern engineering tools, techniques, skills and management principles to do work as a member and leader in a team, to manage projects in multidisciplinary environments.
- PO12** Life-long learning: A recognition of the need for, and an ability to engage in, to resolve contemporary issues and acquire lifelong learning


  
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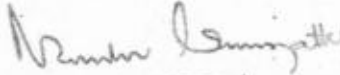
  
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FACULTY NAME		UMABAI										
BRANCH		EEE			ACADEMIC YEAR				2019-2020			
COURSE	B.E	SEMESTER		III	SECTION							
SUBJECT	Electrical & Electronic Measurement						SUBJECT CODE		18EE36			
CO & PO MAPPING												
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	2	2	2	2	2						1
CO2	3	2	2	2	2	2						1
CO3	3	2	3	2	2	2						1
CO4	3	2	2	2	2	2						1
CO5	3	2	2	2	2	2						2
AVERAGE	3	2	2.2	2	2	2						1.2
OVERALL MAPPING OF SUBJECT												2.05

### CO AND PO ATTAINMENT

	CO%	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	48.3	1.44	0.96	0.96	0.96	0.96	0.96						0.48
CO2	45.3	1.45	0.96	0.96	0.96	0.96	0.96						0.48
CO3	49.7	1.52	1.01	1.52	1.01	1.01	1.01						0.50
CO4	49.8	1.40	0.93	0.93	0.93	0.93	0.93						0.46
CO5	51.0	1.43	0.95	0.95	0.95	0.95	0.95						0.47
AVERAGE	48.38	1.44	0.96	1.06	0.96	0.96	0.96						0.47
FINAL ATTAINMENT LEVEL													1.12

  
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SEM: V, EEE	IA TEST 1			IA TEST 2			IA TEST 3			Assignment						SEE					TOTAL					Average						
USN	CO1	CO2	TOTAL	CO3	CO4	TOTAL	CO4	CO5	TOTAL	CO1	CO2	CO3	CO4	CO5	TOTAL	CO1	CO2	CO3	CO4	CO5	TOTAL	CO1(34)	CO2(34)	CO3(34)	CO4(54)	CO5(34)	CO1(34)	CO2(34)	CO3(34)	CO4(54)	CO5(34)	
1SV17EE012	5	7	12	6	10	16	11	9	20	2	2	2	2	2	10	4.6	4.6	4.6	4.6	4.6	23	11.6	13.6	12.6	27.6	15.6	0.341	0.400	0.371	0.5111	0.459	
1SV18EE002	10	6	16	9	9	18	7	10	17	2	2	2	2	2	10	8.4	8.4	8.4	8.4	8.4	42	20.4	16.4	19.4	26.4	20.4	0.600	0.482	0.571	0.4889	0.600	
1SV18EE003	9	7	16	10	8	18	9	8	17	2	2	2	2	2	10	5.8	5.8	5.8	5.8	5.8	29	16.8	14.8	17.8	24.8	15.8	0.494	0.435	0.524	0.4593	0.465	
1SV18EE004	8	4	12	6	5	11	8	8	16	2	2	2	2	2	10	4.2	4.2	4.2	4.2	4.2	21	14.2	10.2	12.2	19.2	14.2	0.418	0.300	0.359	0.3556	0.418	
1SV18EE005	5	7	12	8	9	17	11	8	19	2	2	2	2	2	10	5.4	5.4	5.4	5.4	5.4	27	12.4	14.4	15.4	27.4	15.4	0.365	0.424	0.453	0.5074	0.453	
1SV18EE006	13	10	23	13	12	25	13	14	27	2	2	2	2	2	10	9.4	9.4	9.4	9.4	9.4	47	24.4	21.4	24.4	36.4	25.4	0.718	0.629	0.718	0.6741	0.747	
1SV18EE007	7	10	17	10	13	23	14	12	26	2	2	2	2	2	10	6	6	6	6	6	30	15	18	18	35	20	0.441	0.529	0.529	0.6481	0.588	
1SV18EE008	4	6	10	8	5	13	9	7	16	2	2	2	2	2	10	5.8	5.8	5.8	5.8	5.8	29	11.8	13.8	15.8	21.8	14.8	0.347	0.406	0.465	0.4037	0.435	
1SV18EE009	3	5	8	7	5	12	4	6	10	2	2	2	2	2	10	4.2	4.2	4.2	4.2	4.2	21	9.2	11.2	13.2	15.2	12.2	0.271	0.329	0.388	0.2815	0.359	
1SV18EE011	9	7	16	8	10	18	12	5	17	2	2	2	2	2	10	5.2	5.2	5.2	5.2	5.2	26	16.2	14.2	15.2	29.2	12.2	0.476	0.418	0.447	0.5407	0.359	
1SV18EE012	3	5	8	6	4	10	6	6	12	2	2	2	2	2	10	5	5	5	5	5	25	10	12	13	17	13	0.294	0.353	0.382	0.3148	0.382	
1SV19EE400	9	11	20	14	10	24	11	17	28	2	2	2	2	2	10	6.2	6.2	6.2	6.2	6.2	31	17.2	19.2	22.2	29.2	25.2	0.506	0.565	0.653	0.5407	0.741	
1SV19EE401	10	8	18	9	11	20	13	12	25	2	2	2	2	2	10	6.6	6.6	6.6	6.6	6.6	33	18.6	16.6	17.6	32.6	20.6	0.547	0.488	0.518	0.6037	0.606	
1SV19EE402	10	14	24	9	11	20	18	10	28	2	2	2	2	2	10	5.8	5.8	5.8	5.8	5.8	29	17.8	21.8	16.8	36.8	17.8	0.524	0.641	0.494	0.6815	0.524	
1SV19EE403	12	4	16	8	10	18	9	8	17	2	2	2	2	2	10	4.8	4.8	4.8	4.8	4.8	24	18.8	10.8	14.8	25.8	14.8	0.553	0.318	0.435	0.4778	0.435	
1SV19EE404	14	11	25	11	7	18	10	10	20	2	2	2	2	2	10	5	5	5	5	5	25	21	18	18	24	17	0.618	0.529	0.529	0.4444	0.500	
1SV19EE405	16	8	24	13	7	20	15	13	28	2	2	2	2	2	10	5.6	5.6	5.6	5.6	5.6	28	23.6	15.6	20.6	29.6	20.6	0.694	0.459	0.606	0.5481	0.606	
<b>TOTAL</b>	147	130	277	155	146	301	180	163	343	34	34	34	34	34	170	98	98	98	98	98	490	279	262	287	458	295	8.206	7.70588	8.4412	8.48148	8.67647	
Total students	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17
Average	8.647	7.647	16.294	9.118	8.59	17.706	10.59	9.59	20.176	2	2	2	2	2	10	5.765	5.76	5.76	5.765	5.765	28.8	16.412	15.41	16.8824	26.941	17.353	48.3	45.3	49.7	49.9	51.0	

ELECTRICAL & ELECTRONICS  
2019-20

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*(Signature)*  
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SIET, TUMAKURU.



## DEPARTMENT OF EEE

<b>SUBJECT</b>	Management&Economics	<b>SUBJECT CODE</b>	17EE51
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### COURSE OUTCOME

<b>CO1</b>	Explain the field of management, task of the manager, planning and steps in decision making
<b>CO2</b>	Discuss the structure of organization, importance of staffing, leadership styles, modes of communication, techniques of coordination and importance of managerial control in business
<b>CO3</b>	Explain the concepts of entrepreneurship and a businessman's social responsibilities towards different groups
<b>CO4</b>	Show an understanding of role of SSI's in the development of country and state/central level institutions/agencies supporting business enterprises
<b>CO5</b>	Discuss the concepts of project management, capital budgeting, project feasibility studies, need for project report and new control techniques

### PROGRAM OUTCOME

- PO1** Engineering knowledge: An ability to apply knowledge of mathematics (including probability, statistics and discrete mathematics), science, and engineering for solving Engineering problems and Knowledge.
- PO2** Problem analysis: Identify, formulate, research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
- PO3** Design / development of solutions: An ability to design solution for engineering problems and design system components or process to meet desired specifications and needs.
- PO4** Conduct investigations of complex Problem: An ability to identify, formulate, comprehend, analyze, design synthesis of the information to solve complex engineering problems and provide valid conclusions.
- PO5** Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools, including prediction and modeling to complex engineering activities.
- PO6** The engineer and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal, and cultural issues.
- PO7** Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
- PO8** Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
- PO9** Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
- PO10** Communication: Communicate effectively on complex engineering activities with the engineering community and with the society.
- PO11** Project management and finance: An ability to use the modern engineering tools, techniques, skills and management principles to do work as a member and leader in a team, to manage projects in multidisciplinary environments.
- PO12** Life-long learning: A recognition of the need for, and an ability to engage in, to resolve contemporary issues and acquire lifelong learning.


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COLLEGE	SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY											
FACULTY NAME	CHARAN											
BRANCH	EEE			ACADEMIC YEAR				2019-20				
COURSE	B.E	SEMESTER		V	SECTION			EEE				
SUBJECT	Management&Economics						SUBJECT CODE		17EE51			
<b>CO &amp; PO MAPPING</b>												
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	-	-	-	-	-	-	-	3	2	3	-	2
CO2	-	-	-	-	-	2	-	2	3	3	-	2
CO3	-	-	-	-	-	3	-	2	3	2	-	2
CO4	-	-	-	-	-	-	-	2	2	2	-	3
CO5	-	-	-	-	-	-	-	2	3	3	2	2
AVERAGE	-	-	-	-	-	2.5	-	2.2	2.6	2.6	2	2.2
OVERALL MAPPING OF SUBJECT												3

### CO AND PO ATTAINMENT

	CO%	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	74.74								2.24	1.49	2.24		1.49
CO2	67.84						1.35		1.35	2.03	2.03		1.35
CO3	68.27						2.04		1.37	2.04	1.37		1.37
CO4	110.51								2.21	2.21	2.21		3.31
CO5	68.70								1.37	2.06	2.06	1.37	1.37
AVERAGE	78.01						1.69		1.70	1.96	1.98	1.37	1.77
FINAL ATTAINMENT LEVEL													2.09

  
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SEM: V, EEE	IA TEST 1			IA TEST 2			IA TEST 3			Assignment					SEE					TOTAL					Average							
USN	CO1	CO2	TOTAL	CO3	CO4	TOTAL	CO4	CO5	TOTAL	CO1	CO2	CO3	CO4	CO5	TOTAL	CO1	CO2	CO3	CO4	CO5	TOTAL	CO1	CO2	CO3	CO4	CO5	CO1	CO2	CO3	CO4	CO5	
1sv17EE002	12	12	24	11	11	22	12	11	23	2	2	2	2	2	10	4.2	4.2	4.2	4.2	4.2	21	18.2	18.2	17.2	29.2	17.2	0.63	0.63	0.59	0.12	0.59	
1sv17EE004	13	14	27	12	13	25	13	13	26	2	2	2	2	2	10	10.2	10.2	10.2	10.2	10.2	51	25.2	26.2	24.2	38.2	25.2	0.87	0.90	0.83	0.30	0.87	
1sv17EE005	15	15	30	14	14	28	15	14	29	2	2	2	2	2	10	9.2	9.2	9.2	9.2	9.2	46	26.2	26.2	25.2	40.2	25.2	0.90	0.90	0.87	0.27	0.87	
1sv17EE009	14	5	19	10	10	20	10	9	19	2	2	2	2	2	10	8.2	8.2	8.2	8.2	8.2	41	24.2	15.2	20.2	30.2	19.2	0.83	0.52	0.70	0.24	0.66	
1sv17EE010	12	13	25	10	13	23	12	12	24	2	2	2	2	2	10	7.8	7.8	7.8	7.8	7.8	39	21.8	22.8	19.8	34.8	21.8	0.75	0.79	0.68	0.23	0.75	
1sv18EE400	10	9	19	10	10	20	10	10	20	2	2	2	2	2	10	6.4	6.4	6.4	6.4	6.4	32	18.4	17.4	18.4	28.4	18.4	0.63	0.60	0.63	0.19	0.63	
1sv18EE402	13	3	16	7	7	14	10	5	15	2	2	2	2	2	10	3.8	3.8	3.8	3.8	3.8	19	18.8	8.8	12.8	22.8	10.8	0.65	0.30	0.44	0.11	0.37	
1sv18EE403	12	14	26	12	12	24	12	13	25	2	2	2	2	2	10	6.6	6.6	6.6	6.6	6.6	33	20.6	22.6	20.6	32.6	21.6	0.71	0.78	0.71	0.19	0.74	
TOTAL	101	85	186	86	90	176	94	87	181	16	16	16	16	16	80	56.4	56.4	56.4	56.4	56.4	282	173	157.4	158.4	256	159.4	5.98	5.43	5.46	1.66	5.50	
Total students	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
Average	12.625	10.63	23.25	10.75	11.25	22	11.75	10.875	22.6	2	2	2	2	2	10	7.05	7.05	7.05	7.05	7.05	35.25	21.68	19.68	19.80	32.05	19.93	74.74	67.84	68.28	110.52	68.71	

2019-20

M&E-17EE51

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5519-20

DEPARTMENT OF EEE

SUBJECT	MICROCONTROLLER	SUBJECT CODE	17EE52
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**COURSE OUTCOME**

- CO1. Discuss the history of the 8051 and features of other 8051 family members and the internal architecture of the 8051.
- CO2. Explains the use of an 8051 assembler, the stack and the flag register, loop, jump, and call instructions.
- CO3. Discuss 8051 addressing modes, accessing data and I/O port programming, arithmetic, logic instructions, and programs.
- CO4. Develop 8051C programs for time delay, I/O operations, I/O bit manipulation, logic and arithmetic operations, data conversion and data serialization
- CO5. Discuss the hardware connection of the 8051 chip, its timers, serial data communication and its interfacing of 8051 to the RS232

**PROGRAM OUTCOMES**

- PO1 Engineering knowledge: An ability to apply knowledge of mathematics (including probability, statistics and discrete mathematics), science, and engineering for solving Engineering problems and Knowledge.
- PO2 Problem analysis: Identify, formulate, research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
- PO3 Design / development of solutions: An ability to design solution for engineering problems and design system components or process to meet desired specifications and needs.
- PO4 Conduct investigations of complex Problem: An ability to identify, formulate, comprehend, analyze, design synthesis of the information to solve complex engineering problems and provide valid conclusions.
- PO5 Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools, including prediction and modeling to complex engineering activities.
- PO6 The engineer and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal, and cultural issues.
- PO7 Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
- PO8 Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
- PO9 Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
- PO10 Communication: Communicate effectively on complex engineering activities with the engineering community and with the society.
- PO11 Project management and finance: An ability to use the modern engineering tools, techniques, skills and management principles to do work as a member and leader in a team, to manage projects in multidisciplinary environments.
- PO12 Life-long learning: A recognition of the need for, and an ability to engage in, to resolve contemporary issues and acquire lifelong learning.


G. R. R.  
Head of Department  
Electronics Engineering  
Shree Institute of Engineering & Technology  
TUMKUR-572106.

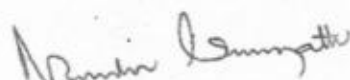
Principal  
PRINCIPAL  
SIET, TUMAKURU

COLLEGE	SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY											
FACULTY NAME	MRS. SHWETHA T M											
BRANCH	EEE			ACADEMIC YEAR				2019-20				
COURSE	B.E	SEMESTER			V	SECTION						
SUBJECT	MICROCONTROLLER					SUBJECT CODE			17EE52			
CO & PO MAPPING												
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	2	3	2	2				1			1
CO2	2	2	2	1	1				1			1
CO3	3	2	3	2	2				1			1
CO4	1	2	1	1	1				1			1
CO5	3	2	3	1	2				1			1
AVERAGE	2.4	2	2.4	1.4	1.6				1			1
OVERALL MAPPING OF SUBJECT												1.68

#### CO AND PO ATTAINMENT

	CO%	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	51.40	1.5	1.0	1.5	1.0	1.0				0.5			0.5
CO2	63.90	1.3	1.3	1.3	0.6	0.6				0.6			0.6
CO3	52.13	1.6	1.0	1.6	1.0	1.0				0.5			0.5
CO4	59.44	0.6	1.2	0.6	0.6	0.6				0.6			0.6
CO5	68.68	2.1	1.4	2.1	0.7	1.4				0.7			0.7
AVERAGE	59.11	1.40	1.18	1.40	0.79	0.94	0	0	0	0.59	0	0	0.59
FINAL ATTAINMENT LEVEL													0.987

  
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 Shridevi Institute of Engineering & Technology  
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 SIET., TUMAKURU.

SEM: V, EEE	IA TEST 1			IA TEST 2			IA TEST 3			Assignment						SEE-MC 2019-2020						TOTAL					Average				
USN	CO1	CO2	TOTAL	CO3	CO4	TOTAL	CO4	CO5	TOTAL	CO1	CO2	CO3	CO4	CO5	TOTAL	CO1	CO2	CO3	CO4	CO5	TOTAL	CO1	CO2	CO3	CO4	CO5	CO1	CO2	CO3	CO4	CO5
1sv17EE002	12	11	23	10	14	24	12	13	25	2	2	2	2	2	10	4.2	4.2	4.2	4.2	4.2	21	18.2	17.2	16.2	32.2	19.2	53.5	50.6	47.6	59.6	56.5
1sv17EE004	9	19	28	11	16	27	13	16	29	2	2	2	2	2	10	5.2	5.2	5.2	5.2	5.2	26	16.2	26.2	18.2	36.2	23.2	47.6	77.1	53.5	67.0	68.2
1sv17EE005	11	20	31	13	14	27	11	18	29	2	2	2	2	2	10	8.8	8.8	8.8	8.8	8.8	44	21.8	30.8	23.8	35.8	28.8	64.1	90.6	70.0	66.3	84.7
1sv17EE009	10	13	23	9	16	25	10	14	24	2	2	2	2	2	10	4.6	4.6	4.6	4.6	4.6	23	16.6	19.6	15.6	32.6	20.6	48.8	57.6	45.9	60.4	60.6
1sv17EE010	8	14	22	7	20	27	7	22	29	2	2	2	2	2	10	9	9	9	9	9	45	19	25	18	38	33	55.9	73.5	52.9	70.4	97.1
1sv18EE400	9	14	23	8	13	21	8	17	25	2	2	2	2	2	10	5	5	5	5	5	15	16	21	15	28	24	47.1	61.8	44.1	51.9	70.6
1sv18EE402	11	6	17	11	8	19	10	8	18	2	2	2	2	2	10	5	5	5	5	5	25	18	13	18	25	15	52.9	38.2	52.9	46.3	44.1
1sv18EE403	7	14	21	10	13	23	9	16	25	2	2	2	2	2	10	5	5	5	5	5	25	14	21	17	29	23	41.2	61.8	50.0	53.7	67.6
TOTAL	77	111	188	79	114	193	80	124	204	16	16	16	16	16	80	46.8	46.8	46.8	46.8	46.8	224	139.8	173.8	141.8	256.8	186.8	411.2	511.2	417.1	475.6	549.4
Total students	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
Average	9.625	13.875	23.5	9.875	14.25	24.125	10	15.5	25.5	2	2	2	2	2	10	5.85	5.85	5.85	5.85	5.85	28	17.475	21.725	17.725	32.1	23.35	51.40	63.90	52.13	59.44	68.68

17EES2MC2019-2020

*Principals Signature*  
 PRINCIPAL  
 SIET., TUMAKURU

*G. U. Rama*  
 Head of the Department  
 Electrical & Electronics Engineering  
 Shridevi Institute of Engineering & Technology  
 TUMKUR-572106.

## DEPARTMENT OF EEE

<b>SUBJECT</b>	<b>ESTIMATION AND COSTING</b>	<b>SUBJECT CODE</b>	<b>17EE553</b>
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### COURSE OUTCOME

<b>CO1</b>	Summarize the basic principal and standard methods for working out quantities in estimating.
<b>CO2</b>	Demonstrate the detailed estimate of buildings and workout rate analysis of various items of work
<b>CO3</b>	Understand the material requirements as per specified norms and standards.
<b>CO4</b>	Analyze systems of electric traction, speed time curves and mechanics of train movement.
<b>CO5</b>	Assess the valuation of building and provide practical knowledge of standard specification of items of building construction

### PROGRAM OUTCOME

**PO1** Engineering knowledge: An ability to apply knowledge of mathematics (including probability, statistics and discrete mathematics), science, and engineering for solving Engineering problems and Knowledge.

**PO2** Problem analysis: Identify, formulate, research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.

**PO3** Design / development of solutions: An ability to design solution for engineering problems and design system components or process to meet desired specifications and needs.

**PO4** Conduct investigations of complex Problem: An ability to identify, formulate, comprehend, analyze, design synthesis of the information to solve complex engineering problems and provide valid conclusions.

**PO5** Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools, including prediction and modeling to complex engineering activities.

**PO6** The engineer and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal, and cultural issues.

**PO7** Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

**PO8** Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

**PO9** Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

**PO10** Communication: Communicate effectively on complex engineering activities with the engineering community and with the society.

**PO11** Project management and finance: An ability to use the modern engineering tools, techniques, skills and management principles to do work as a member and leader in a team, to manage projects in multidisciplinary environments.

**PO12** Life-long learning: A recognition of the need for, and an ability to engage in, to resolve contemporary issues and acquire lifelong learning.

*G. H. Rama*  
Head of the Department  
Electrical & Electronics Engineering  
School of Engineering & Technology  
TUMKUR-572106.

*Ramesh Kumar*  
PRINCIPAL  
SIET., TUMAKURU

COLLEGE	SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY											
FACULTY NAME	SOWMYA T											
BRANCH	EEE			ACADEMIC YEAR				2019-20				
COURSE	B.E	SEMESTER		VII	SECTION			EEE				
SUBJECT	ESTIMATION AND COSTING					SUBJECT CODE			17EE553			
<b>CO &amp; PO MAPPING</b>												
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2	3	2	-	-	-	-	-	-	-	-	-
CO2	2	3	3	3	-	-	-	-	-	-	-	3
CO3	2	3	2	-	-	-	-	-	-	-	-	-
CO4	2	3	-	-	-	-	-	-	-	-	-	-
CO5	2	3	-	-	-	-	-	-	-	-	-	3
AVERAGE	2	3	2.3									3
OVERALL MAPPING OF SUBJECT												2.575

### CO AND PO ATTAINMENT

	CO%	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	63.10	1.26	1.89	1.26									
CO2	75.60	1.51	2.26	2.26	2.26								2.26
CO3	64.40	1.28	1.93	1.28									
CO4	95.74	1.91	2.87										
CO5	66.98	1.33	2										2
AVERAGE	73.16	1.45	2.19	1.6	2.26								2.13
FINAL ATTAINMENT LEVEL													1.926

G. H. Ramesh  
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 Electrical & Electronics Engineering  
 Shridevi Institute of Engineering & Technology  
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*(Signature)*  
 PRINCIPAL  
 SIET, TUMAKURU.



SEM: V, EEE	IA TEST 1			IA TEST 2			IA TEST 3			Assignment					SEE					TOTAL					Average						
	CO1	CO2	TOTAL	CO3	CO4	TOTAL	CO4	CO5	TOTAL	CO1	CO2	CO3	CO4	CO5	TOTAL	CO1	CO2	CO3	CO4	CO5	TOTAL	CO1	CO2	CO3	CO4	CO5	CO1	CO2	CO3	CO4	CO5
1sv17EE002	10	10	20	10	8	18	10	9	19	2	2	2	2	2	10	4.8	4.8	4.8	4.8	4.8	24	16.8	16.8	16.8	24.8	15.8	0.58	0.58	0.58	0.73	0.54
1sv17EE004	10	18	28	12	14	26	10	17	27	2	2	2	2	2	10	4.6	4.6	4.6	4.6	4.6	23	16.6	24.6	18.6	30.6	23.6	0.57	0.85	0.64	0.90	0.81
1sv17EE005	10	19	29	13	14	27	18	10	28	2	2	2	2	2	10	5.2	5.2	5.2	5.2	5.2	26	17.2	26.2	20.2	39.2	17.2	0.59	0.90	0.70	1.15	0.59
1sv17EE009	10	18	28	16	10	26	10	17	27	2	2	2	2	2	10	5	5	5	5	5	25	17	25	23	27	24	0.59	0.86	0.79	0.79	0.83
1sv17EE010	13	13	26	12	13	25	16	10	26	2	2	2	2	2	10	6	6	6	6	6	30	21	21	20	37	18	0.72	0.72	0.69	1.09	0.62
1sv18EE400	13	13	26	10	14	24	10	15	25	2	2	2	2	2	10	4.2	4.2	4.2	4.2	4.2	21	19.2	19.2	16.2	30.2	21.2	0.66	0.66	0.56	0.89	0.73
1sv18EE402	10	13	23	10	11	21	11	11	22	2	2	2	2	2	10	5.4	5.4	5.4	5.4	5.4	27	17.4	20.4	17.4	29.4	18.4	0.60	0.70	0.60	0.86	0.63
1sv18EE403	14	15	29	10	17	27	18	10	28	2	2	2	2	2	10	5.2	5.2	5.2	5.2	5.2	26	21.2	22.2	17.2	42.2	17.2	0.73	0.77	0.59	1.24	0.59
TOTAL	90	119	209	93	101	194	103	99	202	16	16	16	16	16	80	40.4	40.4	40.4	40.4	40.4	202	146.4	175.4	149.4	260.4	155.4	5.05	6.05	5.15	7.66	5.36
Total student	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8.00	8.00	8.00	8.00	8.00
Average	11.25	14.875	26.13	11.6	12.63	24.25	12.9	12.375	25.25	2	2	2	2	2	10	5.05	5.05	5.05	5.05	5.05	25.25	18.3	21.93	18.68	32.55	19.43	63.10	75.60	64.40	95.74	66.98

2019-20 ESTIMATION & COSTING  
17EE553

*Nandini Sanyal*  
PRINCIPAL  
SIET., TUMAKURU

G. H. Ravi  
Head of the Department  
Electrical & Electronics Engineering  
SIET, Institute of Engineering & Technology  
TUMAKURU-572106.

## DEPARTMENT OF EEE

<b>SUBJECT</b>	<b>RENEWABLE ENERGY SOURCES</b>	<b>SUBJECT CODE</b>	<b>17EE563</b>
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### COURSE OUTCOME

<b>CO1</b>	Discuss causes of energy scarcity and its solution, energy resources and availability of renewable energy.
<b>CO2</b>	Outline energy from sun, energy reaching the Earth's surface and solar thermal energy applications
<b>CO3</b>	Discuss types of solar collectors, their configurations, solar cell system, its characteristics and their applications
<b>CO4</b>	Explain generation of energy from hydrogen, wind, geothermal system, solid waste and agriculture refuse
<b>CO5</b>	Discuss production of energy from biomass, biogas.

### PROGRAM OUTCOME

- PO1** Engineering knowledge: An ability to apply knowledge of mathematics (including probability, statistics and discrete mathematics), science, and engineering for solving Engineering problems and Knowledge.
- PO2** Problem analysis: Identify, formulate, research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
- PO3** Design / development of solutions: An ability to design solution for engineering problems and design system components or process to meet desired specifications and needs.
- PO4** Conduct investigations of complex Problem: An ability to identify, formulate, comprehend, analyze, design synthesis of the information to solve complex engineering problems and provide valid conclusions.
- PO5** Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools, including prediction and modeling to complex engineering activities.
- PO6** The engineer and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal, and cultural issues.
- PO7** Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
- PO8** Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
- PO9** Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
- PO10** Communication: Communicate effectively on complex engineering activities with the engineering community and with the society.
- PO11** Project management and finance: An ability to use the modern engineering tools, techniques, skills and management principles to do work as a member and leader in a team, to manage projects in multidisciplinary environments.
- PO12** Life-long learning: A recognition of the need for, and an ability to engage in, to resolve contemporary issues and acquire lifelong learning.

*G. H. Rao*  
Head of the Department  
Electrical & Electronics Engineering  
Institute of Engineering & Technology  
TUMKUR-572106.

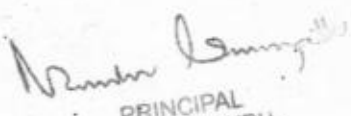
*Principals*  
PRINCIPAL  
SIET., TUMAKURU

COLLEGE	SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY											
FACULTY NAME	SHWETHA T M											
BRANCH	EEE			ACADEMIC YEAR				2019-20				
COURSE	B.E	SEMESTER		VI	SECTION			EEE				
SUBJECT	CONTROL SYSTEM						SUBJECT CODE		17EE563			
CO & PO MAPPING												
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	2	2	2	1	1	2		1	1	1	1
CO2	3	2	2	2	1	1	2		1	1	1	1
CO3	3	2	2	2	1	1	2		1	1	1	1
CO4	3	2	2	2	1	1	2		1	1	1	1
CO5	3	2	2	2	1	1	2		1	1	1	1
AVERAGE	3	2	2	2	1	1	2		1	1	1	1
OVERALL MAPPING OF SUBJECT												1.54

#### CO AND PO ATTAINMENT

	CO%	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	60.86	1.82	1.21	1.21	1.21	0.60	1.60	1.21		0.60	0.60	0.60	0.60
CO2	87.59	2.62	1.75	1.75	1.75	0.87	0.87	1.75		0.87	0.87	0.87	0.87
CO3	60.86	1.82	1.21	1.21	1.21	0.60	0.60	1.21		0.60	0.60	0.60	0.60
CO4	69.19	2.07	1.38	1.38	1.38	0.69	0.69	1.38		0.69	0.69	0.69	0.69
CO5	83.71	2.51	1.67	1.67	1.67	0.83	0.83	1.67		0.83	0.83	0.83	0.83
AVERAGE	72.44	2.16	1.44	1.44	1.44	0.71	0.71	1.44		0.71	0.71	0.71	0.71
FINAL ATTAINMENT LEVEL													1.10

  
 Head of the Department  
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 PRINCIPAL  
 SIET, TUMAKURU.

SEM: V, EEE	IA TEST 1			IA TEST 2			IA TEST 3			Assignment						SEE						TOTAL					Average				
USN	CO1	CO2	TOTAL	CO3	CO4	TOTAL	CO4	CO5	TOTAL	CO1	CO2	CO3	CO4	CO5	TOTAL	CO1	CO2	CO3	CO4	CO5	TOTAL	CO1	CO2	CO3	CO4	CO5	CO1	CO2	CO3	CO4	CO5
1sv17EE002	10	17	27	10	15	25	10	16	26	2	2	2	2	2	10	4.8	4.8	4.8	4.8	4.8	24	16.8	23.8	16.8	21.8	22.8	0.58	0.82	0.58	0.64	0.79
1sv17EE004	10	20	30	10	18	28	10	19	29	2	2	2	2	2	10	6.8	6.8	6.8	6.8	6.8	34	18.8	28.8	18.8	26.8	27.8	0.65	0.99	0.65	0.79	0.96
1sv17EE005	10	20	30	10	19	29	10	18	28	2	2	2	2	2	10	7	7	7	7	7	35	19	29	19	28	27	0.66	1.00	0.66	0.82	0.93
1sv17EE009	10	19	29	10	17	27	10	18	28	2	2	2	2	2	10	6	6	6	6	6	30	18	27	18	25	26	0.62	0.93	0.62	0.74	0.90
1sv17EE010	10	20	30	10	18	28	10	19	29	2	2	2	2	2	10	5.6	5.6	5.6	5.6	5.6	28	17.6	27.6	17.6	25.6	26.6	0.61	0.95	0.61	0.75	0.92
1sv18EE400	10	17	27	10	15	25	10	16	26	2	2	2	2	2	10	5	5	5	5	5	25	17	24	17	22	23	0.59	0.83	0.59	0.65	0.79
1sv18EE402	10	9	19	10	7	17	10	8	18	2	2	2	2	2	10	4.8	4.8	4.8	4.8	4.8	24	16.8	15.8	16.8	13.8	14.8	0.58	0.54	0.58	0.41	0.51
1sv18EE403	10	20	30	10	18	28	10	19	29	2	2	2	2	2	10	5.2	5.2	5.2	5.2	5.2	26	17.2	27.2	17.2	25.2	26.2	0.59	0.94	0.59	0.74	0.90
TOTAL	80	142	222	80	127	207	80	133	213	16	16	16	16	16	80	45.2	45.2	45.2	45.2	45.2	226	141.2	203.2	141.2	188.2	194.2	4.87	7.01	4.87	5.54	6.70
Total students	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8.00	8.00	8.00	8.00	8.00
Average	10	17.75	27.75	10	15.88	25.875	10	16.625	26.6	2	2	2	2	2	10	5.65	5.65	5.65	5.65	5.65	28.25	17.65	25.4	17.65	23.53	24.275	60.86	87.59	60.86	69.19	83.71

2019-20

RES 17EE563

G. H. Rama  
 Head of the Department  
 Electrical & Electronics Engineering  
 Shri Devi Institute of Engineering & Technology  
 TUMKUR-572106.

*N. Srinivas*  
 PRINCIPAL  
 SIET, TUMAKURU

**EVEN SEMESTER**

**DEPARTMENT OF EEE**

<b>SUBJECT</b>	<b>Basic Electrical Engineering</b>	<b>SUBJECT CODE</b>	<b>18ELE13/23</b>
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**COURSE OUTCOME**

<b>CO1</b>	Understand the dc circuits and electrical laws.
<b>CO2</b>	Apply the basic electrical laws to solve ac and dc circuits
<b>CO3</b>	Discuss the construction and operation of various electrical machines
<b>CO4</b>	Identify suitable electrical machines for practical implementations
<b>CO5</b>	Explain the concept of electrical transmission and distribution ,electricity billing, circuit protective devices and personal safety measures.

**PROGRAM OUTCOME**

- PO1** Engineering knowledge: An ability to apply knowledge of mathematics (including probability, statistics and discrete mathematics), science, and engineering for solving Engineering problems and Knowledge.
- PO2** Problem analysis: Identify, formulate, research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
- PO3** Design / development of solutions: An ability to design solution for engineering problems and design system components or process to meet desired specifications and needs.
- PO4** Conduct investigations of complex Problem: An ability to identify, formulate, comprehend, analyze, design synthesis of the information to solve complex engineering problems and provide valid conclusions.
- PO5** Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools, including prediction and modeling to complex engineering activities.
- PO6** The engineer and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal, and cultural issues.
- PO7** Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
- PO8** Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
- PO9** Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
- PO10** Communication: Communicate effectively on complex engineering activities with the engineering community and with the society.
- PO11** Project management and finance: An ability to use the modern engineering tools, techniques, skills and management principles to do work as a member and leader in a team, to manage projects in multidisciplinary environments.
- PO12** Life-long learning: A recognition of the need for, and an ability to engage in, to resolve contemporary issues and acquire lifelong learning.


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COLLEGE	SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY											
FACULTY NAME	UMABAI											
BRANCH	EEE			ACADEMIC YEAR				2019-2020				
COURSE	B.E	SEMESTER		I <sup>st</sup>	SECTION							
SUBJECT	Basic Electrical Engineering						SUBJECT CODE		18ELE13/23			
<b>CO &amp; PO MAPPING</b>												
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	2	1	-	-	1	1	1	-	-	-	1
CO2	3	3	2	1	-	1	0	0	-	-	-	1
CO3	3	2	1	1	-	1	1	1	-	-	-	1
CO4	3	2	2	1	-	1	1	1	-	-	-	1
CO5	3	1	2	-	-	2	1	1	-	-	1	1
AVERAGE	3	2	1.6	1	-	1.2	0.8	0.8	-	-	1	1
OVERALL MAPPING OF SUBJECT												1.37

#### CO AND PO ATTAINMENT

	CO%	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	52.9	1.587	1.587	0.529			0.529	0.529	0.529				0.529
CO2	52.9	1.587	1.587	1.058	0.529		0.529						0.529
CO3	40.1	1.203	0.802	0.401	0.401		0.401	0.401	0.401				0.401
CO4	60.5	1.815	1.21	1.21	0.605		0.605	0.605	0.605				0.605
CO5	53.3	1.59	0.533	1.33			1.33	0.533	0.533			0.533	0.533
AVERAGE	51.94	1.55	1.14	0.905	0.511		0.606	0.517	0.517			0.533	0.519
FINAL ATTAINMENT LEVEL													0.755

  
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SEM (A & B)	II	Total strength					108	Subject					Basic Electrical Engg					Subject Code					18ELE23	Total Cos ATTAINMENT					Avg of individual CO					SEE (50M)		CIE			
SEM:II:SEC:A&I	IA TEST 1 (30M)	IA TEST 2 (30M)	IA TEST 3 (60M)			ASSIGNMENT(10) + Grace (10N)					SEE MARKS(50M)					CO1(4)	CO2(4)	CO3(29)	CO4(44)	CO5(29)	CO1	CO2	CO3	CO4	CO5	CO1	CO2	CO3	CO4	CO5	CO1	CO2	CO3	CO4	CO5	CO1	CO2		
USN	CO1	CO2	TOTAL	CO3	CO4	TOTAL	CO1	CO2	CO3	CO4	CO5	TOTAL	CO1	CO2	CO3	CO4	CO5	CO1	CO2	CO3	CO4	CO5	CO1	CO2	CO3	CO4	CO5	CO1	CO2	CO3	CO4	CO5	CO1	CO2	CO3	CO4	CO5	CO1	CO2
1SV19CS001	15	15	30	13	13	26	15	13	15	11	54	3	3	3	3	3	6.6	6.6	6.6	6.6	6.6	40	37.6	22.6	37.6	20.6	90	85.5	77.93	85.5	71	33	6.6	43	28	15			
1SV19CS003	15	15	30	15	15	30	11	13	13	11	48	4	4	4	4	4	6.8	6.8	6.8	6.8	6.8	37	38.8	25.8	38.8	21.8	83.64	88.2	88.97	88.2	75.2	34	6.8	50	30	20			
1SV19CS004	15	15	30	15	14	29	11	15	15	15	56	2.8	2.8	2.8	2.8	2.8	4.8	4.8	4.8	4.8	4.8	34	37.6	22.6	36.6	22.6	76.36	85.5	77.93	83.2	77.9	24	4.8	43	29	14			
1SV19CS005	15	14	29	15	15	30	15	15	15	15	60	4	4	4	4	4	3.6	3.6	3.6	3.6	3.6	38	36.6	22.6	37.6	22.6	85.45	83.2	77.93	85.5	77.9	18	3.6	50	30	20			
1SV19CS006	15	15	30	15	15	30	15	15	15	15	60	4	4	4	4	4	6.6	6.6	6.6	6.6	6.6	41	40.6	25.6	40.6	25.6	92.27	92.3	88.28	92.3	88.3	33	6.6	50	30	20			
1SV19CS007	15	15	30	14	14	28	15	15	15	15	60	4	4	4	4	4	5.6	5.6	5.6	5.6	5.6	40	39.6	23.6	38.6	24.6	90	90	81.38	87.7	84.8	28	5.6	50	30	20			
1SV19CS008	15	15	30	14	12	26	15	15	15	15	60	4	4	4	4	4	6.6	6.6	6.6	6.6	6.6	41	40.6	24.6	37.6	25.6	92.27	92.3	84.83	85.5	88.3	33	6.6	50	30	20			
1SV19CS009	14	14	28	0	0	0	15	11	15	15	56	2.8	2.8	2.8	2.8	2.8	3	3	3	3	3	35	30.8	5.8	20.8	20.8	79.09	70	20	47.3	71.7	15	3	35	21	14			
1SV19CS011	15	15	30	14	14	28	15	15	15	15	60	4	4	4	4	4	5.2	5.2	5.2	5.2	5.2	39	39.2	23.2	38.2	24.2	89.09	89.1	80	86.8	83.4	26	5.2	50	30	20			
1SV19CS013	15	15	30	14	15	29	15	15	15	15	60	4	4	4	4	4	6	6	6	6	6	40	40	24	40	25	90.91	90.9	82.76	90.9	86.2	30	6	50	30	20			
1SV19CS014	14	14	28	15	15	30	15	15	15	15	60	4	4	4	4	4	6.2	6.2	6.2	6.2	6.2	39	39.2	25.2	40.2	25.2	89.09	89.1	86.9	91.4	86.9	31	6.2	50	30	20			
1SV19CS015	15	15	30	14	14	28	15	14	12	15	56	4	4	4	4	4	7.4	7.4	7.4	7.4	7.4	41	40.4	25.4	37.4	26.4	94.09	91.8	87.59	85	91	37	7.4	50	30	20			
1SV19CS016	14	14	28	14	13	27	14	14	12	14	54	4	4	4	4	4	5.8	5.8	5.8	5.8	5.8	38	37.8	23.8	34.8	23.8	85.91	85.9	82.07	79.1	82.1	29	5.8	49	29	20			
1SV19CS017	15	15	30	10	15	25	10	11	9	10	40	3	3	3	3	3	4.6	4.6	4.6	4.6	4.6	33	33.6	17.6	31.6	17.6	74.09	76.4	60.69	71.8	60.7	23	4.6	39	24	15			
1SV19CS018	15	15	30	13	13	26	15	14	14	15	58	4	4	4	4	4	6.2	6.2	6.2	6.2	6.2	40	39.2	23.2	37.2	25.2	91.36	89.1	80	84.5	86.9	31	6.2	50	30	20			
1SV19CS019	15	15	30	12	12	24	10	10	9	7	36	4	4	4	4	4	2.2	2.2	2.2	2.2	2.2	31	31.2	18.2	27.2	13.2	70.91	70.9	62.76	61.8	45.5	11	2.2	45	25	20			
1SV19CS020	15	15	30	15	15	30	15	15	15	15	60	4	4	4	4	4	6.6	6.6	6.6	6.6	6.6	41	40.6	25.6	40.6	25.6	92.27	92.3	88.28	92.3	88.3	33	6.6	50	30	20			
1SV19CS021	15	14	29	13	13	26	15	15	15	15	60	4	4	4	4	4	8	8	8	8	8	42	41	25	40	27	95.45	93.2	86.21	90.9	93.1	40	8	50	30	20			
1SV19CS022	15	15	30	14	14	28	15	15	15	15	60	4	4	4	4	4	5.8	5.8	5.8	5.8	5.8	40	39.8	23.8	38.8	24.8	90.45	90.5	82.07	88.2	85.5	29	5.8	50	30	20			
1SV19CS023	15	15	30	14	14	28	15	15	15	15	60	3.6	3.6	3.6	3.6	3.6	5.4	5.4	5.4	5.4	5.4	39	39	23	38	24	88.64	88.6	79.31	86.4	82.8	27	5.4	48	30	18			
1SV19CS024	15	15	30	14	14	28	10	10	12	12	44	3.6	3.6	3.6	3.6	3.6	3.8	3.8	3.8	3.8	3.8	32	32.4	21.4	33.4	19.4	73.64	73.6	73.79	75.9	66.9	19	3.8	44	26	18			
1SV19CS025	15	15	30	10	15	25	15	15	14	14	58	4	4	4	4	4	6.2	6.2	6.2	6.2	6.2	40	40.2	20.2	39.2	24.2	91.36	91.4	69.66	89.1	83.4	31	6.2	50	30	20			
1SV19CS026	15	15	30	10	7	17	0	0	0	0	0	4	4	4	4	4	0.8	0.8	0.8	0.8	0.8	20	19.8	14.8	11.8	4.8	45	45	51.03	26.8	16.6	4	0.8	32	12	20			
1SV19CS027	15	15	30	15	14	29	15	15	15	15	60	4	4	4	4	4	6.6	6.6	6.6	6.6	6.6	41	40.6	25.6	39.6	25.6	92.27	92.3	88.28	90	88.3	33	6.6	50	30	20			
1SV19CS028	15	15	30	14	14	28	15	15	15	15	60	4	4	4	4	4	6.8	6.8	6.8	6.8	6.8	41	40.8	24.8	39.8	25.8	92.73	92.7	85.52	90.5	89	34	6.8	50	30	20			
1SV19CS029	15	15	30	13	13	26	15	15	15	15	60	3.8	3.8	3.8	3.8	3.8	5.8	5.8	5.8	5.8	5.8	40	39.6	22.6	37.6	24.6	90	90	77.93	85.5	84.8	29	5.8	48	29	19			
1SV19CS030	15	15	30	14	14	28	15	15	15	15	60	4	4	4	4	4	7.6	7.6	7.6	7.6	7.6	42	41.6	25.6	40.6	26.6	94.55	94.5	88.28	92.3	91.7	38	7.6	50	30	20			
1SV19CS031	15	15	30	14	13	27	10	10	12	12	44	3	3	3	3	3	3.6	3.6	3.6	3.6	3.6	32	31.6	20.6	31.6	18.6	71.82	71.8	71.03	71.8	64.1	18	3.6	40	25	15			
1SV19CS032	15	15	30	14	14	28	15	15	14	14	58	4	4	4	4	4	5.8	5.8	5.8	5.8	5.8	40	39.8	23.8	37.8	23.8	90.45	90.5	82.07	85.9	82.1	29	5.8	50	30	20			
1SV19CS033	15	15	30	14	14	28	14	14	15	13	56	4	4	4	4	4	4.8	4.8	4.8	4.8	4.8	38	37.8	22.8	37.8	21.8	85.91	85.9	78.62	85.9	75.2	24	4.8	50	30	20			
1SV19CS034	15	15	30	15	15	30	15	15	15	15	60	4	4	4	4	4	8	8	8	8	8	42	42	27	42	27	95.45	95.5	93.1	95.5	93.1	40	8	50	30	20			
1SV19CS035	15	15	30	14	15	29	15	15	15	15	60	3.8	3.8	3.8	3.8	3.8	6	6	6	6	6	40	39.8	23.8	39.8	24.8	90.45	90.5	82.07	90.5	85.5	30	6	49	30	19			
1SV19CS036	15	15	30	14	14	28	15	15	15	15	60	3	3	3	3	3	4.2	4.2	4.2	4.2	4.2	37	37.2	21.2	36.2	22.2	84.55	84.5	73.1	82.3	76.6	21	4.2	45	30	15			
1SV19CS037	15	15	30	15	15	30	15	15	15	15	60	4	4	4	4	4	4	4	4	4	4	38	38	23	38	23	86.36	86.4	79.31	86.4	79.3	20	4	50	30	20			
1SV19CS038	15	15	30	14	14	28	15	15	15	15	60	4	4	4	4	4	4.4	4.4	4.4	4.4	4.4	38	38.4	22.4	37.4	23.4	87.27	87.3	77.24	85	80.7	22	4.4	50	30	20			
1SV19CS039	6	6	12	0	0	0	0	0	0	0	0	4	4	4	4	4	3.4	3.4	3.4	3.4	3.4	13	13.4	7.4	7.4	7.4	30.45	30.5	25.52	16.8	25.5	17	3.4	25	5	20			
1SV19CS040	14	15	29	14	15	29	15	15	15	15	60	4	4	4	4	4	7.4	7.4	7.4	7.4	7.4	40	41.4	25.4	41.4	26.4	91.82	94.1	87.59	94.1	91	37	7.4	50	30	20			
1SV19CS041	15	15	30	14	14	28	15	14	15	14	58	4	4	4	4	4	5.4	5.4	5.4	5.4	5.4	39	38.4	23.4	38.4	23.4	89.55	87.3	80.69	87.3	80.7	27	5.4	50	30	20			
1SV19CS042	15	15	30	14	13	27	15	15	15	15	60	3.8	3.8	3.8	3.8	3.8	6	6	6	6	6	40	39.8	23.8	37.8	24.8	90.45	90.5	82.07	85.9	85.5	30	6	49	30	19			
1SV19CS043	15	14	29	14	14	28	13	15	15	15	58	4	4	4	4	4	3.6	3.6	3.6	3.6	3.6	36	36.6	21.6	36.6	22.6	80.91	83.2	74.48	83.2	77.9	18	3.6	50	30	20			
1SV19CS044	15	15	30	14	14	28	15																																



1SV19CS045	15	15	30	14	14	28	15	15	15	15	60	4	4	4	4	4	7.2	7.2	7.2	7.2	7.2	41	41.2	25.2	40.2	26.2	93.64	93.6	86.9	91.4	90.3	<b>36</b>	7.2	<b>50</b>	30	20	
1SV19CS046	15	15	30	14	14	28	10	10	14	14	48	4	4	4	4	4	5.6	5.6	5.6	5.6	5.6	35	34.6	23.6	37.6	23.6	78.64	78.6	81.38	85.5	81.4	<b>28</b>	5.6	<b>49</b>	29	20	
1SV19CS047	15	15	30	15	14	29	15	15	15	15	60	4	4	4	4	4	6.8	6.8	6.8	6.8	6.8	41	40.8	25.8	39.8	25.8	92.73	92.7	88.97	90.5	89	<b>34</b>	6.8	<b>50</b>	30	20	
1SV19CS048	15	15	30	14	14	28	15	14	14	15	58	4	4	4	4	4	6.2	6.2	6.2	6.2	6.2	40	39.2	24.2	38.2	25.2	91.36	89.1	83.45	86.8	86.9	<b>31</b>	6.2	<b>50</b>	30	20	
1SV19CS049	15	15	30	14	15	29	15	15	15	15	60	4	4	4	4	4	5.2	5.2	5.2	5.2	5.2	39	39.2	23.2	39.2	24.2	89.09	89.1	80	89.1	83.4	<b>26</b>	5.2	<b>50</b>	30	20	
1SV19CS050	15	15	30	14	15	29	15	15	15	15	60	4	4	4	4	4	7.2	7.2	7.2	7.2	7.2	41	41.2	25.2	41.2	26.2	93.64	93.6	86.9	93.6	90.3	<b>36</b>	7.2	<b>50</b>	30	20	
1SV19CS051	14	14	28	14	14	28	14	14	15	15	58	4	4	4	4	4	5.8	5.8	5.8	5.8	5.8	38	37.8	23.8	38.8	24.8	85.91	85.9	82.07	88.2	85.5	<b>29</b>	5.8	<b>49</b>	29	20	
1SV19CS052	15	15	30	14	14	28	13	13	11	15	52	4	4	4	4	4	6	6	6	6	6	38	38	24	35	25	86.36	86.4	82.76	79.5	86.2	<b>30</b>	6	<b>49</b>	29	20	
1SV19CS053	15	15	30	14	15	29	15	15	15	15	60	4	4	4	4	4	7.8	7.8	7.8	7.8	7.8	42	41.8	25.8	41.8	26.8	95	95	88.97	95	92.4	<b>39</b>	7.8	<b>50</b>	30	20	
1SV19CS054	15	15	30	14	14	28	15	14	12	15	56	3.6	3.6	3.6	3.6	3.6	4.2	4.2	4.2	4.2	4.2	38	36.8	21.8	33.8	22.8	85.91	83.6	75.17	76.8	78.6	<b>21</b>	4.2	<b>47</b>	29	18	
1SV19CS055	15	15	30	13	12	25	15	15	14	14	58	3.2	3.2	3.2	3.2	3.2	2.2	2.2	2.2	2.2	2.2	35	35.4	18.4	31.4	19.4	80.45	80.5	63.45	71.4	66.9	<b>11</b>	2.2	<b>44</b>	28	16	
1SV19CS056	15	15	30	15	14	29	15	15	15	15	60	3.6	3.6	3.6	3.6	3.6	5.4	5.4	5.4	5.4	5.4	39	39	24	38	24	88.64	88.6	82.76	86.4	82.8	<b>27</b>	5.4	<b>48</b>	30	18	
1SV19CS057	15	14	29	14	15	29	15	15	15	15	60	4	4	4	4	4	7.6	7.6	7.6	7.6	7.6	42	40.6	25.6	41.6	26.6	94.55	92.3	88.28	94.5	91.7	<b>38</b>	7.6	<b>50</b>	30	20	
1SV19CS058	15	15	30	14	15	29	15	13	13	15	56	4	4	4	4	4	7.8	7.8	7.8	7.8	7.8	42	39.8	25.8	39.8	26.8	95	90.5	88.97	90.5	92.4	<b>39</b>	7.8	<b>50</b>	30	20	
1SV19CS059	13	13	26	11	15	26	15	15	14	14	58	4	4	4	4	4	4.6	4.6	4.6	4.6	4.6	37	36.6	19.6	37.6	22.6	83.18	83.2	67.59	85.5	77.9	<b>23</b>	4.6	<b>49</b>	29	20	
1SV19CS060	15	15	30	14	15	29	15	15	15	15	60	3.8	3.8	3.8	3.8	3.8	5.4	5.4	5.4	5.4	5.4	39	39.2	23.2	39.2	24.2	89.09	89.1	80	89.1	83.4	<b>27</b>	5.4	<b>49</b>	30	19	
1SV19CS061	15	14	29	13	14	27	15	15	15	15	60	4	4	4	4	4	6	6	6	6	6	40	39	23	39	25	90.91	88.6	79.31	88.6	86.2	<b>30</b>	6	<b>50</b>	30	20	
1SV19CS062	14	14	28	14	15	29	11	15	15	15	56	4	4	4	4	4	5.8	5.8	5.8	5.8	5.8	35	38.8	23.8	39.8	24.8	79.09	88.2	82.07	90.5	85.5	<b>29</b>	5.8	<b>48</b>	28	20	
1SV19CS063	14	14	28	14	14	28	13	12	12	13	50	2.6	2.6	2.6	2.6	2.6	6	6	6	6	6	6	36	34.6	22.6	34.6	21.6	80.91	78.6	77.93	78.6	74.5	<b>30</b>	6	<b>40</b>	27	13
1SV19CS064	15	15	30	15	15	30	13	11	11	13	48	3.2	3.2	3.2	3.2	3.2	5.2	5.2	5.2	5.2	5.2	36	34.4	23.4	34.4	21.4	82.73	78.2	80.69	78.2	73.8	<b>26</b>	5.2	<b>43</b>	27	16	
1SV19CS065	15	15	30	15	15	30	15	15	15	15	60	4	4	4	4	4	7	7	7	7	7	41	41	26	41	26	93.18	93.2	89.66	93.2	89.7	<b>35</b>	7	<b>50</b>	30	20	
1SV19CS066	15	15	30	15	15	30	15	15	15	15	60	4	4	4	4	4	6.6	6.6	6.6	6.6	6.6	41	40.6	25.6	40.6	25.6	92.27	92.3	88.28	92.3	88.3	<b>33</b>	6.6	<b>50</b>	30	20	
1SV19CS067	15	15	30	15	15	30	14	15	13	14	56	3.2	3.2	3.2	3.2	3.2	6	6	6	6	6	38	39.2	24.2	37.2	23.2	86.82	89.1	83.45	84.5	80	<b>30</b>	6	<b>45</b>	29	16	
1SV19CS068	0	0	0	0	0	0	11	13	13	11	48	3.4	3.4	3.4	3.4	3.4	5	5	5	5	5	19	21.4	8.4	21.4	19.4	44.09	48.6	28.97	48.6	66.9	<b>25</b>	5	<b>29</b>	12	17	
1SV19CS069	15	14	29	15	14	29	13	13	13	13	52	4	4	4	4	4	5.4	5.4	5.4	5.4	5.4	37	36.4	24.4	36.4	22.4	85	82.7	84.14	82.7	77.2	<b>27</b>	5.4	<b>49</b>	29	20	
1SV19CS070	15	15	30	15	14	29	15	15	15	15	60	4	4	4	4	4	7.2	7.2	7.2	7.2	7.2	41	41.2	26.2	40.2	26.2	93.64	93.6	90.34	91.4	90.3	<b>36</b>	7.2	<b>50</b>	30	20	
1SV19CS071	15	14	29	15	14	29	15	15	15	15	60	4	4	4	4	4	7.8	7.8	7.8	7.8	7.8	42	40.8	26.8	40.8	26.8	95	92.7	92.41	92.7	92.4	<b>39</b>	7.8	<b>50</b>	30	20	
1SV19CS072	15	15	30	14	14	28	14	15	15	14	58	3.2	3.2	3.2	3.2	3.2	5.6	5.6	5.6	5.6	5.6	38	38.8	22.8	37.8	22.8	85.91	88.2	78.62	85.9	78.6	<b>28</b>	5.6	<b>45</b>	29	16	
1SV19CS073	15	15	30	15	14	29	15	15	15	15	60	3.4	3.4	3.4	3.4	3.4	2.8	2.8	2.8	2.8	2.8	36	36.2	21.2	35.2	21.2	82.27	82.3	73.1	80	73.1	<b>14</b>	2.8	<b>47</b>	30	17	
1SV19CS074	15	15	14	14	14	28	15	15	15	15	60	4	4	4	4	4	4.8	4.8	4.8	4.8	4.8	39	38.8	22.8	37.8	23.8	88.18	88.2	78.62	85.9	82.1	<b>24</b>	4.8	<b>49</b>	29	20	
1SV19CS075	5	4	9	14	14	28	15	14	13	10	52	3.6	3.6	3.6	3.6	3.6	3.4	3.4	3.4	3.4	3.4	27	25	21	34	17	61.36	56.8	72.41	77.3	58.6	<b>17</b>	3.4	<b>40</b>	22	18	
1SV19CS076	15	14	29	13	14	27	15	15	14	14	58	3.8	3.8	3.8	3.8	3.8	5.4	5.4	5.4	5.4	5.4	39	38.2	22.2	37.2	23.2	89.09	86.8	76.55	84.5	80	<b>27</b>	5.4	<b>48</b>	29	19	
1SV19CS077	15	15	30	10	15	25	14	14	14	14	56	4	4	4	4	4	5.2	5.2	5.2	5.2	5.2	38	38.2	19.2	38.2	23.2	86.82	86.8	66.21	86.8	80	<b>26</b>	5.2	<b>49</b>	29	20	
1SV19CS079	15	15	30	13	14	27	13	11	11	13	48	3.6	3.6	3.6	3.6	3.6	4.4	4.4	4.4	4.4	4.4	36	34	21	33	21	81.82	77.3	72.41	75	72.4	<b>22</b>	4.4	<b>44</b>	26	18	
1SV19CS080	15	15	30	15	15	30	15	15	15	15	60	4	4	4	4	4	6.4	6.4	6.4	6.4	6.4	40	40.4	25.4	40.4	25.4	91.82	91.8	87.59	91.8	87.6	<b>32</b>	6.4	<b>50</b>	30	20	
1SV19CS081	15	15	30	14	14	28	15	15	15	15	60	3.6	3.6	3.6	3.6	3.6	6	6	6	6	6	40	39.6	23.6	38.6	24.6	90	90	81.38	87.7	84.8	<b>30</b>	6	<b>48</b>	30	18	
1SV19CS082	15	15	30	13	15	28	15	15	15	15	60	4	4	4	4	4	8.4	8.4	8.4	8.4	8.4	42	42.4	25.4	42.4	27.4	96.36	96.4	87.59	96.4	94.5	<b>42</b>	8.4	<b>50</b>	30	20	
1SV19CS083	15	15	30	15	13	28	13	13	14	14	54	4	4	4	4	4	7	7	7	7	7	39	39	26	38	25	88.64	88.6	89.66	86.4	86.2	<b>35</b>	7	<b>50</b>	30	20	
1SV19CS084	10	5	15	13	14	27	9	9	10	8	36	4	4	4	4	4	4.8	4.8	4.8	4.8	4.8	28	22.8	21.8	32.8	16.8	63.18	51.8	75.17	74.5	57.9	<b>24</b>	4.8	<b>40</b>	20	20	
1SV19CS085	15	14	29	15	15	30	14	14	13	15	56	4	4	4	4	4	5.4	5.4	5.4	5.4	5.4	38	37.4	24.4	37.4	24.4	87.27	85	84.14	85	84.1	<b>27</b>	5.4	<b>50</b>	30	20	
1SV19CS086	13	14	27	0	0	0	14	14	13	15	56	2.6	2.6	2.6	2.6	2.6	6.4	6.4	6.4	6.4	6.4	36	37	9	22	24	81.82	84.1	31.03	50	82.8	<b>32</b>	6.4	<b>34</b>	21	13	
1SV19IS001	14	14	28	14	14	28	14	14	13	15	56	4	4	4	4	4	6.8	6.8	6.8	6.8	6.8	39	38.8	24.8	37.8	25.8</											

**DEPARTMENT OF EEE**4<sup>5</sup> 19-20

<b>SUBJECT</b>	<b>POWER GENERATION ECONOMICS</b>	<b>SUBJECT CODE</b>	<b>18EE42</b>
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**COURSE OUTCOME**

- CO1.** Describe the working of hydroelectric, steam, nuclear power plants and state functions of major equipment of the power plants.
- CO2.** Classify various substations and explain the functions of major equipments in substations.
- CO3.** Explain the types of grounding and its importance
- CO4.** Infer the economic aspects of power system operation and its effects
- CO5.** Explain the importance of power factor improvement.

**PROGRAM OUTCOMES**

- PO1** Engineering knowledge: An ability to apply knowledge of mathematics (including probability, statistics and discrete mathematics), science, and engineering for solving Engineering problems and Knowledge.
- PO2** Problem analysis: Identify, formulate, research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
- PO3** Design / development of solutions: An ability to design solution for engineering problems and design system components or process to meet desired specifications and needs.
- PO4** Conduct investigations of complex Problem: An ability to identify, formulate, comprehend, analyze, design synthesis of the information to solve complex engineering problems and provide valid conclusions.
- PO5** Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools, including prediction and modeling to complex engineering activities.
- PO6** The engineer and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal, and cultural issues.
- PO7** Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
- PO8** Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
- PO9** Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
- PO10** Communication: Communicate effectively on complex engineering activities with the engineering community and with the society.
- PO11** Project management and finance: An ability to use the modern engineering tools, techniques, skills and management principles to do work as a member and leader in a team, to manage projects in multidisciplinary environments.
- PO12** Life-long learning: A recognition of the need for, and an ability to engage in, to resolve contemporary issues and acquire lifelong learning.

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COLLEGE	SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY											
FACULTY NAME	MRS. SHWETHA T M											
BRANCH	EEE			ACADEMIC YEAR				2019-20				
COURSE	B.E	SEMESTER			SECTION							
SUBJECT	POWER GENERATION ECONOMICS					SUBJECT CODE			18EE42			
CO & PO MAPPING												
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	3	2			2	2	1	1	1		1
CO2	2	2	2			2	1	1	1	1		1
CO3	3	2	2			2	2	1	1	1		1
CO4	2	2	2			2	2	1	1	1		1
CO5	3	2	2			2	1	1	1	1		1
AVERAGE	2.6	2.2	2			2	1.6	1	1	1		1
OVERALL MAPPING OF SUBJECT												1.6

#### CO AND PO ATTAINMENT

	CO%	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	63.1	1.89	1.89	1.26			1.26	1.26	0.63	0.63	0.63		0.63
CO2	56.7	1.13	1.13	1.13			1.13	0.57	0.57	0.57	0.57		0.57
CO3	62.6	1.88	1.25	1.25			1.25	1.25	0.63	0.63	0.63		0.63
CO4	62.0	1.24	1.24	1.24			1.24	1.24	0.62	0.62	0.62		0.62
CO5	66.0	1.98	1.32	1.32			1.32	0.66	0.66	0.66	0.66		0.66
AVERAGE	62.08	1.63	1.37	1.24	0.00	0.00	1.24	1.00	0.62	0.62	0.62	0.00	0.62
FINAL ATTAINMENT LEVEL													1.279

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SEM. V. SEE	IA TEST 1			IA TEST 2			IA TEST 3			Assignment					SEE PGE 2019-2020					TOTAL					Average						
	CO1	CO2	TOTAL	CO3	CO4	TOTAL	CO4	CO5	TOTAL	CO1	CO2	CO3	CO4	CO5	TOTAL	CO1(S4)	CO2(S4)	CO3(S4)	CO4(S4)	CO5(S4)	CO1	CO2	CO3	CO4	CO5						
1SV1PE006	15	15	30	15	15	30	11	19	30	4	4	4	4	4	10	6.2	6.2	6.2	6.2	6.2	31	25.2	25.2	25.2	25.2	25.2	74	74	87	86	
1SV1PE012	12	13	25	12	15	27	12	17	29	4	4	4	4	4	10	3.6	3.6	3.6	3.6	3.6	18	18.6	20.6	19.6	34.6	24.6	58	61	58	72	
1SV1BE002	13	3	16	13	6	19	13	6	19	4	4	4	4	4	10	4.6	4.6	4.6	4.6	4.6	23	21.6	11.6	21.6	27.6	14.6	64	34	64	51	
1SV1BE003	14	16	30	14	16	30	14	16	30	4	4	4	4	4	10	5.2	5.2	5.2	5.2	5.2	26	23.2	25.2	23.2	39.2	25.2	68	74	68	73	
1SV1BE004	12	4	16	15	3	18	15	2	17	4	4	4	4	4	10	5	5	5	5	5	25	21	13	24	27	11	62	38	71	50	
1SV1BE005	13	5	18	12	8	20	11	14	25	4	4	4	4	4	10	4.8	4.8	4.8	4.8	4.8	24	21.8	13.8	20.8	27.8	22.8	64	41	61	67	
1SV1BE006	14	16	30	13	17	30	12	18	30	4	4	4	4	4	10	5.8	5.8	5.8	5.8	5.8	29	23.8	25.8	22.8	38.8	27.8	70	76	67	72	
1SV1BE007	12	15	27	14	11	25	13	16	29	4	4	4	4	4	10	5.2	5.2	5.2	5.2	5.2	26	21.2	24.2	23.2	33.2	25.2	62	71	68	61	
1SV1BE008	13	9	20	12	12	24	10	18	28	4	4	4	4	4	10	4.2	4.2	4.2	4.2	4.2	21	19.2	17.2	20.2	30.2	26.2	56	51	59	56	
1SV1BE009	12	4	16	14	5	19	15	4	19	4	4	4	4	4	10	4.2	4.2	4.2	4.2	4.2	21	20.2	12.2	22.2	28.2	12.2	59	38	65	52	
1SV1BE011	13	10	23	13	12	25	14	13	27	4	4	4	4	4	10	4.4	4.4	4.4	4.4	4.4	22	21.4	18.4	21.4	34.4	21.4	63	54	63	64	
1SV1BE012	12	6	18	10	10	20	12	7	19	4	4	4	4	4	10	4.2	4.2	4.2	4.2	4.2	21	20.2	14.2	18.2	30.2	15.2	59	42	54	56	
1SV1BE400	13	10	23	12	13	25	13	17	30	4	4	4	4	4	10	4.2	4.2	4.2	4.2	4.2	21	21.2	18.2	20.2	34.2	25.2	62	54	59	63	
1SV1BE401	12	14	26	13	15	28	14	16	30	4	4	4	4	4	10	4.2	4.2	4.2	4.2	4.2	21	20.2	22.2	21.2	37.2	24.2	59	65	62	69	
1SV1BE402	14	16	30	11	19	30	14	16	30	4	4	4	4	4	10	5.2	5.2	5.2	5.2	5.2	26	23.2	25.2	20.2	42.2	25.2	68	74	59	78	
1SV1BE403	12	11	23	12	14	26	12	17	29	4	4	4	4	4	10	4.2	4.2	4.2	4.2	4.2	21	20.2	19.2	20.2	34.2	25.2	59	56	59	63	
1SV1BE404	14	11	25	11	13	24	12	17	29	4	4	4	4	4	10	4	4	4	4	4	20	22	19	19	33	25	65	56	61	74	
1SV1BE405	13	14	27	12	13	25	13	16	29	4	4	4	4	4	10	4	4	4	4	4	20	21	22	20	34	24	62	65	59	63	
TOTAL	231	192	423	228	217	445	230	249	479	72	72	72	72	72	180	83.2	83.2	83.2	83.2	83.2	416	386.2	347.2	383.2	602.2	404.2	1135.882	1021.176	1127.059	1115.185	
Total students	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18
Average	12.833333	10.66667	23.5	12.66667	12.05556	24.72222	12.77778	13.83333	26.61111	4	4	4	4	4	10	4.622222	4.622222	4.622222	4.622222	4.622222	23.11111	21.45556	19.28889	21.28889	33.45556	22.45556	63.1	56.7	62.6	62.0	

1BE42 PGE 2019-2020

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SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY

SIRA ROAD, TUMKUR- 572 106.

**DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGG**

SUBJECT	Transmission & Distribution	SUBJECT CODE	18EE43
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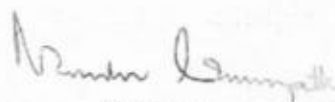
**COURSE OUTCOME**

CO1	Explain transmission and distribution scheme, identify the importance of different transmission systems and types of insulators.
CO2	Analyze and compute the parameters of the transmission line for different configurations.
CO3	Assess the performance of overhead lines.
CO4	Interpret corona, explain the use of underground cables.
CO5	Classify different types of distribution systems; examine its quality & reliability

**PROGRAM OUTCOMES**

- P01** Engineering knowledge: An ability to apply knowledge of mathematics (including probability, statistics and discrete mathematics), science, and engineering for solving Engineering problems and Knowledge.
- P02** Problem analysis: Identify, formulate, research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
- P03** Design / development of solutions: An ability to design solution for engineering problems and design system components or process to meet desired specifications and needs.
- P04** Conduct investigations of complex Problem: An ability to identify, formulate, comprehend, analyze, design synthesis of the information to solve complex engineering problems and provide valid conclusions.
- P05** Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools, including prediction and modeling to complex engineering activities.
- P06** The engineer and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal, and cultural issues.
- P07** Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
- P08** Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
- P09** Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
- P010** Communication: Communicate effectively on complex engineering activities with the engineering community and with the society.
- P011** Project management and finance: An ability to use the modern engineering tools, techniques, skills and management principles to do work as a member and leader in a team, to manage projects in multidisciplinary environments.
- P012** Life-long learning: A recognition of the need for, and an ability to engage in, to resolve contemporary issues and acquire lifelong learning.

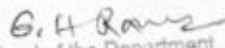
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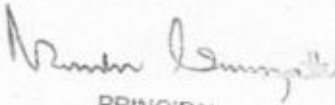
  
PRINCIPAL  
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COLLEGE	SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY											
FACULTY NAME	TANUJA K S											
BRANCH	EEE			ACADEMIC YEAR				2020-21				
COURSE	B.E	SEMESTER			IV	SECTION			EEE			
SUBJECT	TRANSMISSION & DISTRIBUTION					SUBJECT CODE			18EE43			
CO & PO MAPPING												
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
	1	2	3	4	5	6	7	8	9	10	11	12
CO1	2	2	-	-	-	-	-	-	-	-	-	2
CO2	2	3	-	-	-	-	-	-	-	-	-	-
CO3	2	3	-	-	-	-	-	-	-	-	-	-
CO4	2	3	-	-	-	2	3	-	-	-	-	-
CO5	2	3	-	-	-	-	-	-	-	-	-	-
AVERAGE	2	2.8	-	-	-	2	3	-	-	-	-	2
OVERALL MAPPING OF SUBJECT												2.36

#### CO AND PO ATTAINMENT

	CO%	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	74.52	1.49	2.08										1.49
CO2	27.14	0.54	0.75										
CO3	41.95	0.83	0.83										
CO4	65.51	1.31	1.83				1.31	1.96					
CO5	66.85	1.33	1.87										
AVERAGE	55.19	1.1	1.47				1.31	1.96					1.49
FINAL ATTAINMENT LEVEL													1.46

  
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 SIET, TUMAKURU.

Staff Name: Tanuja K.S

Academic year	2020-21		SEM		4		Total strength			19					Subject					TRANSMISSION AND DISTRIBUTION					Subject Code					18EE43														
SEM-7 SEC. E&E	IA TEST 1(30M)		IA TEST 2(30M)		IA TEST 3(30M)			ASSIGNMENT / QUIZ(10 M)					SEE MARKS(60)					Total Cos ATTAINMENT					% of individual CO																					
USN	CO1	TOTAL	CO2	CO3	TOTAL	CO4	CO5	TOTAL	CO1	CO2	CO3	CO4	CO5	CO1-12	CO2	CO3	CO4	CO5	CO1-29	CO2-44	CO3-29	CO4-29	CO5-29	CO1	CO2	CO3	CO4	CO5																
15V18EE001	17	17	4	4	8	12	13	25	2	2	2	2	2	3.8	3.8	3.8	3.8	3.8	22.8	9.8	9.8	17.8	18.8	78.62069	22.27273	33.7931	61.37931	64.82759																
15V19EE001	14	14	7	8	15	14	14	28	2	2	2	2	2	4.6	4.6	4.6	4.6	4.6	20.6	13.6	14.6	20.6	20.6	71.03448	30.90909	50.34483	71.03448	71.03448																
15V19EE002	16	16	3	2	5	11	11	22	2	2	2	2	2	3.4	3.4	3.4	3.4	3.4	21.4	8.4	7.4	16.4	16.4	73.7931	19.09091	25.51724	56.55172	56.55172																
15V19EE005	18	18	6	6	12	12	12	24	2	2	2	2	2	5.8	5.8	5.8	5.8	5.8	25.8	13.8	13.8	19.8	19.8	88.96552	31.36364	47.58621	68.27586	68.27586																
15V19EE006	6	6	4	5	9	10	10	20	2	2	2	2	2	3.6	3.6	3.6	3.6	3.6	11.6	9.6	10.6	15.6	15.6	40	21.81818	36.55172	53.7931	53.7931																
15V19EE007	17	17	8	9	17	12	15	27	2	2	2	2	2	5.8	5.8	5.8	5.8	5.8	24.8	15.8	16.8	19.8	22.8	85.51724	35.90909	57.93103	68.27586	78.62069																
15V19EE008	16	16	4	4	8	20	20	40	2	2	2	2	2	3.8	3.8	3.8	3.8	3.8	21.8	9.8	9.8	25.8	25.8	75.17241	22.27273	33.7931	88.96552	88.96552																
15V19EE009	16	16	3	3	6	10	10	20	2	2	2	2	2	3.8	3.8	3.8	3.8	3.8	21.8	8.8	8.8	15.8	15.8	75.17241	20	30.34483	54.48276	54.48276																
15V19EE011	19	19	8	9	17	12	16	28	2	2	2	2	2	5.8	5.8	5.8	5.8	5.8	26.8	15.8	16.8	19.8	23.8	92.41379	35.90909	57.93103	68.27586	82.06897																
15V19EE012	12	12	7	8	15	11	11	22	2	2	2	2	2	3.8	3.8	3.8	3.8	3.8	17.8	12.8	13.8	16.8	16.8	61.37931	29.09091	47.58621	57.93103	57.93103																
15V19EE013	18	18	8	8	16	12	12	24	2	2	2	2	2	3.2	3.2	3.2	3.2	3.2	23.2	13.2	13.2	17.2	17.2	80	30	45.51724	59.31034	59.31034																
15V19EE014	12	12	1	1	2	1	2	3	2	2	2	2	2	2.2	2.2	2.2	2.2	2.2	16.2	5.2	5.2	6.2	6.2	55.86207	11.81818	17.93103	17.93103	21.37931																
15V19EE016	17	17	7	7	14	12	12	24	2	2	2	2	2	3.8	3.8	3.8	3.8	3.8	22.8	12.8	12.8	17.8	17.8	78.62069	29.09091	44.13793	61.37931	61.37931																
15V19EE017	18	18	10	10	20	20	20	40	2	2	2	2	2	6.8	6.8	6.8	6.8	6.8	26.8	18.8	18.8	28.8	28.8	92.41379	42.72727	64.82759	99.31034	99.31034																
15V19EE020	13	13	7	7	14	15	14	29	2	2	2	2	2	4.8	4.8	4.8	4.8	4.8	19.8	13.8	13.8	21.8	20.8	68.27586	31.36364	47.58621	75.17241	71.72414																
15V20EE400	13	13	4	4	8	15	12	27	2	2	2	2	2	4.6	4.6	4.6	4.6	4.6	19.6	10.6	10.6	21.6	18.6	67.58621	24.09091	36.55172	74.48276	64.33793																
15V20EE401	18	18	3	2	5	15	17	32	2	2	2	2	2	4.2	4.2	4.2	4.2	4.2	24.2	9.2	8.2	21.2	23.2	81.44828	20.90909	28.27586	73.10345	80																
15V20EE402	15	15	7	8	15	14	14	28	2	2	2	2	2	4.2	4.2	4.2	4.2	4.2	21.2	13.2	14.2	23.2	20.2	73.10345	30	48.96552	69.65517	69.65517																
																			21.61111	11.94444	12.16667	19	19.18889	74.52107	27.14646	41.95402	65.51724	66.85824																

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## DEPARTMENT OF EEE

<b>SUBJECT</b>	<b>ELECTRIC MOTORS</b>	<b>SUBJECT CODE</b>	<b>18EE44</b>
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### **COURSE OUTCOME**

<b>CO1</b>	Explain the construction, operation and classification of DC Motor, AC motor and Special purpose motors
<b>CO2</b>	Describe the performance characteristics & applications of Electric motors.
<b>CO3</b>	Demonstrate and explain the methods of testing of DC machines and determine losses and Efficiency
<b>CO4</b>	Control the speed of DC motor and induction motor.
<b>CO5</b>	Explain the starting methods, equivalent circuit and phasor diagrams, torque angle, effect of change in excitation and change in load, hunting and damping of synchronous motors

### **PROGRAM OUTCOME**

**PO1 Engineering knowledge:** An ability to apply knowledge of mathematics (including probability, statistics and discrete mathematics), science, and engineering for solving Engineering problem and Knowledge.

**PO2 Problem analysis:** Identify, formulate, research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.

**PO3 Design / development of solutions:** An ability to design solution for engineering problems and design system components or process to meet desired specifications and needs.

**PO4 Conduct investigations of complex Problem:** An ability to identify, formulate, comprehend, analyze, design synthesis of the information to solve complex engineering problems and provide valid conclusions.

**PO5 Modern tool usage:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools, including prediction and modeling to complex engineering activities.

**PO6 The engineer and society:** Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal, and cultural issues.

**PO7 Environment and sustainability:** Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.


**PO8 Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

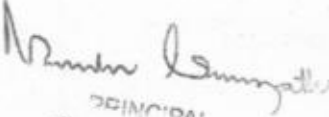
**PO9 Individual and team work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

**PO10 Communication:** Communicate effectively on complex engineering activities with the engineering community and with the society.

**PO11 Project management and finance:** An ability to use the modern engineering tools techniques, skills and management principles to do work as a member and leader in a team, to manage projects in multidisciplinary environments.

**PO12 Life-long learning:** A recognition of the need for, and an ability to engage in, to resolve contemporary issues and acquire lifelong learning.

  
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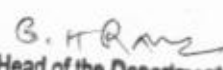
  
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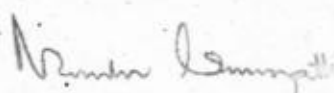


COLLEGE	SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY											
FACULTY NAME	UMABAI											
BRANCH	EEE			ACADEMIC YEAR				2019-2020				
COURSE	B.E	SEMESTER		IV		SECTION						
SUBJECT	ELECTRIC MOTORS						SUBJECT CODE		18EE44			
CO & PO MAPPING												
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	3	2			2	2	1	1	1		1
CO2	2	2	2			2	1	1	1	1		1
CO3	3	2	2			2	2	1	1	1		1
CO4	2	2	2			2	2	1	1	1		1
CO5	3	2	2			2	1	1	1	1		1
AVERAGE	2.6	2.2	2			2	1.6	1	1	1		1
OVERALL MAPPING OF SUBJECT												1.6

### CO AND PO ATTAINMENT

	CO%	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	63.6	1.89	1.89	1.26			1.26	0.63	0.63	0.63	0.63		0.63
CO2	59.5	1.19	1.19	1.19			1.19	0.59	0.59	0.59	0.59		0.59
CO3	63.7	1.91	1.27	1.27			1.27	1.27	0.63	0.63	0.63		0.63
CO4	62.4	1.24	1.24	1.24			1.24	0.62	0.62	0.62	0.62		0.62
CO5	63.7	1.91	1.27	1.27			1.27	0.63	0.63	0.63	0.63		0.63
AVERAGE	62.5	1.62	1.37	1.24			1.24	0.74	0.62	0.62	0.62		0.62
FINAL ATTAINMENT LEVEL													0.965

  
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SEM: IV, EEE	IA TEST 1			IA TEST 2			IA TEST 3			Assignment						SEE					TOTAL					Average						
	USN	CO1	CO2	TOTAL	CO3	CO4	TOTAL	CO4	CO5	TOTAL	CO1	CO2	CO3	CO4	CO5	TOTAL	CO1	CO2	CO3	CO4	CO5	TOTAL	CO1(34)	CO2(34)	CO3(34)	CO4(34)	CO5(34)	CO1	CO2	CO3	CO4	CO5
1SV17EE006	16	14	30	13	17	30	14	16	30	4	4	4	4	4	20	6.2	6.2	6.2	6.2	6.2	31	26.2	24.2	23.2	41.2	26.2	77	71	68	76	77	
1SV17EE012	10	13	23	10	15	25	12	15	27	4	4	4	4	4	20	3.6	3.6	3.6	3.6	3.6	18	17.6	20.6	17.6	34.6	22.6	52	61	52	64	66	
1SV18EE002	9	11	20	6	12	18	8	17	25	4	4	4	4	4	20	4.6	4.6	4.6	4.6	4.6	23	17.6	19.6	14.6	28.6	25.6	52	58	43	53	75	
1SV18EE003	22	8	30	20	10	30	15	15	30	4	4	4	4	4	20	5.2	5.2	5.2	5.2	5.2	26	31.2	17.2	29.2	34.2	24.2	92	51	86	63	71	
1SV18EE004	9	10	19	9	7	16	11	8	19	4	4	4	4	4	20	5	5	5	5	5	25	18	19	18	27	17	53	56	53	50	50	
1SV18EE005	10	9	19	10	11	21	13	10	23	4	4	4	4	4	20	4.8	4.8	4.8	4.8	4.8	24	18.8	17.8	18.8	32.8	18.8	55	52	55	61	55	
1SV18EE006	20	10	30	18	12	30	20	10	30	4	4	4	4	4	20	5.8	5.8	5.8	5.8	5.8	29	29.8	19.8	27.8	41.8	19.8	88	58	82	77	58	
1SV18EE007	15	10	25	13	14	27	19	10	29	4	4	4	4	4	20	5.2	5.2	5.2	5.2	5.2	26	24.2	19.2	22.2	42.2	19.2	71	56	65	78	56	
1SV18EE008	12	15	27	18	7	25	16	13	29	4	4	4	4	4	20	4.2	4.2	4.2	4.2	4.2	21	20.2	23.2	26.2	31.2	21.2	59	68	77	58	62	
1SV18EE009	9	9	18	12	8	20	10	12	22	4	4	4	4	4	20	4.2	4.2	4.2	4.2	4.2	21	17.2	17.2	20.2	26.2	20.2	51	51	59	49	59	
1SV18EE011	11	9	20	15	13	28	13	14	27	4	4	4	4	4	20	4.4	4.4	4.4	4.4	4.4	22	19.4	17.4	23.4	34.4	22.4	57	51	69	64	66	
1SV18EE012	8	10	18	9	11	20	8	14	22	4	4	4	4	4	20	4.2	4.2	4.2	4.2	4.2	21	16.2	18.2	23.4	34.4	22.4	57	51	69	64	66	
1SV19EE400	12	15	27	13	12	25	11	18	29	4	4	4	4	4	20	4.2	4.2	4.2	4.2	4.2	21	16.2	18.2	17.2	27.2	22.2	48	54	51	50	65	
1SV19EE401	13	15	28	17	9	26	17	13	30	4	4	4	4	4	20	4.2	4.2	4.2	4.2	4.2	21	20.2	23.2	21.2	31.2	26.2	59	68	62	58	77	
1SV19EE402	17	11	28	18	12	30	15	11	26	4	4	4	4	4	20	4.2	4.2	4.2	4.2	4.2	21	21.2	23.2	25.2	34.2	21.2	62	68	74	63	62	
1SV19EE403	15	8	23	13	12	25	11	16	27	4	4	4	4	4	20	5.2	5.2	5.2	5.2	5.2	26	26.2	20.2	27.2	36.2	20.2	77	59	80	67	59	
1SV19EE404	12	17	29	10	14	24	13	12	25	4	4	4	4	4	20	4.2	4.2	4.2	4.2	4.2	21	23.2	16.2	21.2	31.2	24.2	68	48	62	58	71	
1SV19EE405	14	15	29	11	14	25	16	11	27	4	4	4	4	4	20	4	4	4	4	4	20	20	25	18	35	20	59	74	53	65	59	
TOTAL	234	209	443	235	210	445	242	235	477	72	72	72	72	72	360	83	83.2	83.2	83.2	83.2	416	389.2	364.2	390.2	607.2	390.2	1145	1071	1148	1124	1148	
Total students	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18
Average	13	11.61	24.611	13.06	11.7	24.722	13.44	13.1	26.5	4	4	4	4	4	20	4.6	4.62	4.62	4.62	4.62	23.11	21.622	20.23	21.678	33.733	21.678	63.6	59.5	63.76	62.46914	63.75817	

ELECTRIC 18EE44  
2019-20

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DEPARTMENT OF EEE

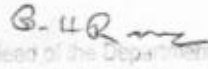
SUBJECT	ELECTROMAGNETIC FIELD THEORY	SUBJECT CODE	18EE45
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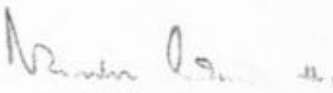
**COURSE OUTCOME**

CO1	Use different coordinate systems, Coulomb's Law and Gauss Law for the evaluation of electric fields produced by different charge configurations.
CO2	Calculate the energy and potential due to a system of charges & Explain the behavior of electric field across a boundary conditions
CO3	Explain the Poisson's, Laplace equations and behavior of steady magnetic fields.
CO4	Explain the behavior of magnetic fields and magnetic materials.
CO5	Asses time varying fields and propagation of waves in different media.

**PROGRAM OUTCOMES**

- P01 Engineering knowledge: An ability to apply knowledge of mathematics (including probability, statistics and discrete mathematics), science, and engineering for solving Engineering problems and Knowledge.
- P02 Problem analysis: Identify, formulate, research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
- P03 Design / development of solutions: An ability to design solution for engineering problems and design system components or process to meet desired specifications and needs.
- P04 Conduct investigations of complex Problem: An ability to identify, formulate, comprehend, analyze, design synthesis of the information to solve complex engineering problems and provide valid conclusions.
- P05 Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools, including prediction and modeling to complex engineering activities.
- P06 The engineer and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal, and cultural issues.
- P07 Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
- P08 Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
- P09 Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
- P010 Communication: Communicate effectively on complex engineering activities with the engineering community and with the society.
- P011 Project management and finance: An ability to use the modern engineering tools, techniques, skills and management principles to do work as a member and leader in a team, to manage projects in multidisciplinary environments.
- P012 Life-long learning: A recognition of the need for, and an ability to engage in, to resolve contemporary issues and acquire lifelong learning.

  
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COLLEGE		SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY										
FACULTY NAME		RAJESH KUMAR V K										
BRANCH		EEE			ACADEMIC YEAR				2019-20			
COURSE	B.E	SEMESTER		IV	SECTION							
SUBJECT							SUBJECT CODE		18EE45			
CO & PO MAPPING												
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	2	-	-	-	-	-	-	-	-	-	-
CO2	3	2	-	-	-	-	-	-	-	-	-	-
CO3	2	3	-	-	-	-	-	-	-	-	-	-
CO4	2	3	-	-	-	-	-	-	-	-	-	-
CO5	2	3	-	-	-	-	-	-	-	-	-	-
AVERAGE	2.4	2.6	-	-	-	-	-	-	-	-	-	-
OVERALL MAPPING OF SUBJECT												2.5

### CO AND PO ATTAINMENT

	CO%	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	52.19	1.56	1.04										
CO2	64.28	1.92	1.28										
CO3	52.03	1.56	1.04										
CO4	32.76	0.65	0.98										
CO5	67.39	1.34	2.02										
AVERAGE	53.73	1.40	1.272										
FINAL ATTAINMENT LEVEL													1.33

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Principal  
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 SIET., TUMAKURU.

SEM: IV, EEE	IA TEST 1			IA TEST 2			IA TEST 3			Assignment						SEE					Total					Average						
USN	CO1	CO2	TOTAL	CO3	CO4	TOTAL	CO4	CO5	TOTAL	CO1	CO2	CO3	CO4	CO5	TOTAL	CO1	CO2	CO3	CO4	CO5	TOTAL	CO1(34)	CO2(34)	CO3(34)	CO4(54)	CO5(34)	CO1(34)	CO2(34)	CO3(34)	CO4(54)	CO5(34)	
1SV17EE006	12	17	29	11	19	30	12	19	31	2	2	2	2	2	10	6.2	6.2	6.2	6.2	6.2	31	20.2	25.2	20.2	20.2	27.2	0.59	0.74	0.59	0.37	0.80	
1SV17EE012	14	14	28	14	15	29	14	16	30	2	2	2	2	2	10	3.6	3.6	3.6	3.6	3.6	18	19.6	19.6	19.6	19.6	21.6	0.58	0.58	0.58	0.36	0.64	
1SV18EE002	10	13	23	13	11	24	13	12	25	2	2	2	2	2	10	4.2	4.2	4.2	4.2	4.2	21	16.2	19.2	19.2	19.2	18.2	0.48	0.56	0.56	0.36	0.54	
1SV18EE003	9	20	29	10	20	30	10	21	31	2	2	2	2	2	10	5.2	5.2	5.2	5.2	5.2	26	16.2	27.2	17.2	17.2	28.2	0.48	0.80	0.51	0.32	0.83	
1SV18EE004	7	13	20	9	10	19	14	7	21	2	2	2	2	2	10	4.4	4.4	4.4	4.4	4.4	22	13.4	19.4	20.4	20.4	13.4	0.39	0.57	0.60	0.38	0.39	
1SV18EE005	12	9	21	7	12	19	10	10	20	2	2	2	2	2	10	4.8	4.8	4.8	4.8	4.8	24	18.8	15.8	16.8	16.8	16.8	0.55	0.46	0.49	0.31	0.49	
1SV18EE006	13	16	29	8	23	31	9	21	30	2	2	2	2	2	10	5.8	5.8	5.8	5.8	5.8	29	20.8	23.8	16.8	16.8	28.8	0.61	0.70	0.49	0.31	0.85	
1SV18EE007	14	14	28	10	19	29	7	20	27	2	2	2	2	2	10	4.2	4.2	4.2	4.2	4.2	21	20.2	20.2	13.2	13.2	26.2	0.59	0.59	0.39	0.24	0.77	
1SV18EE008	10	14	24	13	12	25	8	18	26	2	2	2	2	2	10	4.2	4.2	4.2	4.2	4.2	21	16.2	20.2	14.2	14.2	24.2	0.48	0.59	0.42	0.26	0.71	
1SV18EE009	12	10	22	10	13	23	11	13	24	2	2	2	2	2	10	3.8	3.8	3.8	3.8	3.8	19	17.8	15.8	16.8	16.8	18.8	0.52	0.46	0.49	0.31	0.55	
1SV18EE011	14	16	30	11	18	29	13	18	31	2	2	2	2	2	10	4.4	4.4	4.4	4.4	4.4	22	20.4	22.4	19.4	19.4	24.4	0.60	0.66	0.57	0.36	0.72	
1SV18EE012	9	13	22	12	11	23	14	10	24	2	2	2	2	2	10	3.8	3.8	3.8	3.8	3.8	19	14.8	18.8	19.8	19.8	15.8	0.44	0.55	0.58	0.37	0.46	
1SV19EE400	10	17	27	14	14	28	11	18	29	2	2	2	2	2	10	4.2	4.2	4.2	4.2	4.2	21	16.2	23.2	17.2	17.2	24.2	0.48	0.68	0.51	0.32	0.71	
1SV19EE401	11	19	30	10	21	31	10	19	29	2	2	2	2	2	10	4.2	4.2	4.2	4.2	4.2	21	17.2	25.2	16.2	16.2	25.2	0.51	0.74	0.48	0.30	0.74	
1SV19EE402	13	16	29	13	17	30	12	19	31	2	2	2	2	2	10	5.2	5.2	5.2	5.2	5.2	26	20.2	23.2	19.2	19.2	26.2	0.59	0.68	0.56	0.36	0.77	
1SV19EE403	14	17	31	12	17	29	10	20	30	2	2	2	2	2	10	4.2	4.2	4.2	4.2	4.2	21	20.2	23.2	16.2	16.2	26.2	0.59	0.68	0.48	0.30	0.77	
1SV19EE404	9	19	28	12	17	29	14	16	30	2	2	2	2	2	10	4	4	4	4	4	20	15	25	20	20	22	0.44	0.74	0.59	0.37	0.65	
1SV19EE405	10	20	30	10	18	28	10	19	29	2	2	2	2	2	10	4	4	4	4	4	20	16	26	16	16	25	0.47	0.76	0.47	0.30	0.74	
<b>TOTAL</b>	203	277	480	199	287	486	202	296	498	36	36	36	36	36	180	80.4	80.4	80.4	80.4	80.4	402	319.4	393.4	318.4	318.4	412.4	9.394	11.57	9.3647	5.8963	12.12941	
<b>Total students</b>	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18
<b>Average</b>	11.278	11.278	11.278	11.28	11.278	11.278	11.278	11.28	11.28	11.28	11.28	11.28	11.28	11.3	11.28	11.3	11.3	11.3	11.28	11.3	11.3	11.28	11.28	11.28	11.278	11.28	52.19	64.28	52.03	32.76	67.39	

18EE45 2019-20

S. H. Ramesh  
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 PRINCE JPAI  
 SIET, TUMKUR

## DEPARTMENT OF EEE

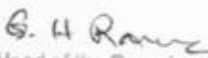
<b>SUBJECT</b>	<b>OPERATIONAL AMPLIFIERS &amp; LINEAR ICS</b>	<b>SUBJECT CODE</b>	<b>18EE46</b>
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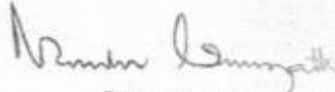
### COURSE OUTCOME

<b>CO1</b>	Describe the characteristics of ideal and practical operational amplifier.
<b>CO2</b>	Design filters and signal generators using linear ICs.
<b>CO3</b>	Demonstrate the application of Linear ICs as comparators and rectifiers.
<b>CO4</b>	Analyze voltage regulators for given specification using op-amp and IC voltage regulators.
<b>CO5</b>	Summarize the basics of PLL and Timer.

### PROGRAM OUTCOME

- PO1** Engineering knowledge: An ability to apply knowledge of mathematics (including probability, statistics and discrete mathematics), science, and engineering for solving Engineering problems and Knowledge.
- PO2** Problem analysis: Identify, formulate, research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
- PO3** Design / development of solutions: An ability to design solution for engineering problems and design system components or process to meet desired specifications and needs.
- PO4** Conduct investigations of complex Problem: An ability to identify, formulate, comprehend, analyze, design synthesis of the information to solve complex engineering problems and provide valid conclusions.
- PO5** Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools, including prediction and modeling to complex engineering activities.
- PO6** The engineer and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal, and cultural issues.
- PO7** Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
- PO8** Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
- PO9** Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
- PO10** Communication: Communicate effectively on complex engineering activities with the engineering community and with the society.
- PO11** Project management and finance: An ability to use the modern engineering tools, techniques, skills and management principles to do work as a member and leader in a team, to manage projects in multidisciplinary environments.
- PO12** Life-long learning: A recognition of the need for, and an ability to engage in, to resolve contemporary issues and acquire lifelong learning.

  
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PRINCIPAL  
SIET., TUMAKURU

COLLEGE	SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY											
FACULTY NAME	RAJESH KUMAR V											
BRANCH	EEE			ACADEMIC YEAR				2019-2020				
COURSE	B.E	SEMESTER		IV	SECTION							
SUBJECT	OPERATIONAL AMPLIFIERS & LINEAR ICs						SUBJECT CODE		18EE46			
CO & PO MAPPING												
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2	2	-	-	-	-	-	-	-	-	-	-
CO2	2	3	2	-	-	-	-	-	-	-	-	-
CO3	2	3	-	-	-	-	-	-	-	-	-	-
CO4	2	3	-	-	-	-	-	-	-	-	-	-
CO5	3	2	-	-	-	-	-	-	-	-	-	-
AVERAGE	2.4	2.6	2	-	-	-	-	-	-	-	-	-
OVERALL MAPPING OF SUBJECT												2.05

#### CO AND PO ATTAINMENT

	CO%	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	52.22	1.04	1.04	-	-	-	-	-	-	-	-	-	-
CO2	62.84	1.25	1.88	1.25	-	-	-	-	-	-	-	-	-
CO3	51.24	1.02	1.53	-	-	-	-	-	-	-	-	-	-
CO4	31.44	0.62	0.94	-	-	-	-	-	-	-	-	-	-
CO5	67.25	2.01	1.34	-	-	-	-	-	-	-	-	-	-
AVERAGE	52.99	1.18	1.41	1.25	-	-	-	-	-	-	-	-	-
FINAL ATTAINMENT LEVEL													1.28

G. H. Ramesh  
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 Shree Siddaganga Institute of Engineering & Technology  
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*(Signature)*  
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 SIET, TUMAKURU

STAFF NAME: RAJESH KUMAR J

Academic year	2019-20						SEM	4	Total strength						18	Subject					OPERATIONAL AMPLIFIER AND LINEAR IC'S					Subject Code	18EE46					Average				
	IA TEST 1			IA TEST 2					IA TEST 3			Assignment					SEC					Total														
	CO1	CO2	TOTAL	CO3	CO4	TOTAL			CO4	CO5	TOTAL	CO1	CO2	CO3		CO4	CO5	TOTAL	CO1	CO2	CO3	CO4	CO5	TOTAL	CO1(34)		CO2(34)	CO3(34)	CO4(34)	CO5(34)	CO1(34)		CO2(34)	CO3(34)	CO4(34)	CO5(34)
	UNN	CO1	CO2	TOTAL	CO3	CO4			TOTAL	CO4	CO5	TOTAL	CO1	CO2		CO3	CO4	CO5	TOTAL	CO1	CO2	CO3	CO4	CO5	TOTAL		CO1(34)	CO2(34)	CO3(34)	CO4(34)	CO5(34)		CO1(34)	CO2(34)	CO3(34)	CO4(34)
15V17EE006	12	17	29	10	20	30	11	20	31	2	2	2	2	2	10	6.2	6.2	6.2	6.2	6.2	31	20.2	25.2	18.2	19.2	28.2	0.59	0.74	0.54	0.36	0.83					
15V17EE012	14	13	27	12	17	29	14	14	28	2	2	2	2	2	10	3.6	3.6	3.6	3.6	3.6	18	19.6	18.6	17.6	19.6	19.6	0.58	0.55	0.52	0.36	0.58					
15V18EE002	13	11	24	14	9	23	13	12	25	2	2	2	2	2	10	4.2	4.2	4.2	4.2	4.2	21	19.2	17.2	20.2	19.2	18.2	0.56	0.51	0.59	0.36	0.54					
15V18EE003	11	15	26	10	18	28	12	15	27	2	2	2	2	2	10	5.6	5.6	5.6	5.6	5.6	28	18.6	22.6	17.6	19.6	22.6	0.55	0.66	0.52	0.36	0.66					
15V18EE004	10	10	20	9	13	22	14	7	21	2	2	2	2	2	10	4.4	4.4	4.4	4.4	4.4	22	16.4	16.4	15.4	20.4	13.4	0.48	0.48	0.46	0.45	0.38	0.39				
15V18EE005	9	12	21	7	13	20	12	10	22	2	2	2	2	2	10	4.8	4.8	4.8	4.8	4.8	24	15.8	18.8	13.8	18.8	16.8	0.46	0.55	0.41	0.35	0.49					
15V18EE006	7	19	26	8	20	28	10	17	27	2	2	2	2	2	10	4.2	4.2	4.2	4.2	4.2	21	14.2	25.2	17.2	15.2	26.2	0.42	0.74	0.51	0.28	0.77					
15V18EE007	8	19	27	11	17	28	9	20	29	2	2	2	2	2	10	4.2	4.2	4.2	4.2	4.2	21	17.2	23.2	18.2	13.2	25.2	0.51	0.68	0.54	0.24	0.74					
15V18EE008	11	17	28	12	15	27	7	19	26	2	2	2	2	2	10	3.8	3.8	3.8	3.8	3.8	19	17.8	13.8	18.8	13.8	16.8	0.52	0.41	0.55	0.26	0.49					
15V18EE009	12	8	20	11	8	19	8	11	19	2	2	2	2	2	10	4.2	4.2	4.2	4.2	4.2	21	17.2	23.2	18.2	13.2	25.2	0.51	0.68	0.54	0.24	0.74					
15V18EE011	14	15	29	8	22	30	11	21	32	2	2	2	2	2	10	4.2	4.2	4.2	4.2	4.2	21	20.2	21.2	14.2	17.2	27.2	0.59	0.62	0.42	0.32	0.80					
15V18EE012	10	8	18	14	5	19	10	11	21	2	2	2	2	2	10	4.2	4.2	4.2	4.2	4.2	21	19.2	21.2	16.2	18.2	24.2	0.56	0.62	0.48	0.34	0.71					
15V19EE400	13	15	28	10	19	29	12	18	30	2	2	2	2	2	10	3.8	3.8	3.8	3.8	3.8	19	15.8	13.8	19.8	15.8	16.8	0.46	0.41	0.58	0.29	0.48					
15V19EE401	13	16	29	11	19	30	14	17	31	2	2	2	2	2	10	4.2	4.2	4.2	4.2	4.2	21	19.2	21.2	16.2	18.2	24.2	0.56	0.62	0.48	0.34	0.71					
15V19EE402	12	19	31	12	17	29	9	21	30	2	2	2	2	2	10	5.2	5.2	5.2	5.2	5.2	26	19.2	22.2	17.2	20.2	23.2	0.56	0.65	0.51	0.17	0.68					
15V19EE403	10	20	30	14	17	31	12	17	29	2	2	2	2	2	10	4.2	4.2	4.2	4.2	4.2	21	16.2	26.2	20.2	18.2	23.2	0.48	0.77	0.59	0.34	0.68					
15V19EE404	12	18	30	10	18	28	11	18	29	2	2	2	2	2	10	4	4	4	4	4	20	18	24	16	17	24	0.51	0.71	0.47	0.31	0.71					
15V19EE405	12	16	28	12	16	30		22	27	2	2	2	2	2	10	4	4	4	4	4	20	18	24	16	17	24	0.51	0.71	0.47	0.31	0.71					
TOTAL	203	268	471	197	285	482	189	295	484	36	36	36	36	36	180	80.6	80.6	80.6	80.6	80.6	401	319.6	184.6	313.6	305.6	411.6	0.4	11.31126	9.223529	5.659259	12.10588					
Total students	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18				
Average	11.27778	14.8889	26.16667	10.94444	15.83333	26.77778	10.5	16.38889	26.88889	2	2	2	2	2	10	4.4777778	4.477778	4.477778	4.477778	4.477778	22.27778	17.755556	21.366667	17.42222	16.97778	22.86667	5.72	62.84	51.24	31.44	67.25					

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 SIET., TUMAKURU



## DEPARTMENT OF EEE

<b>SUBJECT</b>	<b>CONTROL SYSTEM</b>	<b>SUBJECT CODE</b>	<b>17EE61</b>
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### **COURSE OUTCOME**

<b>CO1</b>	Analyze and model electrical and mechanical system using analogous
<b>CO2</b>	Formulate transfer functions using block diagram and signal flow graphs.
<b>CO3</b>	Analyze the stability of control system, ability to determine transient and steady state time response.
<b>CO4</b>	Illustrate the performance of a given system in time and frequency domains, stability analysis using Root locus and Bode plots
<b>CO5</b>	Discuss stability analysis using Nyquist plots, Design controller and compensator for a given specification

### **PROGRAM OUTCOME**

**PO1** Engineering knowledge: An ability to apply knowledge of mathematics (including probability, statistics and discrete mathematics), science, and engineering for solving Engineering problems and Knowledge.

**PO2** Problem analysis: Identify, formulate, research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.

**PO3** Design / development of solutions: An ability to design solution for engineering problems and design system components or process to meet desired specifications and needs.

**PO4** Conduct investigations of complex Problem: An ability to identify, formulate, comprehend, analyze, design synthesis of the information to solve complex engineering problems and provide valid conclusions.

**PO5** Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools, including prediction and modeling to complex engineering activities.

**PO6** The engineer and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal, and cultural issues.

**PO7** Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.


**PO8** Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

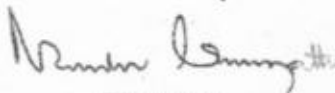
**PO9** Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

**PO10** Communication: Communicate effectively on complex engineering activities with the engineering community and with the society.

**PO11** Project management and finance: An ability to use the modern engineering tools, techniques, skills and management principles to do work as a member and leader in a team, to manage projects in multidisciplinary environments.

**PO12** Life-long learning: A recognition of the need for, and an ability to engage in, to resolve contemporary issues and acquire lifelong learning.

  
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COLLEGE	SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY											
FACULTY NAME	TANUJA.K.S											
BRANCH	EEE			ACADEMIC YEAR				2019-20				
COURSE	B.E	SEMESTER			VI	SECTION			EEE			
SUBJECT	CONTROL SYSTEM						SUBJECT CODE		17EE61			
CO & PO MAPPING												
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	3	-	-	-	-	-	-	-	-	-	-
CO2	3	-	-	-	-	-	-	-	-	-	-	-
CO3	2	3	-	-	-	-	-	-	-	-	-	-
CO4	3	3	2	-	-	-	-	-	-	-	-	-
CO5	2	2	3	-	-	-	-	-	-	-	-	-
AVERAGE	2.6	2.75	2.5	-	-	-	-	-	-	-	-	-
OVERALL MAPPING OF SUBJECT												2.61

#### CO AND PO ATTAINMENT

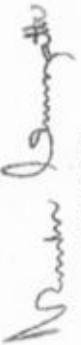
	CO%	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	64.31	1.92	1.92										
CO2	72.07	2.16											
CO3	69.48	1.38	2.08										
CO4	93.09	2.79	2.79	1.86									
CO5	86.72	1.73	1.73	2.6									
AVERAGE	77.13	1.99	2.13	2.23									
FINAL ATTAINMENT LEVEL													2.11

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PRINCIPAL  
SIET, TUMAKURU

SEM: VI, EEE	IA TEST 1			IA TEST 2			IA TEST 3			Assignment						SEEmegha					TOTAL					Average					
USN	CO1	CO2	TOTAL	CO3	CO4	TOTAL	CO4	CO5	TOTAL	CO1	CO2	CO3	CO4	CO5	TOTAL	CO1	CO2	CO3	CO4	CO5	TOTAL	CO1	CO2	CO3	CO4	CO5	CO1	CO2	CO3	CO4	CO5
1sv17EE002	10	10	20	10	11	21	10	12	22	2	2	2	2	2	10	4.8	4.8	4.8	4.8	4.8	24	16.8	16.8	16.8	27.8	18.8	0.58	0.58	0.58	0.82	0.65
1sv17EE004	9	10	29	15	15	30	10	21	31	2	2	2	2	2	10	6.8	6.8	6.8	6.8	6.8	34	17.8	18.8	23.8	33.8	29.8	0.61	0.65	0.82	0.99	1.03
1sv17EE005	12	17	29	15	15	30	10	21	31	2	2	2	2	2	10	7	7	7	7	7	35	21	26	24	34	30	0.72	0.90	0.83	1.00	1.03
1sv17EE009	10	19	29	15	15	30	10	21	31	2	2	2	2	2	10	6	6	6	6	6	30	18	27	23	33	29	0.62	0.93	0.79	0.97	1.00
1sv17EE010	10	19	29	15	15	30	10	21	31	2	2	2	2	2	10	5.6	5.6	5.6	5.6	5.6	28	17.6	26.6	22.6	32.6	28.6	0.61	0.92	0.78	0.96	0.99
1sv18EE400	12	10	22	10	13	23	10	14	24	2	2	2	2	2	10	5	5	5	5	5	25	19	17	17	30	21	0.66	0.59	0.59	0.88	0.72
1sv18EE402	10	11	21	10	12	22	10	13	23	2	2	2	2	2	10	4.8	4.8	4.8	4.8	4.8	24	16.8	17.8	16.8	28.8	19.8	0.58	0.61	0.58	0.85	0.68
1sv18EE403	15	10	25	10	16	26	10	17	27	2	2	2	2	2	10	5.2	5.2	5.2	5.2	5.2	26	22.2	17.2	17.2	33.2	24.2	0.77	0.59	0.59	0.98	0.83
TOTAL	88	106	204	100	112	212	80	140	220	16	16	16	16	16	80	45.2	45.2	45.2	45.2	45.2	226	149.2	167.2	161.2	253.2	201.2	5.14	5.77	5.56	7.45	6.94
Total student	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8.00	8.00	8.00	8.00	8.00
Average	11	13.25	25.5	12.5	14	26.5	10	17.5	28	2	2	2	2	2	10	5.65	5.65	5.65	5.65	5.65	28.25	18.65	20.9	20.15	31.65	25.15	64.31	72.07	69.48	93.09	86.72

### 2019-20 CONTROL SYSTEM 17EE61

  
 PRINCIPAL  
 SIET, TUMAKURU.

G. H. R. R. R.  
 Head of Department  
 Electrical & Electronics Engineering  
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## DEPARTMENT OF EEE

<b>SUBJECT</b>	<b>POWER SYSTEM ANALYSIS I</b>	<b>SUBJECT CODE</b>	<b>17EE62</b>
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### COURSE OUTCOME

65 19. 20

<b>CO1</b>	Model the power system components & construct per unit impedance diagram of power system.
<b>CO2</b>	Analyze three phase symmetrical faults on power system.
<b>CO3</b>	Compute unbalanced phasor in terms of sequence components and vice versa, also develop sequence networks.
<b>CO4</b>	Analyze various unsymmetrical faults on power system.
<b>CO5</b>	Examine dynamics of synchronous machine and determine the power system stability

### PROGRAM OUTCOME

- PO1** Engineering knowledge: An ability to apply knowledge of mathematics (including probability, statistics and discrete mathematics), science, and engineering for solving Engineering problems and Knowledge.
- PO2** Problem analysis: Identify, formulate, research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
- PO3** Design / development of solutions: An ability to design solution for engineering problems and design system components or process to meet desired specifications and needs.
- PO4** Conduct investigations of complex Problem: An ability to identify, formulate, comprehend, analyze, design synthesis of the information to solve complex engineering problems and provide valid conclusions.
- PO5** Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools, including prediction and modeling to complex engineering activities.
- PO6** The engineer and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal, and cultural issues.
- PO7** Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
- PO8** Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
- PO9** Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
- PO10** Communication: Communicate effectively on complex engineering activities with the engineering community and with the society.
- PO11** Project management and finance: An ability to use the modern engineering tools, techniques, skills and management principles to do work as a member and leader in a team, to manage projects in multidisciplinary environments.
- PO12** Life-long learning: A recognition of the need for, and an ability to engage in, to resolve contemporary issues and acquire lifelong learning.

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*Manjunath*  
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COLLEGE	SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY											
FACULTY NAME	UMABAI											
BRANCH	EEE			ACADEMIC YEAR				2019-2020				
COURSE	B.E	SEMESTER		VI	SECTION							
SUBJECT	POWER SYSTEM ANALYSIS 1					SUBJECT CODE			17EE62			
CO & PO MAPPING												
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	3	-	-	-	-	1	-	-	-	-	-
CO2	3	3	-	-	-	-	1	-	-	-	-	-
CO3	2	3	-	-	-	1	-	-	-	-	-	-
CO4	2	3	-	3	-	1	-	-	1	-	-	2
CO5	2	3	-	3	-	1	1	-	1	-	-	2
AVERAGE	2.4	3	-	3	-	1	1	-	1	-	-	2
OVERALL MAPPING OF SUBJECT												1.92

#### CO AND PO ATTAINMENT

	CO%	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	69.0	2.07	2.07					0.69					
CO2	62.0	1.86	1.86					0.62					
CO3	67.5	1.35	2.02		2.02	0.67							
CO4	37.9	0.75	1.13		1.13	0.37				0.37			0.75
CO5	60.2	1.20	1.80			0.6		0.6		0.6			1.2
AVERAGE	59.32	1.44	1.77		1.57	0.54		0.63		0.48			0.975
FINAL ATTAINMENT LEVEL													1.057

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*Principals Signature*  
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**DEPARTMENT OF EEE**

<b>SUBJECT</b>	<b>Solar &amp; Wind Energy</b>	<b>SUBJECT CODE</b>	<b>17EE654</b>
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**COURSE OUTCOME**

- CO1.** Discuss the importance of the role of renewable energy, the concept of energy storage and the principles of energy storage devices.
- CO2.** Discuss the concept of solar radiation data and solar PV system fabrication, operation of solar cell, sizing and design of PV system.
- CO3.** Describe the process of harnessing solar energy and its applications in heating and cooling.
- CO4.** Explain basic Principles of Wind Energy Conversion, collection of wind data, energy estimation and site selection
- CO5.** Discuss the performance of Wind-machines, energy storage, applications of Wind Energy and environmental aspects.

**PROGRAM OUTCOMES**

- PO1** Engineering-knowledge: An ability to apply knowledge of mathematics (including probability, statistics and discrete mathematics), science, and engineering for solving Engineering problems and Knowledge.
- PO2** Problem analysis: Identify, formulate, research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
- PO3** Design / development of solutions: An ability to design solution for engineering problems and design system components or process to meet desired specifications and needs.
- PO4** Conduct investigations of complex Problem: An ability to identify, formulate, comprehend, analyze, design synthesis of the information to solve complex engineering problems and provide valid conclusions.
- PO5** Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools, including prediction and modeling to complex engineering activities.
- PO6** The engineer and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal, and cultural issues.
- PO7** Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
- PO8** Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
- PO9** Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
- PO10** Communication: Communicate effectively on complex engineering activities with the engineering community and with the society.
- PO11** Project management and finance: An ability to use the modern engineering tools, techniques, skills and management principles to do work as a member and leader in a team, to manage projects in multidisciplinary environments.
- PO12** Life-long learning: A recognition of the need for, and an ability to engage in, to resolve contemporary issues and acquire lifelong learning.


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*N. Srinivasan*  
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COLLEGE	SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY											
FACULTY NAME	MRS. SHWETHA T M											
BRANCH	EEE			ACADEMIC YEAR				2019-20				
COURSE	B.E	SEMESTER			VI	SECTION						
SUBJECT	Solar & Wind Energy						SUBJECT CODE		18EE654			
CO & PO MAPPING												
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2	3	3			1	1					1
CO2	2	3	3			1	1					1
CO3	2	3	3			1	1					1
CO4	2	3	3			1	1					1
CO5	2	3	3			1	1					1
AVERAGE	2	3	3			1	1					1
OVERALL MAPPING OF SUBJECT												1.83

#### CO AND PO ATTAINMENT

	CO%	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	53.97	1.0794	1.6191	1.6191			0.5397	0.5397					0.5397
CO2	77.13	1.5426	2.3139	2.3139			0.7713	0.7713					0.7713
CO3	52.13	1.0426	1.5639	1.5639			0.5213	0.5213					0.5213
CO4	68.47	1.3694	2.0541	2.0541			0.6847	0.6847					0.6847
CO5	75.29	1.5058	2.2587	2.2587			0.7529	0.7529					0.7529
AVERAGE	65.39	1.308	1.962	1.962			0.654	0.654					0.654
FINAL ATTAINMENT LEVEL													1.199

  
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SEM VI, EEE	IA TEST 1			IA TEST 2			IA TEST 3			Assignment					SEE SWE 2019-2020					TOTAL					Average						
	CO1	CO2	TOTAL	CO3	CO4	TOTAL	CO4	CO5	TOTAL	CO1	CO2	CO3	CO4	CO5	TOTAL	CO1	CO2	CO3	CO4	CO5	TOTAL	CO1	CO2	CO3	CO4	CO5	CO1	CO2	CO3	CO4	CO5
1sv17EE002	14	13	27	12	14	26	13	13	26	2	2	2	2	2	10	4.8	4.8	4.8	4.8	4.8	24	20.8	19.8	18.8	33.8	21.8	61.2	58.2	55.3	62.8	64.7
1sv17EE004	11	21	32	10	19	29	13	14	29	2	2	2	2	2	10	6.8	6.8	6.8	6.8	6.8	34	19.8	29.8	18.8	40.8	24.8	58.2	67.6	55.3	75.8	72.9
1sv17EE005	10	19	29	9	20	29	14	18	32	2	2	2	2	2	10	7	7	7	7	7	35	19	28	18	43	27	55.9	62.4	52.9	79.8	79.4
1sv17EE009	13	16	29	7	25	32	12	17	29	2	2	2	2	2	10	6	6	6	6	6	30	21	24	15	45	25	61.8	70.9	44.1	83.3	73.5
1sv17EE010	11	21	32	8	21	29	10	19	29	2	2	2	2	2	10	6.2	6.2	6.2	6.2	6.2	32	19.2	29.2	16.2	39.2	27.2	56.5	65.9	47.6	72.8	69.0
1sv18EE400	10	19	29	11	16	27	9	19	28	2	2	2	2	2	10	5	5	5	5	5	25	17	26	18	32	26	50.0	76.5	52.9	89.3	75.3
1sv18EE402	7	19	26	12	13	25	7	20	27	2	2	2	2	2	10	4.8	4.8	4.8	4.8	4.8	24	18.8	25.8	18.8	26.8	26.8	40.6	75.8	55.3	48.6	73.8
1sv18EE403	9	20	29	11	17	28	11	19	30	2	2	2	2	2	10	5.2	5.2	5.2	5.2	5.2	26	16.2	27.2	18.2	35.2	26.2	47.6	80.0	53.5	61.2	77.1
TOTAL	85	148	233	80	145	225	89	143	232	16	16	16	16	16	80	45.8	45.8	45.8	45.8	45.8	230	146.8	209.8	141.8	295.8	204.8	431.8	617.1	417.1	547.8	602.4
Total students	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
Average	10.63	18.50	29.13	10.00	18.13	28.13	11.13	17.88	29.00	2.00	2.00	2.00	2.00	2.00	10.00	5.73	5.73	5.73	5.73	5.73	28.75	18.35	26.21	17.73	36.98	25.60	53.97	77.13	52.13	68.47	75.29

17EE654 SWE 2019-2020

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