DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

SUBJECT	ELECTRIC CIRCUIT ANALYSIS	SUBJECT CODE	BEE302

COURSE OUTCOME

CO1: Understand the basic concepts, basic laws and methods of analysis of DC and AC networks and reduce the complexity of network using source shifting, source transformation and network reduction using transformations

CO2: Solve complex electric circuits using network theorems

CO3: Discuss resonance in series and parallel circuits and also the importance of initial conditions and their evaluation

CO4: Synthesize typical waveforms using Laplace transformation

CO5: Solve unbalanced three phase systems and also evaluate the performance of two port networks.

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.

COLLEGE	SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY				
FACULTY NAME	Mr. G. H. RAVIKUMAR				
BRANCH	EEE		ACADEMIC YEAR		2023-24
COURSE	B.E	SEMESTER	III	SECTION	EEE
SUBJECT	ELECTRIC CIRCUIT ANALYSIS		SUBJECT CODE		BEE302

CO & PO MAPPING

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2	3	2	2	-	-	-	-	-	-	-	2
CO2	2	3	2	2	-	-	-	-	-	-	-	2
CO3	1	3	1	1	-	-	-	-	-	-	-	1
CO4	3	3	3	3	-	-	-	-	-	-	-	3
CO5	2	3	2	2	-	-	-	-	-	-	-	2
AVERAGE	2	3	2	2	-	-	-	-	-	-	-	2
OVERALL MAPPING OF SUBJECT												2.2

CO AND PO ATTAINMENT

	CO%	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	56.00	1.120	1.680	1.120	1.120	-	-	-	-	-	-	-	1.120
CO2	49.21	0.984	1.476	0.984	0.984	-	-	-	-	-	-	-	0.984
CO3	54.35	0.543	1.630	0.543	0.543	-	-	-	-	-	-	-	0.543
CO4	53.09	1.592	1.592	1.592	1.592	-	-	-	-	-	-	-	1.592
CO5	65.33	1.306	1.659	1.306	1.306	-	-	-	-	-	-	-	1.306
AV		1.109	1.607	1.109	1.109	-	-	-	-	-	-	-	1.109
FINAL ATTAINMENT LEVEL													1.208

Academic year	2023-24			SEM	III	Total strength		15	Subject	ELECTRIC CIRCUIT ANALYSIS										Subject Code		BEE302			% of Individual CO				

SEM:III	IA TEST 1(25M)			IA TEST 2(25M)			IA TEST 3(25M)			ASSIGN/LAB / QUIZ(25 M)					SEE MARKS(50)					Total COs ATTAINMENT					% of Individual CO				
USN	CO1	CO2	TOTAL	CO3	CO4	TOTAL	CO5	CO5	TOTAL	CO1	CO2	CO3	CO4	CO5	CO1=10	CO2	CO3	CO4	CO5	CO1=27.5	CO2=27.5	CO3=27.5	CO4=27.5	CO5=35	CO1	CO2	CO3	CO4	CO5
															3.6	3.6	3.6	3.6	3.6	12.8	11.8	13.8	10.8	18.8	46.55	42.91	50.18	39.27	53.71
1SV22EE001	7	6	13	8	5	13	6	7	13	2.2	2.2	2.2	2.2	2.2	3.6	3.6	3.6	3.6	3.6	14.6	10.6	12.6	12.6	18.6	53.09	38.55	45.82	45.82	53.14
1SV22EE002	8	4	12	6	6	12	6	6	12	3	3	3	3	3	4.6	4.6	4.6	4.6	4.6	22	19	21	20	32	80.00	69.09	76.36	72.73	91.43
1SV22EE003	13	10	23	12	11	23	11	12	23	4.4	4.4	4.4	4.4	4.4	3.6	3.6	3.6	3.6	3.6	19.6	17.6	17.6	19.6	29.6	71.27	64.00	64.00	71.27	84.57
1SV22EE004	12	10	22	10	12	22	11	11	22	4	4	4	4	4	3.6	3.6	3.6	3.6	3.6	19.4	14.4	21.4	22.4	36.4	70.55	52.36	77.82	81.45	104.00
1SV22EE005	12	7	19	14	15	19	15	14	19	3.8	3.8	3.8	3.8	3.8	7.4	7.4	7.4	7.4	7.4	21	24	22	23	34	76.36	87.27	80.00	83.64	97.14
1SV22EE006	10	13	23	11	12	23	13	10	23	3.6	3.6	3.6	3.6	3.6	4.2	4.2	4.2	4.2	4.2	12.8	12.8	11.8	13.8	18.8	46.55	46.55	42.91	50.18	53.71
1SV23EE400	6	6	12	5	7	12	6	6	12	2.6	2.6	2.6	2.6	2.6	1.8	1.8	1.8	1.8	1.8	12	12	13	11	19	43.64	43.64	47.27	48.00	54.29
1SV23EE401	7	7	14	8	6	14	8	6	14	3.2	3.2	3.2	3.2	3.2	2	2	2	2	2	10.6	10.6	11.6	9.6	16.6	38.55	38.55	42.18	34.91	47.43
1SV23EE402	6	6	12	7	5	12	8	4	12	2.6	2.6	2.6	2.6	2.6	1.6	1.6	1.6	1.6	1.6	13	11	11	13	19	47.27	40.00	40.00	47.27	54.29
1SV23EE403	8	6	14	6	8	14	6	8	14	3.4	3.4	3.4	3.4	3.4	3.6	3.6	3.6	3.6	3.6	15.8	8.8	12.8	11.8	17.8	57.45	32.00	46.55	42.91	50.86
1SV23EE404	9	2	11	6	5	11	5	6	11	3.2	3.2	3.2	3.2	3.2	4.8	4.8	4.8	4.8	4.8	18	10	14	14	21	65.45	36.36	50.91	50.91	60.00
1SV23EE405	11	3	14	7	7	14	6	8	14	2.2	2.2	2.2	2.2	2.2	3.8	3.8	3.8	3.8	3.8	16.6	12.6	15.6	13.6	22.6	60.36	45.82	56.73	49.45	64.57
1SV23EE406	10	6	16	9	7	16	10	6	16	2.8	2.8	2.8	2.8	2.8	2.6	2.6	2.6	2.6	2.6	10.6	16.6	14.6	12.6	20.6	38.55	60.36	53.09	45.82	58.86
1SV23EE407	4	10	14	8	6	14	8	6	14	4	4	4	4	4	2.4	2.4	2.4	2.4	2.4	12.2	11.2	12.2	11.2	18.2	44.36	40.73	44.36	40.73	52.00
1SV23EE408	7	6	13	7	6	13	8	5	13	2.8	2.8	2.8	2.8	2.8											56.00	49.21	54.55	53.09	65.33

G. H Ramz
STAFF

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H. O. D
Head of the Department
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PRINCIPAL

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DEPARTMENT OF EEE

SUBJECT	ANALOG ELECTRONICS CIRCUITS	SUBJECT CODE	BEE303

COURSE OUTCOME

- CO1. To provide the knowledge for the analysis of transistor biasing and thermal stability circuits.
- CO2 .To develop skills to design the electronic circuits like amplifiers, power amplifiers and oscillators.
- CO3. To understand the importance of FET and MOSFET
- CO4. To develop skills to design the FET/MOSFET amplifiers\
- CO5. To understand the importance of electronics circuits

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.

COLLEGE	SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY				
FACULTY NAME	MS.SUSHMITHA V R				
BRANCH	EEE		ACADEMIC YEAR		2023-2024
COURSE	B.E	SEMESTER	III	SECTION	
SUBJECT	ANALOG ELECTRONIC CIRCUIT		SUBJECT CODE		BEE303

CO & PO MAPPING

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	2	1	2	2						1	1
CO2	2	1	2	2	3						1	1
CO3	3	2	2	2	2						1	1
CO4	2	2	3	2	3						1	1
CO5	2	2	2	2	2						1	1
AVERAGE	2.4	1.8	2	2	2.4						1	1
OVERALL MAPPING OF SUBJECT												1.8

CO AND PO ATTAINMENT

	CO%	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	48	1.44	0.96	0.48	0.96	0.96						0.48	0.48
CO2	34	0.68	0.34	0.68	0.68	1.02						0.34	0.34
CO3	35	1.05	0.7	0.7	0.7	0.7						0.35	0.35
CO4	47	0.94	0.94	1.41	0.94	1.41						0.47	0.47
CO5	53	1.06	1.06	1.06	1.06	1.06						0.53	0.53
AVERAGE	43.4	1.034	0.8	0.866	0.868	1.03						0.43	0.434
FINAL ATTAINMENT LEVEL													1.0

SEM: 3rd, EEE	IA TEST 1			IA TEST 2			IA TEST 3										SEE						TOTAL					Average					
USN	CO1	CO2	TOTAL	CO3	CO4	TOTAL	CO1	CO4	co5	TOTAL	CO1	CO2	CO3	CO4	CO5	TOTAL	CO1	CO2	CO3	CO4	CO5	TOTAL	CO1(52	CO2(32	CO3(32	CO4(52	CO5(22	CO1	CO2	CO3	CO4	CO5
SVEE22EE00	0	0	0	0	0	0	4	8	10	22	2	2	2	2	2	10	1.8	1.8	1.8	1.8	1.8	9	7.8	3.8	3.8	11.8	14	0.15	0.12	0.12	0.23	0.43
1SV22EE002	12	6	18	10	18	28	0	10	14	24	2	2	2	2	2	10	1.2	1.2	1.2	1.2	1.2	6	15.2	9.2	13.2	31.2	17	0.29	0.29	0.41	0.60	0.54
1SV22EE003	20	20	40	18	16	34	18	20	20	58	2	2	2	2	2	10	5	5	5	5	5	25	45	27	25	43	27	0.87	0.84	0.78	0.83	0.84
1SV22EE004	20	17	37	17	20	37	0	14	20	34	2	2	2	2	2	10	4.6	4.6	4.6	4.6	4.6	23	26.6	23.6	23.6	40.6	27	0.51	0.74	0.74	0.78	0.83
1SV22EE005	16	6	32	12	20	32	9	10	20	39	2	2	2	2	2	10	3.6	3.6	3.6	3.6	3.6	18	30.6	11.6	17.6	35.6	26	0.59	0.36	0.55	0.68	0.80
1SV22EE006	12	6	18	8	10	18	6	20	0	26	2	2	2	2	2	10	1.8	1.8	1.8	1.8	1.8	9	21.8	9.8	11.8	33.8	4	0.42	0.31	0.37	0.65	0.12
1SV23EE400	8	0	8	0	10	10	17	6	20	43	2	2	2	2	2	10	3.6	3.6	3.6	3.6	3.6	18	30.6	5.6	5.6	21.6	26	0.59	0.18	0.18	0.42	0.80
1SV23EE401	4	14	18	8	10	18	18	8	10	36	2	2	2	2	2	10	3.6	3.6	3.6	3.6	3.6	18	27.6	19.6	13.6	23.6	16	0.53	0.61	0.43	0.45	0.49
1SV23EE402	10	11	21	7	3	10	13	3	14	30	2	2	2	2	2	10	2.2	2.2	2.2	2.2	2.2	11	27.2	15.2	11.2	10.2	18	0.52	0.48	0.35	0.20	0.57
1SV23EE403	8	0	8	0	5	5	5	7	14	26	2	2	2	2	2	10	1.6	1.6	1.6	1.6	1.6	8	16.6	3.6	3.6	15.6	18	0.32	0.11	0.11	0.30	0.55
1SV23EE404	8	0	8	0	0	0	2	6	14	22	2	2	2	2	2	10	2.4	2.4	2.4	2.4	2.4	12	14.4	4.4	4.4	10.4	18	0.28	0.14	0.14	0.20	0.58
1SV23EE405	0	0	0	0	0	0	0	0	0	0	2	2	2	2	2	10	2.6	2.6	2.6	2.6	2.6	13	4.6	4.6	4.6	4.6	5	0.09	0.14	0.14	0.09	0.14
1SV23EE406	16	4	20	6	12	18	20	20	12	52	2	2	2	2	2	10	2.2	2.2	2.2	2.2	2.2	11	40.2	8.2	10.2	36.2	16	0.77	0.26	0.32	0.70	0.51
1SV23EE407	16	3	19	10	14	24	20	18	18	56	2	2	2	2	2	10	1.8	1.8	1.8	1.8	1.8	9	39.8	6.8	13.8	35.8	22	0.77	0.21	0.43	0.69	0.68
1SV23EE408	8	4	12	2	6	8	18	2	0	20	2	2	2	2	2	10	1.8	1.8	1.8	1.8	1.8	9	29.8	7.8	5.8	11.8	4	0.57	0.24	0.18	0.23	0.12
Total	158	91	259	98	144	242	150	152	186	488	30	30	30	30	30	150	39.8	39.8	39.8	39.8	39.8	199	377.8	160.8	167.8	366	255.8	7.27	5.03	5.24	7.03	7.99
students	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
Average	10.53	6.07	17.3	6.53	9.6	16.13	10	10.133	12.4	32.53	2	2	2	2	2	10	2.7	2.7	2.7	2.7	2.7	13.27	25.19	10.72	11.19	24.4	17.05	0.48	0.34	0.35	0.47	0.53

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DEPARTMENT OF EEE

SUBJECT	TRANSFORMER & GENERATOR	SUBJECT CODE	BEE304

COURSE OUTCOME

- CO1 . To understand the construction, working and various tests of singlephase Transformer.
- CO2. To understand the construction, working and parallel operation of threephase Transformer.
- CO3. To understand the construction, working analysis of SynchronousGenerator.
- CO4. To understand the parallel operation of generator
- CO5. To understand the construction, working of solar and wind power generators

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.

COLLEGE	SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY				
FACULTY NAME	MRS. SHWETHA T M				
BRANCH	EEE		ACADEMIC YEAR		2023-24
COURSE	B.E	SEMESTER	III	SECTION	
SUBJECT	Transformer &Generator		SUBJECT CODE		BEE304

CO & PO MAPPING

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	2	1	2	3					1		1
CO2	2	1	2	2	2					1		1
CO3	3	2	2	2	2					1		1
CO4	2	2	3	2	3					1		1
CO5	2	2	2	2	2					1		1
AVERAGE	2.4	1.8	2	2	2.4					1		1

		OVERALL MAPPING OF SUBJECT	1.8

CO AND PO ATTAINMENT

	CO%	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	89.1	2.673	2.673	0.891	1.782	2.673					0.891		0.891
CO2	78.7	1.574	1.574	1.574	1.574	1.574					0.787		0.787
CO3	75.6	2.268	2.268	1.512	1.512	1.512					0.756		0.756
CO4	53.1	1.062	1.062	1.593	1.062	1.593					0.531		0.531
CO5	42.56	0.8512	0.8512	0.8512	0.8512	0.8512					0.4256		0.4256
AVERAGE	67.812	1.62749	1.62749	1.35624	1.35624	1.62749					0.67812		0.678

		FINAL ATTAINMENT LEVEL	1.28

SEM: 3rd EEE	IA TEST 1			IA TEST 2			IA TEST 3										SEE						TOTAL					Average				
USN	CO1	CO2	TOTAL	CO3	CO4	TOTAL	CO1	CO4	co5	TOTAL	CO1	CO2	CO3	CO4	CO5	TOTAL	CO1	CO2	CO3	CO4	CO5	TOTAL	CO1(34)	CO2(24)	CO3(24)	CO4(34)	CO5(24)	CO1	CO2	CO3	CO4	CO5
1SVEE22EE001	5	8	13	7	0	7	15	9	11	35	4	4	4	4	4	20	0.2	0.2	0.2	0.2	0.2	1	24.2	12.2	11.2	13	15	0.71	0.51	0.47	0.38	0.63
1SV22EE002	12	10	22	14	10	24	7	2		9	4	4	4	4	4	20	3.6	3.6	3.6	3.6	3.6	18	26.6	17.6	21.6	16	8	0.78	0.73	0.90	0.47	0.32
1SV22EE003	20	15	35	20	0	20	18	16	16	50	4	4	4	4	4	20	4.4	4.4	4.4	4.4	4.4	22	46.4	23.4	28.4	20	24	1.36	0.98	1.18	0.59	1.02
1SV22EE004	18	19	37	18	19	37	13	7	5	25	4	4	4	4	4	20	3.6	3.6	3.6	3.6	3.6	18	38.6	26.6	25.6	30	13	1.14	1.11	1.07	0.88	0.53
1SV22EE005	16	15	31	11	12	23	12	6	0	18	4	4	4	4	4	20	3.6	3.6	3.6	3.6	3.6	18	35.6	22.6	18.6	22	8	1.05	0.94	0.78	0.65	0.32
1SV22EE006	13	18	31	10	13	23	12	9	0	21	4	4	4	4	4	20	1.4	1.4	1.4	1.4	1.4	7	30.4	23.4	15.4	26	5	0.89	0.98	0.64	0.76	0.23
1SV23EE400	12	12	24	15	0	15	16	3	3	22	4	4	4	4	4	20	4.4	4.4	4.4	4.4	4.4	22	36.4	20.4	23.4	7	11	1.07	0.85	0.98	0.21	0.48
1SV23EE401	11	12	23	11	10	21	15	9	0	24	4	4	4	4	4	20	2.2	2.2	2.2	2.2	2.2	11	32.2	18.2	17.2	23	6	0.95	0.76	0.72	0.68	0.26
1SV23EE402	16	17	33	12	9	21	7	10	2	19	4	4	4	4	4	20	3.6	3.6	3.6	3.6	3.6	18	30.6	24.6	19.6	23	10	0.90	1.03	0.82	0.68	0.40
1SV23EE403	6	9	15	10	0	10	9	9	7	25	4	4	4	4	4	20	2.2	2.2	2.2	2.2	2.2	11	21.2	15.2	16.2	13	13	0.62	0.63	0.68	0.38	0.55
1SV23EE404	12	9	21	2	0	2	8	5	11	24	4	4	4	4	4	20	0.4	0.4	0.4	0.4	0.4	2	24.4	13.4	6.4	9	15	0.72	0.56	0.27	0.26	0.64
1SV23EE405	12	12	24	14	0	14	0	0	0	0	4	4	4	4	4	20	2.6	2.6	2.6	2.6	2.6	13	18.6	18.6	20.6	4	7	0.55	0.78	0.86	0.12	0.28
1SV23EE406	13	10	23	9	12	21	11	7	0	18	4	4	4	4	4	20	1.8	1.8	1.8	1.8	1.8	9	29.8	15.8	14.8	23	6	0.88	0.66	0.62	0.68	0.24
1SV23EE407	10	13	23	18	15	33	16	7	0	23	4	4	4	4	4	20	1.4	1.4	1.4	1.4	1.4	7	31.4	18.4	23.4	26	5	0.92	0.77	0.98	0.76	0.23
1SV23EE408	6	6	12	3	8	11	15	4	0	19	4	4	4	4	4	20	2.8	2.8	2.8	2.8	2.8	14	27.8	12.8	9.8	16	7	0.82	0.53	0.41	0.47	0.28
TOTAL	182	185	367	174	108	282	174	103	55	332	60	60	60	60	60	300	38.2	38.2	38.2	38.2	38.2	191	454.2	283	272.2	271	153	13.36	11.80	11.34	7.97	6.38
students	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	60	45	45	45	45	1.76	1.88	1.88	1.32	1.88
Average	12.133	12.33	24.47	11.6	7.2	18.8	11.6	6.867	3.667	22.133	4	4	4	4	4	20	2.55	2.55	2.55	2.55	2.55	12.73	30.28	18.88	18.15	18.07	10	0.89	0.79	0.76	0.53	0.43

T&G 23-24

Q. H. Rama

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

PRINCIPAL
SIET. TUMKUR.

DEPARTMENT OF EEE

SUBJECT	ELECTRICAL MEASUREMENTS AND INSTRUMENTATION	SUBJECT CODE	BEE306B

COURSE OUTCOME

- **CO1.** To understand the significance and methods of Measurements, elements of generalised measurement system and errors in measurements.
- **CO2 .** To measure resistance, inductance, capacitance by use of different bridges.
- **CO3.** To study theconstruction, working and characteristics of various instrument transformers.
- **CO4 .** To have the working knowledge of electronic instruments and display devices.
- **C05.** TO study the construction of bridges

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.

COLLEGE	SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY				
FACULTY NAME	MRS.UMABAI				
BRANCH	EEE		ACADEMIC YEAR		2023-24
COURSE	B.E	SEMESTER	III	SECTION	
SUBJECT	Electrical Measurements &Instrumentations		SUBJECT CODE		BEEE306B

CO & PO MAPPING

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	2	1	2	2					1		1
CO2	2	1	2	2	3					1		1
CO3	3	2	2	2	2					1		1
CO4	2	2	3	2	3					1		1
CO5	2	2	2	2	2					1		1
AVERAGE	2.4	1.8	2	2	2.4					1		1
						OVERALL MAPPING OF SUBJECT						1.8

CO AND PO ATTAINMENT

	CO%	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO1
CO1	65.4	1.962	1.308	0.654	1.308	1.962					0.654		0.6
CO2	52.1	1.042	0.521	1.042	1.042	1.042					0.521		0.5
CO3	77.9	2.337	1.558	1.558	1.558	2.337					0.779		0.7
CO4	73.2	1.464	1.464	2.196	1.464	1.464					0.732		0.7
CO5	65.1	1.302	1.302	1.302	1.302	1.302					0.651		0.6
AVERAGE	66.74	1.60176	1.20132	1.3348	1.3348	1.60176					0.6674		0.66
							FINAL ATTAINMENT LEVEL						1.2

SEM: I, EEE	IA TEST 1			IA TEST 2			IA TEST 3										SEE						TOTAL					Average				
USN	CO1	CO2	TOTAI	CO3	CO4	TOTAI	CO1	CO4	co5	TOTAI	CO1	CO2	CO3	CO4	CO5	TOTAI	CO1	CO2	CO3	CO4	CO5	TOTAI	CO1(34	CO2(24	CO3(24	CO4(34	CO5(24	CO1	CO2	CO3	CO4	CO5
1SVEE22EE001	5	3	9	0	0	0	5	8	0	13	4	4	4	4	4	20	3.6	3.6	3.6	3.6	3.6	18	17.6	10.6	7.6	15.6	8	0.518	0.442	0.317	0.459	0.317
1SV22EE002	7	1	8	15	2	17	12	8	0	20	4	4	4	4	4	20	4.8	4.8	4.8	4.8	4.8	24	27.8	9.8	23.8	18.8	9	0.818	0.408	0.992	0.553	0.367
1SV22EE003	18	20	38	20	14	34	20	20	18	58	4	4	4	4	4	20	7.8	7.8	7.8	7.8	7.8	39	49.8	31.8	31.8	45.8	30	1.465	1.325	1.325	1.347	1.242
1SV22EE004	12	7	19	17	11	28	6	15	12	33	4	4	4	4	4	20	7.6	7.6	7.6	7.6	7.6	38	29.6	18.6	28.6	37.6	24	0.871	0.775	1.192	1.106	0.983
1SV22EE005	10	6	16	15	8	23	14	10	3	27	4	4	4	4	4	20	3.8	3.8	3.8	3.8	3.8	19	31.8	13.8	22.8	25.8	11	0.935	0.575	0.950	0.759	0.450
1SV22EE006	10	12	32	16	4	20	14	16	17	47	4	4	4	4	4	20	6.6	6.6	6.6	6.6	6.6	33	34.6	22.6	26.6	30.6	28	1.018	0.942	1.108	0.900	1.150
1SV23EE400	0	0	0	12	4	16	8	4	10	22	4	4	4	4	4	20	5.8	5.8	5.8	5.8	5.8	29	17.8	9.8	21.8	17.8	20	0.524	0.408	0.908	0.524	0.825
1SV23EE401	6	2	8	11	0	11	9	5	0	14	4	4	4	4	4	20	3.6	3.6	3.6	3.6	3.6	18	22.6	9.6	18.6	12.6	8	0.665	0.400	0.775	0.371	0.317
1SV23EE402	9	9	18	0	0	0	12	7	0	19	4	4	4	4	4	20	2.4	2.4	2.4	2.4	2.4	12	27.4	15.4	6.4	13.4	6	0.806	0.642	0.267	0.394	0.267
1SV23EE403	0	0	0	10	5	15	3	9	8	20	4	4	4	4	4	20	3.6	3.6	3.6	3.6	3.6	18	10.6	7.6	17.6	21.6	16	0.312	0.317	0.733	0.635	0.650
1SV23EE404	0	0	0	0	17	17	0	10	6	16	4	4	4	4	4	20	3.6	3.6	3.6	3.6	3.6	18	7.6	7.6	7.6	34.6	14	0.224	0.317	0.317	1.018	0.567
1SV23EE405	0	0	0	0	16	16	0	6	9	15	4	4	4	4	4	20	5.2	5.2	5.2	5.2	5.2	26	9.2	9.2	9.2	31.2	18	0.271	0.383	0.383	0.918	0.758
1SV23EE406	0	0	0	14	10	24	13	13	10	36	4	4	4	4	4	20	4.2	4.2	4.2	4.2	4.2	21	21.2	8.2	22.2	31.2	18	0.624	0.342	0.925	0.918	0.758
1SV23EE407	0	0	0	15	5	20	4	13	11	28	4	4	4	4	4	20	3.6	3.6	3.6	3.6	3.6	18	11.6	7.6	22.6	25.6	19	0.341	0.317	0.942	0.753	0.775
1SV23EE408	0	0	0	8	4	12	9	2	3	14	4	4	4	4	4	20	1.2	1.2	1.2	1.2	1.2	6	14.2	5.2	13.2	11.2	8	0.418	0.217	0.550	0.329	0.342
TOTAL	77	60	148	153	100	253	129	146	107	382	60	60	60	60	60	300	67.4	67.4	67.4	67.4	67.4	337	333.4	187.4	280.4	373.4	234.4	9.806	7.808	11.683	10.982	9.7667
STUDENTS	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
AVERAGE	5.13	4.00	9.87	10.20	6.67	16.87	8.60	9.73	7.13	25.47	4.00	4.00	4.00	4.00	4.00	20.00	4.49	4.49	4.49	4.49	4.49	22.47	22.23	12.49	18.69	24.89	15.63	0.65	0.52	0.78	0.73	0.65

EEM 23-24

G. H Rama

Head of the Department
Electrical & Electronics Engineer.
Shridevi Institute of Engineering & Technology
TUMKUR-572106.

27/6/24

PRINCIPAL
SIET. TUMKUR

DEPARTMENT OF EEE

SUBJECT	TRANSMISSION & DISTRIBUTION	SUBJECT CODE	21EE51

COURSE OUTCOME

CO1. To understand the concept of various methods of generation of power
CO2. To understand the importance of HVAC, UHVAC and HVDC transmission
CO3. To design insulator for the given voltage level
CO4. To calculate the transmission line parameter
CO5. To study the underground cables for power transmission and evaluate different types of distribution system

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.

COLLEGE	SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY				
FACULTY NAME	MS. SUSHMITHA V R				
BRANCH	EEE		ACADEMIC YEAR		2023-24
COURSE	B.E	SEMESTER	V	SECTION	
SUBJECT	TRANSMISSION & DISTRIBUTION		SUBJECT CODE		21EE52

CO & PO MAPPING

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	2	1	2	2					1		1
CO2	2	1	2	2	3					1		1
CO3	3	2	2	2	2					1		1
CO4	2	2	3	2	3					1		1
CO5	2	2	2	2	2					1		1
AVERAGE	2.4	1.8	2	2	2.4					1		1
								OVERALL MAPPING OF SUBJECT				1.8
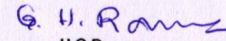
CO AND PO ATTAINMENT

	CO%	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	91.3	2.739	1.826	0.913	1.826	1.826					0.779	0.779	0.779
CO2	92.3	1.846	0.923	1.846	1.846	1.846					0.79	0.79	0.79
CO3	79.8	2.394	1.596	1.596	1.596	1.596					0.769	0.769	0.769
CO4	89.5	1.79	1.79	2.685	1.79	1.79					0.813	0.813	0.813
CO5	93.3	1.866	1.866	1.866	1.866	1.866					0.8	0.8	0.8
AVERAGE	89.24	2.739	1.826	0.913	1.826	1.826					0.779	0.779	0.779
									FINAL ATTAINMENT LEVEL				1.55

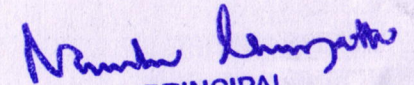| SEM: V, EEE USN	IA TEST 1			IA TEST 2			IA TEST 3			Assignment						SEE						TOTAL					Average				
	CO1	CO2	TOTAL	CO3	CO4	TOTAL	CO4	CO5	TOTAL	CO1	CO2	CO3	CO4	CO5	TOTAL	CO1	CO2	CO3	CO4	CO5	TOTAL	CO1(32)	CO2(32)	CO3(32)	CO4(52)	CO5(32)	CO1	CO2	CO3	CO4	CO5
1SV21EE001	18	20	38	20	20	40	20	20	40	2	2	2	2	2	10	3.8	3.8	3.8	3.8	3.8	19	23.8	25.8	25.8	45.8	25.8	0.744	0.806	0.806	0.881	0.806
1SV21EE003	20	20	40	20	20	40	20	20	40	2	2	2	2	2	10	5	5	5	5	5	25	27	27	27	47	27	0.844	0.844	0.844	0.904	0.844
1SV21EE006	20	20	40	0	0	0	20	20	40	2	2	2	2	2	10	3.6	3.6	3.6	3.6	3.6	18	25.6	25.6	5.6	25.6	25.6	0.800	0.800	0.175	0.492	0.800
1SV21EE005	20	20	40	18	12	30	20	20	40	2	2	2	2	2	10	3.6	3.6	3.6	3.6	3.6	18	25.6	25.6	23.6	37.6	25.6	0.800	0.800	0.738	0.723	0.800
1SV22EE401	18	18	36	20	20	40	20	20	40	2	2	2	2	2	10	6	6	6	6	6	30	26	26	28	48	28	0.813	0.813	0.875	0.923	0.875
1SV22EE403	16	16	32	14	14	28	16	16	32	2	2	2	2	2	10	6	6	6	6	6	30	24	24	22	38	24	0.750	0.750	0.688	0.731	0.750
1SV22EE404	16	16	32	14	14	28	16	16	32	2	2	2	2	2	10	5.2	5.2	5.2	5.2	5.2	26	23.2	23.2	21.2	37.2	23.2	0.725	0.725	0.663	0.715	0.725
TOTAL	128	130	258	106	100	206	132	132	264	14	14	14	14	14	70	33.2	33.2	33.2	33.2	33.2	166	175.2	177.2	153.2	279.2	179.2	5.475	5.538	4.788	5.369	5.600
Total students	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7.000	7.000	7.000	7.000	7.000
Average	21.33	21.67	43.00	17.67	16.67	34.33	22.00	22.00	44.00	2.33	2.33	2.33	2.33	2.33	11.7	5.53	5.53	5.53	5.53	5.53	27.67	29.20	29.53	25.53	46.53	29.87	0.913	0.923	0.798	0.895	0.933

T&D 21EE51-2023-24

STAFF

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

PRINCIPAL

PRINCIPAL
SIET. TUMKUR.

DEPARTMENT OF ELECTRICAL AND ELECTRONICS

SUBJECT	CONTROL SYSTEMS	SUBJECT CODE	21EE52

COURSE OUTCOME:

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

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.

COLLEGE		SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY						
FACULTY NAME		TANUJA K.S						
BRANCH		EEE		ACADEMIC YEAR			2023-24	
COURSE	B.E	SEMESTER		V	SECTION		EEE	
SUBJECT		CONTROL SYSTEMS			SUBJECT CODE		21EE52	

CO & PO MAPPING

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
21EE51.1	2	3	2	2			1	1			1	1
21EE51.2	2	3	2	2	1		1	1			1	1
21EE51.3	3	3	2	2		1		1				1
21EE51.4	2	3	2	2			1	1			1	1
21EE51.5	3	2	3	3		1		1			1	1
Avg Map	2.4	2.8	2.2	2.2	1	1	1	1			1	1
											1	1

	OVERALL MAPPING OF SUBJECT	1.56

CO AND PO ATTAINMENT

	CO%	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	44.55	0.89	1.34	0.89	0.89			0.45	0.45			0.45	0.45
CO2	28.86	0.58	0.87	0.58	0.58	0.29		0.29	0.29			0.29	0.29
CO3	30.07	0.90	0.90	0.60	0.60		0.30		0.30				0.30
CO4	29.38	0.59	0.83	0.59	0.59			0.29	0.29			0.29	0.29
CO5	31.91	0.96	0.64	0.96	0.96		0.32		0.32			0.32	0.32
AVERAGE	49.982	0.78	0.92	0.72	0.72	0.29	0.31	0.34	0.33			0.34	0.33

	FINAL ATTAINMENT LEVEL	0.51

Academic year	2023-24			SEM	III	Total strength		7							Subject			Control systems		Subject Code		21EE52								

SEM:V	IA TEST 1(20M)			IA TEST 2(20M)			IA TEST 3(20M)			ASSIGNEMENT / QUIZ(10 M)					Laboratory(20M)					SEE MARKS(50)					Total COs ATTAINMENT					% of Individual CO				
USN	CO1	CO2	TOTAL	CO3	CO4	TOTAL	CO5	CO5	TOTAL	CO1	CO2	CO3	CO4	CO5	CO1=4	CO2	CO3	CO4	CO5	CO1=10	CO2	CO3	CO4	CO5	CO1=26	CO2=26	CO3=26	CO4=26	CO5=36	CO1	CO2	CO3	CO4	CO5
1SV21EE001	13	0	13	4.5	5	10	10	10	20	2	2	2	2	2	3.8	3.8	3.8	3.8	3.8	5	5	5	5	5	23.8	7	11.5	12	22	82.07	24.14	39.66	41.38	50.00
1SV21EE003	8.5	8	9	10	10	20	10	10	20	2	2	2	2	2	3.8	3.8	3.8	3.8	3.8	6.2	6.2	6.2	6.2	6.2	20.5	16.2	18.2	18.2	22	70.69	55.86	62.76	62.76	50.00
1SV21EE005	6.5	5.5	12	2.5	5	8	10	10	20	2	2	2	2	2	3.8	3.8	3.8	3.8	3.8	4.8	4.8	4.8	4.8	4.8	17.1	12.3	9.3	11.8	22	58.97	42.41	32.07	40.69	50.00
1SV21EE006	6	6.5	13	0	0	0	10	10	20	2	2	2	2	2	3.8	3.8	3.8	3.8	3.8	3.6	3.6	3.6	3.6	3.6	15.4	12.1	5.6	5.6	22	53.10	41.72	19.31	19.31	50.00
1SV22EE401	9	7	16	10	10	20	10	10	20	2	2	2	2	2	3.8	3.8	3.8	3.8	3.8	3.6	3.6	3.6	3.6	3.6	18.4	12.6	15.6	15.6	22	63.45	43.45	53.79	53.79	50.00
1SV22EE403	7.5	4.5	12	6.5	4	11	4	9	13	1.6	1.6	1.6	1.6	1.6	2.4	2.4	2.4	2.4	2.4	4.8	4.8	4.8	4.8	4.8	16.3	10.9	12.9	10.4	14.6	56.21	37.59	44.48	35.86	33.18
1SV22EE404	7.5	5	13	6.5	4	11	5	9	14	1.8	1.8	1.8	1.8	1.8	2.6	2.6	2.6	2.6	2.6	5.8	5.8	5.8	5.8	5.8	17.7	12.6	14.1	11.6	15.8	61.03	43.45	48.62	40.00	35.91
																														44.55	28.86	30.07	29.38	31.91

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SIRA ROAD, TUMKUR- 572 106.

DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

SUBJECT	POWER SYSTEM ANALYSIS-I	SUBJECT CODE	21EE53

COURSE OUTCOME

CO1: Model the power system components & construct per unit impedance diagram of power system

CO2: Analyze three phase symmetrical faults on power system

CO3: Compute unbalanced phasors in terms of sequence components and vice versa, also develop sequence networks

CO4: Analyze various unsymmetrical faults on power system

CO5: Examine dynamics of synchronous machine and determine the power system stability.

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.

COLLEGE	SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY				
FACULTY NAME	Mr. G. H. RAVIKUMAR				
BRANCH	EEE		ACADEMIC YEAR		2023-24
COURSE	B.E	SEMESTER	V	SECTION	EEE
SUBJECT	POWER SYSTEM ANALYSIS-I		SUBJECT CODE		21EE53

CO & PO MAPPING

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2	3	-	-	2	-	-	-	-	-	-	1
CO2	2	3	2	-	2	-	-	-	-	-	-	1
CO3	2	3	-	-	2	-	-	-	-	-	-	1
CO4	2	3	-	-	2	-	-	-	-	-	-	1
CO5	2	3	-	-	2	-	-	-	-	-	-	1
AVERAGE	2	3	2	-	2	-	-	-	-	-	-	1
OVERALL MAPPING OF SUBJECT												2

CO AND PO ATTAINMENT

	CO%	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	68.16	1.363	2.044			1.363							0.681
CO2	66.12	1.322	1.983	1.322		1.322							0.661
CO3	75.31	1.506	2.259			1.506							0.753
CO4	61.50	1.23	1.845			1.23							0.615
CO5	70.20	1.404	2.106			1.404							0.702
AV		1.365	2.047	1.322		1.365							0.682
FINAL ATTAINMENT LEVEL													1.356

Academic year	2023-24		SEM	V			Total strength	7		Subject	POWER SYSTEM ANALYSIS-I					Subject Code	21EE53							

SEM:V	IA TEST 1(20M)			IA TEST 2(20M)			IA TEST 3(20M)			ASSIGNEMENT / QUIZ(40 M)					SEE MARKS(50)					Total COs ATTAINMENT					% of Individual CO				
USN	CO1	CO2	TOTAL	CO3	CO4	TOTAL	CO4	CO5	TOTAL	CO1	CO2	CO3	CO4	CO5	CO1=10	CO2	CO3	CO4	CO5	CO1=28	CO2=28	CO3=28	CO4=38	CO5=28	CO1	CO2	CO3	CO4	CO5
1SV21EE001	5	5	10	10	7	17	3	5	8	7	7	7	7	7	3.6	3.6	3.6	3.6	3.6	15.6	15.6	20.6	20.6	15.6	55.71	55.71	73.57	54.21	55.71
1SV21EE003	10	10	20	10	9	19	9	9	18	7.6	7.6	7.6	7.6	7.6	6	6	6	6	6	23.6	23.6	23.6	31.6	22.6	84.29	84.29	84.29	83.16	80.71
1SV21EE005	7	6	13	10	7	17	4	8	12	7.2	7.2	7.2	7.2	7.2	4	4	4	4	4	18.2	17.2	21.2	22.2	19.2	65.00	61.43	75.71	58.42	68.57
1SV21EE006	10	9	19	10	8	18	9	10	19	3.2	3.2	3.2	3.2	3.2	3.6	3.6	3.6	3.6	3.6	16.8	15.8	16.8	23.8	16.8	60.00	56.43	60.00	62.63	60.00
1SV22EE401	9	8	17	10	9	19	9	10	19	7.6	7.6	7.6	7.6	7.6	5	5	5	5	5	21.6	20.6	22.6	30.6	22.6	77.14	73.57	80.71	80.53	80.71
1SV22EE403	6	5	11	10	3	13	2	8	10	5.8	5.8	5.8	5.8	5.8	3.6	3.6	3.6	3.6	3.6	15.4	14.4	19.4	14.4	17.4	55.00	51.43	69.29	37.89	62.14
1SV22EE404	9	9	18	10	5	15	2	10	12	6.4	6.4	6.4	6.4	6.4	7	7	7	7	7	22.4	22.4	23.4	20.4	23.4	80.00	80.00	83.57	53.68	83.57
																									68.16	66.12	75.31	61.50	70.20

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DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

SUBJECT	POWER ELECTRONICS	SUBJECT CODE	21EE54

COURSE OUTCOME

CO1: To give an overview of applications power electronics, different types of power semiconductor devices, their switching characteristics. To explain power diode characteristics, types, their operation and the effects of power diodes on RL circuits

CO2: To explain the techniques for design and analysis of single phase diode rectifier circuits

CO3: To explain different power transistors, their steady state and switching characteristics and imitations

CO4: To explain different types of Thyristors, their gate characteristics and gate control requirements

CO5: To explain the design, analysis techniques, performance parameters and characteristics of controlled rectifiers, DC- DC, DC –AC converters and Voltage controllers

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.

PO012 Life-long learning: A recognition of the need for, and an ability to engage in, to resolve contemporary issues and acquire lifelong learning.

COLLEGE	SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY				
FACULTY NAME	Mr. G. H. RAVIKUMAR				
BRANCH	EEE		ACADEMIC YEAR		2023-24
COURSE	B.E	SEMESTER	V	SECTION	EEE
SUBJECT	POWER ELECTRONICS		SUBJECT CODE		21EE54

CO & PO MAPPING

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2	-	-	-	-	-	-	-	-	-	-	2
CO2	2	-	3	-	-	-	-	-	-	-	-	2
CO3	2	2	-	-	-	-	-	-	-	-	-	2
CO4	2	2	-	-	-	-	-	-	-	-	-	2
CO5	2	2	3	-	-	-	-	-	-	-	-	2
AVERAGE	2	2	3	-	-	-	-	-	-	-	-	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	69.08	1.381	-	-	-	-	-	-	-	-	-	-	1.381
CO2	67.55	1.351		2.026	-	-	-	-	-	-	-	-	1.351
CO3	60.92	1.218	1.218	-	-	-	-	-	-	-	-	-	1.218
CO4	58.42	1.168	1.168	-	-	-	-	-	-	-	-	-	1.168
CO5	73.67	1.473	1.473	2.21	-	-	-	-	-	-	-	-	1.473
AV		1.318	1.286	2.118	-	-	-	-	-	-	-	-	1.318
FINAL ATTAINMENT LEVEL													1.51

Academic ye	2023-24		SEM	V		Total strength	7		Subject	POWER ELECTRONICS						Subject Code	21EE54								
SEM:V	IA TEST 1(20M)			IA TEST 2(20M)			IA TEST 3(20M)			ASSIGNEMENT / QUIZ(40 M)					SEE MARKS(50)					Total COs ATTAINMENT					% of Individual CO				
USN	CO1	CO2	TOTAL	CO3	CO4	TOTAL	CO4	CO5	TOTAL	CO1	CO2	CO3	CO4	CO5	CO1=10	CO2	CO3	CO4	CO5	CO1=28	CO2=28	CO3=28	CO4=38	CO5=28	CO1	CO2	CO3	CO4	CO5
1SV21EE001	5	2	7	8	4	12	4	8	12	7.6	7.6	7.6	7.6	7.6	5.4	5.4	5.4	5.4	5.4	18	15	17	21	21	64.29	53.57	60.71	55.26	75.00
1SV21EE003	10	9	19	10	8	18	8	10	18	7.8	7.8	7.8	7.8	7.8	5.2	5.2	5.2	5.2	5.2	23	22	21	29	23	82.14	78.57	75.00	76.32	82.14
1SV21EE005	6	6	12	10	4	14	5	9	14	7.6	7.6	7.6	7.6	7.6	5	5	5	5	5	18.6	18.6	16.6	21.6	21.6	66.43	66.43	59.29	56.84	77.14
1SV21EE006	8	7	15	5	4	9	7	11	18	3.2	3.2	3.2	3.2	3.2	3.6	3.6	3.6	3.6	3.6	14.8	13.8	10.8	17.8	17.8	52.86	49.29	38.57	46.84	63.57
1SV22EE401	9	10	19	10	7	17	8	11	19	7.6	7.6	7.6	7.6	7.6	5	5	5	5	5	21.6	22.6	19.6	27.6	23.6	77.14	80.71	70.00	72.63	84.29
1SV22EE403	7	8	15	6	4	10	2	6	8	6.4	6.4	6.4	6.4	6.4	5	5	5	5	5	18.4	19.4	15.4	17.4	17.4	65.71	69.29	55.00	45.79	62.14
1SV22EE404	7	7	14	8	5	13	2	6	8	6.8	6.8	6.8	6.8	6.8	7.2	7.2	7.2	7.2	7.2	21	21	19	21	20	75.00	75.00	67.86	55.26	71.43
																									69.08	67.55	60.92	58.42	73.67

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DEPARTMENT OF ELECTRICAL AND ELECTRONICS

SUBJECT	POWER SYSTEMS-2	SUBJECT CODE	18EE71

COURSE OUTCOME:

CO1: form the different incidence matrices for a given power system network

formulate network matrices by different methods for a given power system

network

CO2: Identify different types of buses

CO2,3 : perform load flow analysis for a given power system

CO4 : perform economic generation scheduling of power generation plants

CO4,5 : perform transient stability study of a given power system

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.

COLLEGE		SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY			
FACULTY NAME		TANUJA K.S			
BRANCH		EEE	ACADEMIC YEAR		2023-24
COURSE	B.E	SEMESTER	VII	SECTION	EEE
SUBJECT		POWER SYSTEMS-2	SUBJECT CODE		18EE71

CO & PO MAPPING

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
18EE71.1	1	3	3	2	3	3	-	-	-	-	3	3
18EE71.2	1	3	3	2	3	3	-	-		-	3	3
18EE71.3	1	3	3	2	3	3					3	3
18EE71.4	1	3	3	2	3	3					3	3
18EE71.5	1	3	3	2	3	3					3	3
Avg. Mapping	1	3	3	2	3	3					3	3
											3	3

		OVERALL MAPPING OF SUBJECT	1.75

CO AND PO ATTAINMENT

	CO%	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	68.17	2.04	2.0451	1.3634	2.0451	2.0451	2.0451	-	-	-	-	2.0451	2.04
CO2	72.74	2.18	2.1822	1.4548	2.1822	2.1822	2.1822	-	-	-	-	2.1822	2.18
CO3	67.20	2.016	2.016	1.344	2.016	2.016	2.016					2.016	2.0
CO4	71.2	2.136	2.136	1.424	2.136	2.136	2.136					2.136	2.1
CO5	68.28	2.0484	2.0484	1.3656	2.0484	2.0484	2.0484					2.0484	2.04
AVERAGE	56.92	0.5692	1.7076	1.7076	1.1384	1.7076	0.5692					1.7076	1.70

		FINAL ATTAINMENT LEVEL	1.4636

Academic year	2023-24			SEM	VII		Total strength		8		Subject		POWER SYSTEMS-2			Subject Code		18EE71										
SEM:VII	IA TEST 1(30M)			IA TEST 2(30M)			IA TEST 3(30M)			ASSIGNEMENT / QUIZ(10 M)					SEE MARKS(60)					Total COs ATTAINMENT					% of Individual CO				
USN	CO1	CO2	TOTAL	CO3	CO4	TOTAL	CO4	CO5	TOTAL	CO1	CO2	CO3	CO4	CO5	CO1=12	CO2	CO3	CO4	CO5	CO1=29	CO2=34	CO3=34	CO4=44	CO5=49	CO1	CO2	CO3	CO4	CO5
1SV19EE003	15	10.5	26	15	7.5	23	1.5	1.5	3	2	2	2	2	2	5.8	5.8	5.8	5.8	5.8	22.8	18.3	15.3	14.8	5	78.62	53.82	45.00	43.53	10.20
1SV19EE018	6.75	15	22	15	6	21	15	6.75	22	2	2	2	2	2	7.2	7.2	7.2	7.2	7.2	15.95	39.2	15.2	24.2	15.95	55.00	89.09	52.41	83.45	55.00
1SV20EE001	9	12	22	7.5	15	23	15	7.5	23	2	2	2	2	2	4.6	4.6	4.6	4.6	4.6	15.6	26.1	21.6	21.6	14.1	53.79	59.32	74.48	74.48	48.62
1SV20EE002	15	15	30	15	15	30	10	10	20	2	2	2	2	2	5.8	5.8	5.8	5.8	5.8	22.8	37.8	22.8	17.8	17.8	78.62	85.91	78.62	61.38	61.38
1SV20EE003	9.5	15	29	15	9.5	29	15	15	30	2	2	2	2	2	6.4	6.4	6.4	6.4	6.4	17.9	38.4	17.9	23.4	23.4	61.72	87.27	61.72	80.69	80.69
1SV20EE004	13.5	7.5	21	6	15	21	15	6.75	22	2	2	2	2	2	5.8	5.8	5.8	5.8	5.8	21.3	21.3	22.8	22.8	14.55	73.45	48.41	78.62	78.62	50.17
1SV20EE006	12.75	15	28	14.3	15	29	14.75	15	29	2	2	2	2	2	7	7	7	7	7	21.75	38.25	24	23.75	24	75.00	86.93	82.76	81.90	82.76
1SV20EE007	11.25	10.5	22	12	9.75	22	10.5	10.5	21	2	2	2	2	2	6.8	6.8	6.8	6.8	6.8	20.05	31.3	18.55	19.3	19.3	69.14	71.14	63.97	66.55	66.55
																								68.17	72.74	67.20	71.32	56.92

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SUBJECT	POWER SYSTEM PROTECTION	SUBJECT CODE	18EE72

COURSE OUTCOME

CO1. Discuss performance of protective relays, components of protection scheme and relay terminology over current protection.

CO2. Explain the working of distance relays and the effects of arc resistance, power swings, line length and source impedance on performance of distance relays.

CO3. Discuss pilot protection, construction, operating principles and performance of differential relays and discuss protection of generators, motors, transformer and Bus Zone Protection.

CO4. Explain the construction and operation of different types of circuit breakers.

CO5. Outline features of fuse, causes of over voltages and its protection, also modern trends in Power System Protection

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.

COLLEGE	SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY				
FACULTY NAME	UMABAI				
BRANCH		EEE	ACADEMIC YEAR		2023-24
COURSE	B.E	SEMESTER	VII	SECTION	
SUBJECT	POWER SYSTEM PROTECTION		SUBJECT CODE		18EE72

CO & PO MAPPING

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	-	-	-	-	-	-	-	-	-	-	-
CO2	2	2	-	-	-	2	-	-	-	-	-	-
CO3	3	-	-	-	-	2	-	-	-	-	-	-
CO4	3	-	-	-	-	2	-	-	-	-	-	-
CO5	2	2	-	-	-	2	2	-	-	-	-	2
AVERAGE	2.6	2				2	2					2
OVERALL MAPPING OF SUBJECT												2.12

CO AND PO ATTAINMENT

	CO%	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	65.68	1.97											
CO2	50.91	1.01				1.01							
CO3	61.78	1.85				1.23							
CO4	71.41	0.34				0.22							0.22
CO5	72.61	1.45	1.45			1.45	1.45						
AVERAGE	52.478	1.324	1.45			.977	1.45						0.22
FINAL ATTAINMENT LEVEL													1.0843

Subject **Power System Protection** **Sub code** **18EE72**

USN	IA TEST 1			IA TEST 2			IA TEST 3			Assignment						SEE						TOTAL					Average				
EM: VII, EI	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	CO2	CO3	CO4	CO5
1sv19EE003	13	13	26	17	3	20	13	0	13	2	2	2	2	2	10	7	7	7	7	7	35	22	22	26	25	9	65	65	76	46	26
1SV19EE018	13	16	29	14	16	30	16	8	24	2	2	2	2	2	10	7.6	7.6	7.6	7.6	7.6	38	22.6	25.6	23.6	41.6	17.6	66	75	69	77	52
1SV20EE001	13	11	24	8	9	17	0	0	0	2	2	2	2	2	10	4.2	4.2	4.2	4.2	4.2	21	19.2	17.2	14.2	15.2	6.2	56	51	42	28	18
1SV20EE002	16	17	33	15	16	31	0	0	0	2	2	2	2	2	10	5.8	5.8	5.8	5.8	5.8	29	23.8	24.8	22.8	23.8	7.8	70	73	67	44	23
1SV20EE003	17	17	34	19	0	20	18	16	34	2	2	2	2	2	10	10.8	10.8	10.8	10.8	10.8	54	29.8	29.8	31.8	30.8	28.8	88	88	94	57	85
1SV20EE004	17	17	34	16	18	34	12	15	27	2	2	2	2	2	10	7	7	7	7	7	35	26	26	25	39	24	76	76	74	72	71
1SV20EE006	17	14	31	18	18	36	18	12	30	2	2	2	2	2	10	8	8	8	8	8	40	27	24	28	46	22	79	71	82	85	65
1SV20EE007	13	16	26	12	7	19	16	6	22	2	2	2	2	2	10	5.8	5.8	5.8	5.8	5.8	29	20.8	23.8	19.8	30.8	13.8	61	70	58	57	41
TOTAL	119	121	237	119	87	207	93	57	150	16	16	16	16	16	80	56.2	56.2	56.2	56.2	56.2	281	191.2	193.2	191.2	252.2	129	562	568	562	467	380
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	8	8	8	8
Average	14.88	15.13	29.625	14.88	10.88	25.88	11.625	7.125	18.75	2	2	2	2	2	10	7.025	7.03	7.025	7.025	7.025	35.13	23.9	24.15	23.9	31.53	16.15	70.3	71.0	70.3	58.4	47.5

G. H. Ramu

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

PRINCIPAL
SIET. TUMKUR

DEPARTMENT OF EEE

SUBJECT	Solar & Wind Energy	SUBJECT CODE	18EE731

COURSE OUTCOME

1. To discuss the importance of energy in human life, relationship among economy and environment with energy use.
2. To discuss the increasing role of renewable energy, energy management, energy audit, energy efficiency, energy intensity.
3. To discuss energy consumption status in India, energy saving potential and energy conservation efforts in India
4. To explain the concept of energy storage and the principles of energy storage devices.
5. To discuss the characteristics and distribution of solar radiation, measurement of components of solar radiation and analysis of collected solar radiation data.
6. To explain availability of solar radiation at a location and the effect of tilting the surface of collector with respect to horizontal surface.
7. To describe the process of harnessing solar energy in the form of heat and working of solar collectors.
8. To discuss applications of solar energy including heating and cooling.
9. To discuss the operation of solar cell and the environmental effects on electrical characteristics of solar cell
10. To discuss basic Principles of Wind Energy Conversion and to compute the power available in the wind
11. To discuss forces on the Blades, Wind Energy Conversion, collection of Wind Data, energy estimation and site selection.
12. To discuss classification of WEC Systems, its advantages and disadvantages of WECS, and Types of Wind Machines (Wind Energy Collectors).
13. To evaluate the performance of Wind-machines, Generating Systems.

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.

COLLEGE	SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY			
FACULTY NAME	MRS. SHWETHA T M			
BRANCH	EEE	ACADEMIC YEAR		2023-24
COURSE	B.E	SEMESTER	VII	SECTION	
SUBJECT	Solar & Wind Energy		SUBJECT CODE	18EE654

CO & PO MAPPING

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	2	1	0	1	1	1	1	0	0	0	1
CO2	3	3	2	1	1	1	0	0	0	0	0	1
CO3	3	2	1	1	1	1	1	1	0	0	0	1
CO4	3	2	2	1	0	1	1	1	0	0	0	1
CO5	3	1	2	0	1	2	1	1	0	0	1	1
AVERAGE	3	2	1.6	0.6	0.8	1.2	0.8	0.8	0	0	0.2	1

OVERALL MAPPING OF SUBJECT	1.2

CO AND PO ATTAINMENT

	CO%	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	70	2.1	1.4	0.7	0	0.7	0.7	0.7	0.7	0	0	0	0.7
CO2	71	2.13	2.13	1.42	0.71	0.71	0.71	0	0	0	0	0	0.71
CO3	70	2.1	1.4	0.7	0.7	0.7	0.7	0.7	0.7	0	0	0	0.7
CO4	58	1.74	1.16	1.16	0.58	0	0.58	0.58	0.58	0	0	0	0.58
CO5	48	1.44	0.48	0.96	0	0.48	0.96	0.48	0.48	0	0	0.48	0.48
AVERAGE	63.6	1.902	1.314	0.988	0.398	0.518	0.73	0.492	0.492	0	0	0.096	0.634

FINAL ATTAINMENT LEVEL	0.7564

SEM: VII, 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	CO2	CO3	CO4	CO5
1sv19EE003	13	13	26	17	3	20	13	0	13	2	2	2	2	2	10	7	7	7	7	7	35	22	22	26	25	9	65	65	76	46	26
1SV19EE018	13	16	29	14	16	30	16	8	24	2	2	2	2	2	10	7.6	7.6	7.6	7.6	7.6	38	22.6	25.6	23.6	41.6	17.6	66	75	69	77	52
1SV20EE001	13	11	24	8	9	17	0	0	0	2	2	2	2	2	10	4.2	4.2	4.2	4.2	4.2	21	19.2	17.2	14.2	15.2	6.2	56	51	42	28	18
1SV20EE002	16	17	33	15	16	31	0	0	0	2	2	2	2	2	10	5.8	5.8	5.8	5.8	5.8	29	23.8	24.8	22.8	23.8	7.8	70	73	67	44	23
1SV20EE003	17	17	34	19	0	20	18	16	34	2	2	2	2	2	10	10.8	10.8	10.8	10.8	10.8	54	29.8	29.8	31.8	30.8	28.8	88	88	94	57	85
1SV20EE004	17	17	34	16	18	34	12	15	27	2	2	2	2	2	10	7	7	7	7	7	35	26	26	25	39	24	76	76	74	72	71
1SV20EE006	17	14	31	18	18	36	18	12	30	2	2	2	2	2	10	8	8	8	8	8	40	27	24	28	46	22	79	71	82	85	65
1SV20EE007	13	16	26	12	7	19	16	6	22	2	2	2	2	2	10	5.8	5.8	5.8	5.8	5.8	29	20.8	23.8	19.8	30.8	13.8	61	70	58	57	41
TOTAL	119	121	237	119	87	207	93	57	150	16	16	16	16	16	80	56.2	56.2	56.2	56.2	56.2	281	191.2	193.2	191.2	252.2	129	562	568	562	467	380
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	14.875	15.13	29.625	14.875	10.9	25.875	11.625	7.125	18.75	2	2	2	2	2	10	7.025	7.025	7.025	7.025	7.025	35.125	23.9	24.15	23.9	31.525	16.15	70.294	71.029	70.294	58.380	47.500

SOLAR AND WIND 23-24

G. H Ram

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

PRINCIPAL
SIET. TUMKUR.

COURSE OUTCOME

CO1: Explain the advantages, choice and control of electric drive

CO2: Explain the dynamics, generating and motoring modes of operation of electric drives

CO3: Explain the selection of motor power rating to suit industry requirements

CO4: Analyze the performance & control of DC motor drives using controlled rectifiers

CO5: Analyze the performance & control of converter fed Induction motor, synchronous motor & stepper motor drives

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.

COLLEGE	SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY				
FACULTY NAME	Mr. G. H. RAVIKUMAR				
BRANCH	EEE		ACADEMIC YEAR		2023-24
COURSE	B.E	SEMESTER	VII	SECTION	EEE
SUBJECT	INDUSTRIAL DRIVES & APPLICATIONS		SUBJECT CODE		18EE741

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	-	-	-	-	-	-	-	-	-	2
CO4	2	3	-	-	-	-	-	-	-	-	-	2
CO5	2	2	-	-	-	-	-	-	-	-	-	2
AVERAGE	2	2	-	-	-	-	-	-	-	-	-	2
OVERALL MAPPING OF SUBJECT												2

CO AND PO ATTAINMENT

	CO%	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	49.74	0.99		-	-	-	-	-	-	-	-	-	0.99
CO2	47.16	0.943	1.414	-	-	-	-	-	-	-	-	-	0.943
CO3	58.36	1.167	1.75	-	-	-	-	-	-	-	-	-	1.167
CO4	58.36	1.167	1.75	-	-	-	-	-	-	-	-	-	1.167
CO5	70.85	1.417	1.417	-	-	-	-	-	-	-	-	-	1.417
AV		1.136	1.582	-	-	-	-	-	-	-	-	-	1.136
FINAL ATTAINMENT LEVEL													1.28

Academic ye	2023-24		SEM	VII		Total strength		8		Subject	INDUSTRIAL DRIVES & APPLICATIONS												Subject Code	18EE741		
SEM:VII	IA TEST 1(30M)			IA TEST 2(30M)			IA TEST 3(30M)			ASSIGNEMENT / QUIZ(10 M)					SEE MARKS(60)					Total COs ATTAINMENT					% of Individual CO				
USN	CO1	CO2	TOTAL	CO3	CO4	TOTAL	CO5	CO5	TOTAL	CO1	CO2	CO3	CO4	CO5	CO1=12	CO2	CO3	CO4	CO5	CO1=29	CO2=29	CO3=29	CO4=29	CO5=44	CO1	CO2	CO3	CO4	CO5
															4.8	4.8	4.8	4.8	4.8	14.8	14.8	14.8	16.8	24.8	51.03	51.03	51.03	57.93	56.36
1SV19EE003	8	8	16	8	10	18	9	9	18	2	2	2	2	2	4.2	4.2	4.2	4.2	4.2	12.2	8.2	18.2	18.2	33.2	42.07	28.28	62.76	62.76	75.45
1SV19EE018	6	2	8	12	12	24	14	13	27	2	2	2	2	2	2.8	2.8	2.8	2.8	2.8	7.8	8.8	14.8	10.8	28.8	26.90	30.34	51.03	37.24	65.45
1SV20EE001	3	4	7	10	6	16	12	12	24	2	2	2	2	2	4.2	4.2	4.2	4.2	4.2	15.2	14.2	12.2	11.2	31.2	52.41	48.97	42.07	38.62	70.91
1SV20EE002	9	8	17	6	5	11	12	13	25	2	2	2	2	2	8.4	8.4	8.4	8.4	8.4	16.4	15.4	21.4	22.4	30.4	56.55	53.10	73.79	77.24	69.09
1SV20EE003	6	5	11	11	12	23	10	10	20	2	2	2	2	2	4.6	4.6	4.6	4.6	4.6	16.6	14.6	14.6	15.6	35.6	57.24	50.34	50.34	53.79	80.91
1SV20EE004	10	8	18	8	9	17	15	14	29	2	2	2	2	2	5.6	5.6	5.6	5.6	5.6	19.6	21.6	22.6	21.6	36.6	67.59	74.48	77.93	74.48	83.18
1SV20EE006	12	14	26	15	14	29	14	15	29	2	2	2	2	2	4.8	4.8	4.8	4.8	4.8	12.8	11.8	16.8	18.8	28.8	44.14	40.69	57.93	64.83	65.45
1SV20EE007	6	5	11	10	12	22	11	11	22	2	2	2	2	2											49.74	47.16	58.36	58.36	70.85

G. H. Rama
STAFF

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

PRINCIPAL

PRINCIPAL
SIET TUMKUR

DEPARTMENT OF CIVIL ENGINEERING

SUBJECT	ENVIRONMENTAL PROTECTION AND MANAGEMENT	SUBJECT CODE	18CV753

COURSE OUTCOME

- **CO1**. Appreciate the elements of Corporate Environmental Management systems complying to international   environmental management system standards.
- **CO2**. Lead pollution prevention assessment team and implement waste minimization options.
- **CO3**. Develop, Implement, maintain and Audit Environmental Management systems for Organizations.

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 modelling 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: recognition of the need for, and an ability to engage in, to resolve contemporary issues and acquire lifelong learning.

COLLEGE	SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY						
FACULTY NAME	Mrs. SREELAKSHMI S						
BRANCH	CIVIL ENGINEERING		ACADEMIC YEAR			2023-24	
COURSE	B.E	SEMESTER	7		SECTION		---
SUBJECT	ENVIRONMENTAL PROTECTION AND MANAGEMENT			SUBJECT CODE		18CV753	

CO & PO MAPPING

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2	1	1	1	1							1
CO2	2	1	1	1	1							2
CO3	3	1	1	1	1							2
AVERAGE	2.4	2	1	1	1							1.75
OVERALL MAPPING OF SUBJECT												1.83

CO AND PO ATTAINMENT

	CO%	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	0.71	1.42	0.71	0.71	0.71	0.71							0.71
CO2	0.48	0.95	0.48	0.48	0.48	0.48							0.96
CO3	0.80	2.39	0.8	0.8	0.8	0.8							1.6
AVERAGE	0.48	0.95	0.48	0.48	0.48	0.48							1.09
FINAL ATTAINMENT LEVEL OF THE COURSE													0.63

Srielakshmi. S

COURSE INSTRUCTOR

G. H. Ramu

HOD

PRINCIPAL
SIET TUMKUR.
PRINCIPAL

SUB CODE - 18CV753   ENVIRONMENTAL PROTECTION AND MANAGEMENT   2023 - 2024 ODD   VIITH SEM

	IA1		IA2		IA3			ASSIGNMENT			TOTAL				SEE						
	CO1	CO2	CO1	CO2	CO1	CO2	CO3	CO1	CO2	CO3		CO1	CO2	CO3		CO1	CO2	CO3	CO1	CO2	CO3
1SV19EE003 KAVYA G	15	11	16	14	10	10		4	4	2	10	7	7	7	36	52	39	9	0.703	0.527	0.281
1SV19EE018 SYEDSAIFULLA	1	0	22	8	0	14	18	4	4	2	10	10.2	10.2	10.2	51	37.2	26	30.2	0.503	0.351	0.944
1SV20EE001 BALKHIS BANU K	20	0	24	4	0	20	10	4	4	2	10	4.8	4.8	4.8	24	52.8	28	16.8	0.714	0.378	0.525
1SV20EE002 B MADHURA	18	8	11	11	0	20	18	4	4	2	10	7.8	7.8	7.8	39	40.8	43	27.8	0.551	0.581	0.869
1SV20EE003 MANU K R	17	12	22	14	0	19	19	4	4	2	10	9.2	9.2	9.2	46	52.2	49	30.2	0.705	0.662	0.944
1SV20EE004 NAGAVENI N	14	14	22	13	17	0	19	4	4	2	10	9.6	9.6	9.6	48	66.6	31	30.6	0.900	0.419	0.956
1SV20EE006 SHWETHA N	18	14	23	9	0	18	19	4	4	2	10	7	7	7	35	52	45	28	0.703	0.608	0.875
1SV20EE007 M YOGANANDA	20	12	16	4	16	0	19	4	4	2	10	10	10	10	50	66	20	31	0.892	0.270	0.969
TOTAL	123	71	156	77	43	101	122	32	32	16	80	65.6	65.6	65.6	329	419.6	281	204	5.670	3.797	6.363
STUDENTS	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	0.108	0.108	0.250
AVERAGE	15.375	8.88	19.5	9.63	5.38	12.6	15.3	4	4	2	10	8.2	8.2	8.2	41.125	52.45	35.125	25.5	0.709	0.475	0.795

CO-PO-PSO Mapping

COS	POs											#
	1	2	3	4	5	6	7	8	9	10	11	
CO1	2	1	1	1	1	0	0	0	0	0	0	1
CO2	2	1	1	1	1	0	0	0	0	0	0	2
CO3	3	1	1	1	1	0	0	0	0	0	0	2

OVERALL MAPPING OF SUBJECT = 0.63

CO PO ATTAINMENT

COS	% COS	1	2	3	4	5	6	7	8	9	#	#	12
CO1	0.71	1.42	0.7	0.71	0.71	0.71	0	0	0	0	0	0	0.71
CO2	0.48	0.95	0.5	0.48	0.48	0.48	0	0	0	0	0	0	0.96
CO3	0.8	2.39	0.8	0.8	0.8	0.8	0	0	0	0	0	0	1.6
Average	0.48	0.95	0.5	0.48	0.48	0.48	0.0	0.0	0.0	0.0	0	0	1.09

FINIAL ATTAINMENT = 0.633

Srilakshmi. S
COURSE INSTRUCTOR

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

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SIET. TUMKUR.

DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

SUBJECT	POWER SYSTEM OPERATION & CONTROL	SUBJECT CODE	18EE81

COURSE OUTCOME

CO1: Describe various levels of controls in power systems, architecture and configuration of SCADA
CO2: Develop and analyze mathematical models of Automatic Load Frequency Control
CO3: Develop mathematical model of Automatic Generation Control in Interconnected Power system
CO4: Discuss the Control of voltage, Reactive Power and Voltage collapse
CO5: Explain security, contingency analysis, state estimation of power systems

PROGRAM OUTCOMES

PO1 Engineering knowledge: An ability to apply knowledge of 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.

COLLEGE	SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY				
FACULTY NAME	Mr. G. H. RAVIKUMAR				
BRANCH	EEE		ACADEMIC YEAR		2023-24
COURSE	B.E	SEMESTER	VIII	SECTION	EEE
SUBJECT	POWER SYSTEM OPERATION & CONTROL		SUBJECT CODE		18EE81

CO & PO MAPPING

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2	3	-	-	2	-	-	-	-	-	-	1
CO2	2	3	2	-	2	-	-	-	-	-	-	1
CO3	2	3	-	-	2	-	-	-	-	-	-	1
CO4	2	3	-	-	2	-	-	-	-	-	-	1
CO5	2	3	-	-	2	-	-	-	-	-	-	1
AVERAGE	2	3	2	-	2	-	-	-	-	-	-	1
						OVERALL MAPPING OF SUBJECT					2

CO AND PO ATTAINMENT

	CO%	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	70.43	1.408	2.11			1.408							0.704
CO2	70.00	1.4	2.1	1.4		1.4							0.7
CO3	60.52	1.21	1.815			1.21							0.605
CO4	60.52	1.21	1.815			1.21							0.605
CO5	71.42	1.428	2.142			1.428							0.714
AV		1.33	1.99	1.4		1.33							0.665
							FINAL ATTAINMENT LEVEL						1.343

USN	IA TEST 1(30M) CO1	CO2	TOTAL	IA TEST 2(30M) CO3	CO4	TOTAL	IA TEST 3(30M) CO5	CO5	TOTAL	ASSIGNEMENT / QUIZ(10 M) CO1	CO2	CO3	CO4	CO5	SEE MARKS(60) CO1=12	CO2	CO3	CO4	CO5	Total COs ATTAINMENT CO1=29	CO2=29	CO3=29	CO4=29	CO5=44	% of Individual CO CO1	CO2	CO3	CO4	CO5
1SV19EE003	12	12	24	12	14	26	13	13	26	2	2	2	2	2	4.2	4.2	4.2	4.2	4.2	18.2	18.2	20.2	20.2	32.2	62.76	62.76	69.66	69.66	73.18
1SV19EE018	12	12	24	10	12	24	13	13	26	2	2	2	2	2	4.4	4.4	4.4	4.4	4.4	18.4	18.4	18.4	18.4	32.4	63.45	63.45	63.45	63.45	73.64
1SV20EE001	12	8	20	7	5	12	8	8	16	2	2	2	2	2	4.2	4.2	4.2	4.2	4.2	18.2	14.2	11.2	11.2	22.2	62.76	48.97	38.62	38.62	50.45
1SV20EE002	12	9	21	8	5	13	8	9	17	2	2	2	2	2	5.6	5.6	5.6	5.6	5.6	19.6	16.6	12.6	12.6	24.6	67.59	57.24	43.45	43.45	55.91
1SV20EE003	14	11	25	14	12	26	13	13	26	2	2	2	2	2	6.6	6.6	6.6	6.6	6.6	22.6	19.6	20.6	20.6	34.6	77.93	67.59	71.03	71.03	78.64
1SV20EE004	11	15	26	13	13	26	14	15	29	2	2	2	2	2	9.2	9.2	9.2	9.2	9.2	22.2	26.2	24.2	24.2	40.2	76.55	90.34	83.45	83.45	91.36
1SV20EE006	14	15	29	9	8	17	14	15	29	2	2	2	2	2	8.2	8.2	8.2	8.2	8.2	24.2	25.2	18.2	18.2	39.2	83.45	86.90	62.76	62.76	89.09
1SV20EE007	11	15	26	8	6	14	9	8	17	2	2	2	2	2	7	7	7	7	7	20	24	15	15	26	68.97	82.76	51.72	51.72	59.09
																									70.43	70.00	60.52	60.52	71.42

Academic year: 2023-24 SEM: VIII Total strength: 8 Subject: POWER SYSTEM OPERATION & CONTROL Subject Code: 18EE81

STAFF   H O D   PRINCIPAL

DEPARTMENT OF EEE

SUBJECT	Power System Planning	SUBJECT CODE	18EE824

COURSE OUTCOME

CO1.To discuss primary components of power system planning namely load furcating, evaluation of energy resources, provisions of electricity Act and Energy Conservation Act.

CO2.To explain planning methodology for optimum power system expansion, various types of generation, transmission and distribution

CO3. To explain forecasting of anticipated future load requirements of both demand and energy by deterministic and statistical techniques using forecasting tools.

CO4.To discuss methods to mobilize resources to meet the investment requirement for the power sector

CO5.To perform economic appraisal to allocate the resources efficiently and take proper investment decisions

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.

COLLEGE		SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY					
FACULTY NAME		MRS. SHWETHA T M					
BRANCH		EEE		ACADEMIC YEAR			2023-24
COURSE	B.E	SEMESTER		VIII	SECTION		
SUBJECT	Non Conventional Energy sources				SUBJECT CODE		18EE824

CO & PO MAPPING

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	2	1	2	2					1		1
CO2	2	1	2	2	3					1		1
CO3	3	2	2	2	2					1		1
CO4	2	2	3	2	3					1		1
CO5	2	2	2	2	2					1		1
AVERAGE	2.4	1.8	2	2	2.4					1		1
							OVERALL MAPPING OF SUBJECT					1.8

CO AND PO ATTAINMENT

	CO%	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	79.9	2.37	1.58	0.79	1.58	1.58					0.79		0.79
CO2	73.4	1.46	0.73	1.46	1.46	2.19					0.73		0.73
CO3	80.3	2.4	1.6	1.6	1.6	1.6					0.8		0.8
CO4	71.1	1.42	1.42	2.1	1.42	2.1					0.71		0.711
CO5	52.7	1.04	1.04	1.04	1.04	1.04					0.52		0.52
AVERAGE	71.48	1.738	1.274	1.39	1.42	1.7					0.71		0.71
					FINAL ATTAINMENT LEVEL								1.3

EEE8th Sem	IA TEST 1			IA TEST 2			IA TEST 3			Assignment						SEE						TOTAL					Average				
USN	CO1	CO2		CO3	CO4		CO4	CO5		CO1	CO2	CO3	CO4	CO5	TOTAL	CO1	CO2	CO3	CO4	CO5	TOTAL	CO1	CO2	CO3	CO4	CO5	CO1	CO2	CO3	CO4	CO5
1SV19EE003	13	11	24	12	13	25	13	7	20	2	2	2	2	2	10	7.8	7.8	7.8	7.8	7.8	39	22.8	20	21.8	35.8	16.8	0.786	0.717	0.752	0.814	0.579
1SV19EE018	13	12	25	15	7	22	6	6	12	2	2	2	2	2	10	7.8	7.8	7.8	7.8	7.8	39	22.8	21	24.8	22.8	15.8	0.786	0.752	0.855	0.518	0.545
1SV20EE001	14	9	23	14	12	26	8	5	13	2	2	2	2	2	10	4.6	4.6	4.6	4.6	4.6	23	20.6	15	20.6	26.6	11.6	0.71	0.538	0.710	0.605	0.400
1SV20EE002	14	10	24	13	11	24	8	5	10	2	2	2	2	2	10	8	8	8	8	8	40	24	20	23	29	15	0.828	0.690	0.793	0.659	0.517
1SV20EE003	13	12	25	13	14	27	13	7	20	2	2	2	2	2	10	8.4	8.4	8.4	8.4	8.4	42	23.4	22	23.4	37.4	17.4	0.807	0.772	0.807	0.850	0.600
1SV20EE004	16	15	31	15	14	29	8	3	11	2	2	2	2	2	10	7.8	7.8	7.8	7.8	7.8	39	25.8	24	24.8	31.8	12.8	0.89	0.855	0.855	0.723	0.441
1SV20EE006	15	13	28	15	14	29	8	6	14	2	2	2	2	2	10	8.4	8.4	8.4	8.4	8.4	42	25.4	23	25.4	32.4	16.4	0.876	0.807	0.876	0.736	0.566
1SV20EE007	13	12	25	13	12	25	13	7	20	2	2	2	2	2	10	7.6	7.6	7.6	7.6	7.6	38	22.6	21	22.6	34.6	16.6	0.779	0.745	0.779	0.786	0.572
Total	111	94	205	110	97	207	77	46	120	16	16	16	16	16	80	60	60.4	60.4	60.4	60.4	302	187.4	170	186.4	250.4	122.4	6.462	5.8759	6.428	5.6909	4.2207
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	8	8	8	8
Average	13.9	11.8	25.63	13.8	12.1	25.88	9.6	5.8	15	2	2	2	2	2	10	7.6	7.55	7.55	7.55	7.55	37.8	23.43	21	23.3	31.3	15.3	0.808	0.7345	0.803	0.7114	0.5276

18EEE824 POWER SYSTEM PLANNING   2023-2024

B. H. Rama

Head of the Department
Electrical & Electronics Engineering
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