SHRIDEVI INSTITUTE OF ENGINEERING AND TECHNOLOGY
DEPARTMENT OF MECHANICAL ENGINEERING

ODD SEM

2017-18

	SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY SIRA ROAD, TUMKUR- 572 106.

DEPARTMENT OF MECHANICAL ENGINEERING

SUBJECT	Engineering Management & Economics	SUBJECT CODE	15ME51

COURSE OUTCOME

CO1	Explain the development of management and the role it plays at different levels in an organization
CO2	Comprehend the process and role of effective planning,organizing and staffing for the development of an organization
CO3	Understand the necessity of good leadership,communication and co-ordination for establishing effective control in an organization
CO4	Understand engineering economics demand supply and its importance in economic decision making and problem solving
CO5	Calculate present worth,annual worth and IRR for different alternatives in economic decision making

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: 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	U S ARADHYA											
BRANCH	ME		ACADEMIC YEAR	2017-18								
COURSE	B.E	SEMESTER	V	SECTION								
SUBJECT	Engineering Management & Economics			SUBJECT CODE	15ME51							
CO & PO MAPPING												
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1										1		
CO2										1	1	
CO3	3											
CO4	3											
CO5	3											
AVERAGE	2.4									0.9	0.9	
OVERALL MAPPING OF SUBJECT												1.4

CO AND PO ATTAINMENT

	CO%	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	61.4										0.61		
CO2	62.9										0.62	0.62	
CO3	47.1	1.41											
CO4	62.4	1.87											
CO5	47.1	1.41											
AVERAGE	56.18	1.56									0.61	0.62	
FINAL ATTAINMENT LEVEL													0.93

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Academic year	2017-18			SEM	V		Total strength			60			Subject	Engineering Management & Economics					Subject Code	15ME51										
Note:V	IA TEST 1(20M)			IA TEST 2(20M)			IA TEST 3(20M)			ASSIGNEMENT / QUIZ(10 M)					SEE MARKS(60)						Total Cos ATTAINMENT					% of Individual CO				
USN	CO1	CO2	TOTAL	CO2	CO3	TOTAL	CO4	CO5	TOTAL	CO1	CO2	CO3	CO4	CO5	CO1=12	CO2	CO3	CO4	CO5	TOTAL	CO1=34	CO2=44	CO3=34	CO4=34	CO5=34	CO1	CO2	CO3	CO4	CO5
1SV14ME011	6	13	19	6	13	19	6	13	19	1	1	1	1	1	5.6	5.6	5.6	5.6	5.6	28	12.6	25.6	19.6	12.6	19.6	0.4	0.6	0.6	0.4	0.6
1SV14ME016	2	18	20	2	18	20	2	18	20	1	1	1	1	1	6.4	6.4	6.4	6.4	6.4	32	8.4	27.4	25.4	9.4	25.4	0.3	0.6	0.7	0.3	0.7
1SV14ME018	5	14	19	5	14	19	5	14	19	1	1	1	1	1	4.8	4.8	4.8	4.8	4.8	24	10.8	24.8	19.8	10.8	19.8	0.3	0.6	0.6	0.3	0.6
1SV14ME026	11	8	19	11	8	19	11	8	19	1	1	1	1	1	7.8	7.8	7.8	7.8	7.8	39	19.8	27.8	16.8	15.8	16.8	0.6	0.6	0.5	0.6	0.5
1SV14ME034	12	4	16	12	4	16	12	4	16	1	1	1	1	1	6.6	6.6	6.6	6.6	6.6	33	19.6	23.6	11.6	19.6	11.6	0.6	0.5	0.3	0.6	0.3
1SV14ME035	15	3	18	15	3	18	15	3	18	1	1	1	1	1	6.2	6.2	6.2	6.2	6.2	31	22.2	25.2	10.2	22.2	10.2	0.7	0.6	0.3	0.7	0.3
1SV14ME064	12	6	18	12	6	18	12	6	18	1	1	1	1	1	5.6	5.6	5.6	5.6	5.6	28	18.6	24.6	12.6	18.6	12.6	0.5	0.6	0.4	0.5	0.4
1SV14ME083	12	7	19	12	7	19	12	7	19	1	1	1	1	1	7.4	7.4	7.4	7.4	7.4	37	20.4	27.4	15.4	20.4	15.4	0.6	0.6	0.5	0.6	0.5
1SV14ME084	15	2	17	15	2	17	15	2	17	1	1	1	1	1	7.6	7.6	7.6	7.6	7.6	38	23.6	25.6	10.6	23.6	10.6	0.7	0.6	0.3	0.7	0.3
1SV15ME001	11	6	17	11	6	17	11	6	17	1	1	1	1	1	7.6	7.6	7.6	7.6	7.6	38	19.6	25.6	14.6	19.6	14.6	0.6	0.6	0.4	0.6	0.4
1SV15ME005	16	1	17	16	1	17	16	1	17	1	1	1	1	1	7.6	7.6	7.6	7.6	7.6	38	24.6	25.6	9.6	24.6	9.6	0.7	0.6	0.3	0.7	0.3
1SV15ME007	15	3	18	15	3	18	15	3	18	1	1	1	1	1	13	13	13	13	13	65	29	32	17	29	17	0.9	0.7	0.5	0.9	0.5
1SV15ME008	11	8	19	11	8	19	11	8	19	1	1	1	1	1	11.6	11.6	11.6	11.6	11.6	58	23.6	31.6	20.6	23.6	20.6	0.7	0.7	0.6	0.7	0.6
1SV15ME010	14	1	15	14	1	15	14	1	15	1	1	1	1	1	8.8	8.8	8.8	8.8	8.8	44	23.8	24.8	10.8	23.8	10.8	0.7	0.6	0.3	0.7	0.3
1SV15ME011	11	5	16	11	5	16	11	5	16	1	1	1	1	1	0	0	0	0	0	0	12	17	6	12	6	0.4	0.4	0.2	0.4	0.2
1SV15ME017	12	5	17	12	5	17	12	5	17	1	1	1	1	1	7.8	7.8	7.8	7.8	7.8	39	20.8	25.8	13.8	20.8	13.8	0.6	0.6	0.4	0.6	0.4
1SV15ME018	12	4	16	12	4	16	12	4	16	1	1	1	1	1	7.2	7.2	7.2	7.2	7.2	36	20.2	24.2	12.2	20.2	12.2	0.6	0.6	0.4	0.6	0.4
1SV15ME019	11	6	17	11	6	17	11	6	17	1	1	1	1	1	7.8	7.8	7.8	7.8	7.8	39	19.8	25.8	14.8	19.8	14.8	0.6	0.6	0.4	0.6	0.4
1SV15ME023	15	2	17	15	2	17	15	2	17	1	1	1	1	1	7.8	7.8	7.8	7.8	7.8	39	23.8	25.8	10.8	23.8	10.8	0.7	0.6	0.3	0.7	0.3
1SV15ME025	15	3	18	15	3	18	15	3	18	1	1	1	1	1	9	9	9	9	9	45	25	28	13	25	13	0.7	0.6	0.4	0.7	0.4
1SV15ME027	11	5	16	11	5	16	11	5	16	1	1	1	1	1	7.4	7.4	7.4	7.4	7.4	37	19.4	24.4	13.4	19.4	13.4	0.6	0.6	0.4	0.6	0.4
1SV15ME028	12	6	18	12	6	18	12	6	18	1	1	1	1	1	6	6	6	6	6	30	19	25	13	19	13	0.6	0.6	0.4	0.6	0.4
1SV15ME032	12	5	17	12	5	17	12	5	17	1	1	1	1	1	8	8	8	8	8	40	21	26	14	21	14	0.6	0.6	0.4	0.6	0.4
1SV15ME034	11	7	18	11	7	18	11	7	18	1	1	1	1	1	8.6	8.4	8.4	8.4	8.4	42	20.4	27.4	16.4	20.4	16.4	0.6	0.6	0.5	0.6	0.5
1SV15ME039	6	9	15	6	9	15	6	9	15	1	1	1	1	1	8.8	8.8	8.8	8.8	8.8	44	15.8	24.8	18.8	15.8	18.8	0.5	0.6	0.6	0.5	0.6
1SV15ME042	5	15	20	5	15	20	5	15	20	1	1	1	1	1	6.6	6.6	6.6	6.6	6.6	33	12.6	27.6	22.6	12.6	22.6	0.4	0.6	0.7	0.4	0.7
1SV15ME044	6	12	18	6	12	18	6	12	18	1	1	1	1	1	8.6	8.6	8.6	8.6	8.6	43	15.6	27.6	21.6	15.6	21.6	0.5	0.6	0.6	0.5	0.6
1SV15ME045	14	6	20	14	6	20	14	6	20	1	1	1	1	1	9.2	9.2	9.2	9.2	9.2	46	24.2	30.2	16.2	24.2	16.2	0.7	0.7	0.5	0.7	0.5
1SV15ME048	1	16	17	1	16	17	1	16	17	1	1	1	1	1	12	12	12	12	12	60	14	30	29	14	29	0.4	0.7	0.9	0.4	0.9
1SV15ME049	12	1	13	12	1	13	12	1	13	1	1	1	1	1	5.6	5.6	5.6	5.6	5.6	28	18.6	18.6	7.6	18.6	7.6	0.5	0.4	0.2	0.5	0.2
1SV15ME051	1	13	14	1	13	14	1	13	14	1	1	1	1	1	5.6	5.6	5.6	5.6	5.6	28	7.6	20.6	19.6	7.6	19.6	0.2	0.5	0.6	0.2	0.6
1SV15ME056	12	5	17	12	5	17	12	5	17	1	1	1	1	1	10.8	10.8	10.8	10.8	10.8	54	23.8	28.8	16.8	23.8	16.8	0.7	0.7	0.5	0.7	0.5
1SV15ME058	11	6	17	11	6	17	11	6	17	1	1	1	1	1	6.4	6.4	6.4	6.4	6.4	32	18.4	24.4	13.4	18.4	13.4	0.5	0.6	0.4	0.5	0.4
1SV15ME059	11	6	17	11	6	17	11	6	17	1	1	1	1	1	4.8	4.8	4.8	4.8	4.8	24	16.8	22.8	11.8	16.8	11.8	0.5	0.5	0.3	0.5	0.3
1SV15ME062	12	6	18	12	6	18	12	6	18	1	1	1	1	1	11.6	11.6	11.6	11.6	11.6	58	24.6	30.6	18.6	24.6	18.6	0.7	0.7	0.5	0.7	0.5
1SV15ME066	2	18	20	2	18	20	2	18	20	1	1	1	1	1	10.4	10.4	10.4	10.4	10.4	52	13.4	31.4	29.4	13.4	29.4	0.4	0.7	0.9	0.4	0.9
1SV15ME067	13	6	19	13	6	19	13	6	19	1	1	1	1	1	8	8	8	8	8	40	22	28	15	22	15	0.6	0.6	0.4	0.6	0.4
1SV15ME070	12	7	19	12	7	19	12	7	19	1	1	1	1	1	8.6	8.6	8.6	8.6	8.6	43	21.6	28.6	16.6	21.6	16.6	0.6	0.7	0.5	0.6	0.5
1SV15ME072	12	1	13	12	1	13	12	1	13	1	1	1	1	1	10.8	10.8	10.8	10.8	10.8	54	23.8	24.8	12.8	23.8	12.8	0.7	0.6	0.4	0.7	0.4
1SV15ME073	11	7	18	11	7	18	11	7	18	1	1	1	1	1	8	8	8	8	8	40	20	27	16	20	16	0.6	0.6	0.5	0.6	0.5
1SV15ME074	13	6	19	13	6	19	13	6	19	1	1	1	1	1	7.4	7.4	7.4	7.4	7.4	37	21.4	27.4	14.4	21.4	14.4	0.6	0.6	0.4	0.6	0.4
1SV15ME075	13	5	18	13	5	18	13	5	18	1	1	1	1	1	7	7	7	7	7	35	21	26	13	21	13	0.6	0.6	0.4	0.6	0.4
1SV15ME076	15	2	17	15	2	17	15	2	17	1	1	1	1	1	8.8	8.8	8.8	8.8	8.8	44	24.8	26.8	11.8	24.8	11.8	0.7	0.6	0.3	0.7	0.3
1SV15ME077	11	3	14	11	3	14	11	3	14	1	1	1	1	1	6.6	6.6	6.6	6.6	6.6	33	18.6	21.6	10.6	18.6	10.6	0.5	0.5	0.3	0.5	0.3
1SV15ME079	12	4	16	12	4	16	12	4	16	1	1	1	1	1	8.6	8.6	8.6	8.6	8.6	43	21.6	25.6	13.6	21.6	13.6	0.6	0.6	0.4	0.6	0.4
1SV15ME082	12	6	18	12	6	18	12	6	18	1	1	1	1	1	8	8	8	8	8	40	21	27	15	21	15	0.6	0.6	0.4	0.6	0.4
1SV15ME083	11	4	15	11	4	15	11	4	15	1	1	1	1	1	6.8	6.8	6.8	6.8	6.8	34	18.8	22.8	11.8	18.8	11.8	0.6	0.5	0.3	0.6	0.3
1SV15ME087	16	3	19	16	3	19	16	3	19	1	1	1	1	1	6.4	6.4	6.4	6.4	6.4	32	23.4	26.4	10.4	23.4	10.4	0.7	0.6	0.3	0.7	0.3
1SV15ME400	15	4	19	15	4	19	15	4	19	1	1	1	1	1	5.6	5.6	5.6	5.6	5.6	28	21.6	25.6	10.6	21.6	10.6	0.6	0.6	0.3	0.6	0.3
1SV16ME402	15	1	16	15	1	16	15	1	16	1	1	1	1	1	5.6	5.6	5.6	5.6	5.6	28	21.6	22.6	7.6	21.6	7.6	0.6	0.5	0.2	0.6	0.2
1SV16ME403	11	6	17	11	6	17	11	6	17	1	1	1	1	1	6.4	6.4	6.4	6.4	6.4	32	18.4	24.4	13.4	18.4	13.4	0.5	0.6	0.4	0.5	0.4
1SV16ME404	11	3	14	11	3	14	11	3	14	1	1	1	1	1	8.2	8.2	8.2	8.2	8.2	41	20.2	23.2	12.2	20.2	12.2	0.6	0.5	0.4	0.6	0.4
1SV16ME405	1	11	12	1	11	12	1	11	12	1	1	1	1	1	2.8	2.8	2.8	2.8	2.8	14	4.8	15.8	14.8	4.8	14.8	0.1	0.4	0.4	0.1	0.4
1SV16ME407	12	5	17	12	5	17	12	5	17	1	1	1	1	1	10	10	10	10	10	50	23	28	16	23	16	0.7	0.6	0.5	0.7	0.5
1SV16ME408	12	3	15	12	3	15	12	3	15	1	1	1	1	1	4.8	4.8	4.8	4.8	4.8	24	17.8	20.8	8.8	17.8	8.8	0.5	0.5	0.3	0.5	0.3
1SV16ME409	11	6	17	11	6	17	11	6	17	1	1	1	1	1	10	10	10	10	10	50	22	28	17	22	17	0.6	0.6	0.5	0.6	0.5
1SV16ME410	15	2	17	15	2	17	15	2	17	1	1	1	1	1	7	7	7	7	7	35	23	25	10	23	10	0.7	0.6	0.3	0.7	0.3
1SV16ME412	16	3	19	16	3	19	16	3	19	1	1	1	1	1	10.6	10.4	10.4	10.4	10.4	52	27.4	30.4	14.4	27.4	14.4	0.8	0.7	0.4	0.8	0.4
1SV16ME413	1	14	15	1	14	15	1	14	15	1	1	1	1	1	7.8	7.8	7.8	7.8	7.8	39	9.8	23.8	22.8	9.8	22.8	0.3	0.5	0.7	0.3	0.7
1SV16ME416	12	3	15	12	3	15	12	3	15	1	1	1	1	1	6.8	6.8	6.8	6.8	6.8	34	19.8	22.8	10.8	19.8	10.8	0.6	0.5	0.3	0.6	0.3
1SV16ME417	16	1	17	16	1	17	16	1	17	1	1	1	1	1	8.8	8.8	8.8	8.8	8.8	44	25.8	26.8	10.8	25.8	10.8	0.8	0.6	0.3	0.8	0.3
1SV16ME418	15	0	15	15	0	15	15	0	15	1	1	1	1	1	9.4	9.4	9.4	9.4	9.4	47	25.4	25.4	10.4	25.4	10.4	0.7	0.6	0.3	0.7	0.3
1SV16ME419	11	3	14	11	3	14	11	3	14	1	1	1	1	1	7.2	7.2	7.2	7.2	7.2	36	19.2	22.2	11.2	19.2	11.2	0.6	0.5	0.3	0.6	0.3
1SV16ME420	12	8	20	12	8	20	12	8	20	1	1	1	1	1	2.6	25.6	25.6	25.6	25.6	13	15.6	46.6	34.6	34.6	34.6	0.5	1.1	1.0	1.1	1.0
1SV16ME421	12	6	18	12	6	18	12	6	18	1	1	1	1	1	10	10	10	10	10	50	23	29	17	23	17	0.7	0.7	0.5	0.7	0.5
1SV16ME425	11	2	13	11	2	13	11	2	13	1	1	1	1	1	6.2	6.2	6.2	6.2	6.2	31	18.2	20.2	9.2	18.2	9.2	0.5	0.5	0.3	0.5	0.3
1SV16ME424	3	17	20	3	17	20	3	17	20	1	1	1	1	1	8.4	8.4	8.4	8.4	8.4	42	12.4	29.4	26.4	12.4	26.4	0.4	0.7	0.8	0.4	0.8
1SV16ME425	12	6	18	12	6	18	12	6	18	1	1	1	1	1	11.2	11.2	11.2	11.2	11.2	56	24.2	30.2	18.2	24.2	18.2	0.7	0.7	0.5	0.7	0.5
TOTAL	747	413	1160	747	413	1160	747	413	1160	60	60	60	60	60	520.8	543.6	543.6	543.6	543.6	2693	1335.6	1771.6	1024.6	1358.6	1024.6	39.3	40.3	30.1	40.0	30.1
NO OF STUDENTS	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60
AVERAGE	11.67	6.45	18.125	11.7	6.453	18.13	11.67	6.45	18.13	1.1	1.1	1.1	1.1	1.1	8.13	8.49	8.49	8.49	8.49	40.67	20.9	27.7	16.0	21.2	16.0	61.4	62.9	47.1	62.4	47.1

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DEPARTMENT OF MECHANICAL ENGINEERING

SUBJECT	Dynamics of Machinary	SUBJECT CODE	15ME52

COURSE OUTCOME

CO1	Apply the concepts of static and dynamic balancing of reciprocating and rotating masses on automobiles
CO2	Determine static and dynamic forces for four bars and slider crank mechanism, stability of governors, Natural frequency of different parameters of vibratory system, force and motion
CO3	Analyze the stability of governors , gyroscopic effects on ships, plane disc, aero planes , automobiles
CO4	Distinguish different types of vibratory systems
CO5	Formulate mathematical equations for damped and undamped vibratory 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 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: 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	MALTESHA P J				
BRANCH	ME	ACADEMIC YEAR	2017-18		
COURSE	B.E	SEMESTER	V	SECTION	
SUBJECT	Dynamics of Machinary	SUBJECT CODE	15ME52		

CO & PO MAPPING

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2											
CO2		1	3									
CO3		2	2									
CO4	2	1	2									
CO5		2	3									2
AVERAGE	2	1.5	1.5									2
											OVERALL MAPPING OF SUBJECT	1.75

CO AND PO ATTAINMENT

	CO%	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	64.2	1.28											
CO2	63.6		0.63	1.90									
CO3	48.8		0.97	0.97									
CO4	64.2	1.28	0.64	1.28									
CO5	48.8		0.97	1.46									0.97
AVERAGE	57.92	1.28	0.80	1.40									0.97
												FINAL ATTAINMENT LEVEL	1.11

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Academic year	2017-18			SEM	V		Total strength	68		Subject	Dynamics of Machines						Subject Code	15ME52										
SEM-V	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	CO2	CO3	TOTAL	CO4	CO5	TOTAL	CO1	CO2	CO3	CO4	CO5	CO1=42	CO2	CO3	CO4	CO5	TOTAL	CO1=34	CO2=44	CO3=34	CO4=34	CO5=34	CO1	CO2	CO3	CO4	CO5
1SV14ME017	7	7	14	7	7	14	7	7	14	1	1	1	1	1	11.6	11.6	11.6	11.6	11.6	58	19.6	26.6	19.6	19.6	19.6	0.6	0.6	0.6	0.6	0.6
1SV14ME016	5	8	13	5	8	13	5	8	13	1	1	1	1	1	9	9	9	9	9	45	15	23	18	15	18	0.4	0.5	0.5	0.4	0.5
1SV14ME018	1	11	12	1	11	12	1	11	12	1	1	1	1	1	3.8	3.8	3.8	3.8	3.8	19	5.8	16.8	15.8	5.8	15.8	0.2	0.4	0.5	0.2	0.5
1SV14ME026	1	15	16	1	15	16	1	15	16	1	1	1	1	1	5.6	5.6	5.6	5.6	5.6	28	7.6	22.6	21.6	7.6	21.6	0.2	0.5	0.6	0.2	0.6
1SV14ME034	2	11	13	2	11	13	2	11	13	1	1	1	1	1	8	8	8	8	8	40	11	22	20	11	20	0.3	0.5	0.6	0.3	0.6
1SV14ME055	6	11	17	6	11	17	6	11	17	1	1	1	1	1	11.8	11.8	11.8	11.8	11.8	59	18.8	29.8	23.8	18.8	23.8	0.6	0.7	0.7	0.6	0.7
1SV14ME064	8	8	16	8	8	16	8	8	16	1	1	1	1	1	0	0	0	0	0	0	9	17	9	9	9	0.3	0.4	0.3	0.3	0.3
1SV14ME083	6	9	15	6	9	15	6	9	15	1	1	1	1	1	5.6	5.6	5.6	5.6	5.6	28	12.6	21.6	15.6	12.6	15.6	0.4	0.5	0.5	0.4	0.5
1SV14ME084	8	6	14	8	6	14	8	6	14	1	1	1	1	1	7.4	7.4	7.4	7.4	7.4	37	16.4	22.4	14.4	16.4	14.4	0.5	0.5	0.4	0.5	0.4
1SV15ME001	6	9	15	6	9	15	6	9	15	1	1	1	1	1	5.6	5.6	5.6	5.6	5.6	28	12.6	21.6	15.6	12.6	15.6	0.4	0.5	0.5	0.4	0.5
1SV15ME003	9	11	20	9	11	20	9	11	20	1	1	1	1	1	10	10	10	10	10	50	20	31	22	20	22	0.6	0.7	0.6	0.6	0.6
1SV15ME007	2	17	19	2	17	19	2	17	19	1	1	1	1	1	10.4	10.4	10.4	10.4	10.4	52	13.4	30.4	28.4	13.4	28.4	0.4	0.7	0.8	0.4	0.8
1SV15ME008	3	17	20	3	17	20	3	17	20	1	1	1	1	1	9	9	9	9	9	45	13	30	27	13	27	0.4	0.7	0.8	0.4	0.8
1SV15ME010	12	4	16	12	4	16	12	4	16	1	1	1	1	1	6.8	6.8	6.8	6.8	6.8	34	19.8	23.8	11.8	19.8	11.8	0.6	0.5	0.3	0.6	0.3
1SV15ME011	11	2	13	11	2	13	11	2	13	1	1	1	1	1	8.2	8.2	8.2	8.2	8.2	41	20.2	32.2	11.2	20.2	11.2	0.6	0.5	0.3	0.6	0.3
1SV15ME017	12	7	19	12	7	19	12	7	19	1	1	1	1	1	5.6	5.6	5.6	5.6	5.6	28	18.6	25.6	13.6	18.6	13.6	0.5	0.6	0.4	0.5	0.4
1SV15ME018	15	2	17	15	2	17	15	2	17	1	1	1	1	1	11	11	11	11	11	55	27	29	14	27	14	0.8	0.7	0.4	0.8	0.4
1SV15ME019	12	4	16	12	4	16	12	4	16	1	1	1	1	1	7.6	7.6	7.6	7.6	7.6	38	20.6	24.6	12.6	20.6	12.6	0.6	0.6	0.4	0.6	0.4
1SV15ME023	13	5	18	13	5	18	13	5	18	1	1	1	1	1	7.4	7.4	7.4	7.4	7.4	37	21.4	26.4	13.4	21.4	13.4	0.6	0.6	0.4	0.6	0.4
1SV15ME025	15	5	20	15	5	20	15	5	20	1	1	1	1	1	5.6	5.6	5.6	5.6	5.6	28	21.6	26.6	11.6	21.6	11.6	0.6	0.6	0.3	0.6	0.3
1SV15ME027	12	5	17	12	5	17	12	5	17	1	1	1	1	1	7	7	7	7	7	35	20	25	13	20	13	0.6	0.6	0.4	0.6	0.4
1SV15ME028	12	5	17	12	5	17	12	5	17	1	1	1	1	1	9.2	9.2	9.2	9.2	9.2	46	22.2	27.2	15.2	22.2	15.2	0.7	0.6	0.4	0.7	0.4
1SV15ME032	11	8	19	11	8	19	11	8	19	1	1	1	1	1	5.6	5.6	5.6	5.6	5.6	28	17.6	25.6	14.6	17.6	14.6	0.5	0.6	0.4	0.5	0.4
1SV15ME034	11	6	17	11	6	17	11	6	17	1	1	1	1	1	5.6	5.6	5.6	5.6	5.6	28	17.6	23.6	12.6	17.6	12.6	0.5	0.5	0.4	0.5	0.4
1SV15ME039	12	3	15	12	3	15	12	3	15	1	1	1	1	1	5.6	5.6	5.6	5.6	5.6	28	18.6	21.6	9.6	18.6	9.6	0.5	0.5	0.3	0.5	0.3
1SV15ME042	16	0	16	16	0	16	16	0	16	1	1	1	1	1	6.8	6.8	6.8	6.8	6.8	34	23.8	23.8	7.8	23.8	7.8	0.7	0.5	0.2	0.7	0.2
1SV15ME044	14	3	17	14	3	17	14	3	17	1	1	1	1	1	10.8	10.8	10.8	10.8	10.8	54	25.8	28.8	14.8	25.8	14.8	0.8	0.7	0.4	0.8	0.4
1SV15ME045	12	4	16	12	4	16	12	4	16	1	1	1	1	1	8.6	8.6	8.6	8.6	8.6	43	21.6	25.6	13.6	21.6	13.6	0.6	0.6	0.4	0.6	0.4
1SV15ME048	11	6	17	11	6	17	11	6	17	1	1	1	1	1	11	11	11	11	11	55	23	29	18	23	18	0.7	0.7	0.5	0.7	0.5
1SV15ME049	12	5	17	12	5	17	12	5	17	1	1	1	1	1	10.2	10.2	10.2	10.2	10.2	51	23.2	28.2	16.2	23.2	16.2	0.7	0.6	0.5	0.7	0.5
1SV15ME051	12	6	18	12	6	18	12	6	18	1	1	1	1	1	7	7	7	7	7	35	20	26	14	20	14	0.6	0.6	0.4	0.6	0.4
1SV15ME056	15	4	19	15	4	19	15	4	19	1	1	1	1	1	7.6	7.6	7.6	7.6	7.6	38	23.6	27.6	12.6	23.6	12.6	0.7	0.6	0.4	0.7	0.4
1SV15ME058	15	2	17	15	2	17	15	2	17	1	1	1	1	1	5.6	5.6	5.6	5.6	5.6	28	21.6	23.6	8.6	21.6	8.6	0.6	0.5	0.3	0.6	0.3
1SV15ME059	15	3	18	15	3	18	15	3	18	1	1	1	1	1	8.4	8.4	8.4	8.4	8.4	42	24.4	27.4	12.4	24.4	12.4	0.7	0.6	0.4	0.7	0.4
1SV15ME062	14	6	20	14	6	20	14	6	20	1	1	1	1	1	10	10	10	10	10	50	25	31	17	25	17	0.7	0.7	0.5	0.7	0.5
1SV15ME066	14	4	18	14	4	18	14	4	18	1	1	1	1	1	7	7	7	7	7	35	22	28	12	22	12	0.6	0.6	0.4	0.6	0.4
1SV15ME067	12	3	15	12	3	15	12	3	15	1	1	1	1	1	11.4	11.4	11.4	11.4	11.4	57	24.4	27.4	15.4	24.4	15.4	0.7	0.6	0.5	0.7	0.5
1SV15ME070	13	7	20	13	7	20	13	7	20	1	1	1	1	1	5.6	5.6	5.6	5.6	5.6	28	19.6	26.6	13.6	19.6	13.6	0.6	0.6	0.4	0.6	0.4
1SV15ME072	15	4	19	15	4	19	15	4	19	1	1	1	1	1	8.6	8.6	8.6	8.6	8.6	43	24.6	28.6	13.6	24.6	13.6	0.7	0.7	0.4	0.7	0.4
1SV15ME073	11	3	14	11	3	14	11	3	14	1	1	1	1	1	11	11	11	11	11	55	23	28	15	23	15	0.7	0.6	0.4	0.7	0.4
1SV15ME074	14	5	19	14	5	19	14	5	19	1	1	1	1	1	10.6	10.6	10.6	10.6	10.6	53	25.6	30.6	16.6	25.6	16.6	0.8	0.7	0.5	0.8	0.5
1SV15ME075	12	3	15	12	3	15	12	3	15	1	1	1	1	1	12	12	12	12	12	60	25	28	16	25	16	0.7	0.6	0.5	0.7	0.5
1SV15ME076	15	0	15	15	0	15	15	0	15	1	1	1	1	1	11.2	11.2	11.2	11.2	11.2	56	27.2	27.2	12.2	27.2	12.2	0.8	0.6	0.4	0.8	0.4
1SV15ME077	11	2	13	11	2	13	11	2	13	1	1	1	1	1	8	8	8	8	8	40	20	22	11	20	11	0.6	0.5	0.3	0.6	0.3
1SV15ME079	12	6	18	12	6	18	12	6	18	1	1	1	1	1	8.8	8.8	8.8	8.8	8.8	44	21.8	27.8	15.8	21.8	15.8	0.6	0.6	0.5	0.6	0.5
1SV15ME082	12	0	12	12	0	12	12	0	12	1	1	1	1	1	10.4	10.4	10.4	10.4	10.4	52	23.4	23.4	11.4	23.4	11.4	0.7	0.5	0.3	0.7	0.3
1SV15ME083	14	1	15	14	1	15	14	1	15	1	1	1	1	1	9.8	9.8	9.8	9.8	9.8	49	24.8	25.8	11.8	24.8	11.8	0.7	0.6	0.3	0.7	0.3
1SV15ME087	1	13	14	1	13	14	1	13	14	1	1	1	1	1	11.2	11.2	11.2	11.2	11.2	56	13.2	26.2	25.2	13.2	25.2	0.4	0.6	0.7	0.4	0.7
1SV15ME400	5	9	14	5	9	14	5	9	14	1	1	1	1	1	11.4	11.4	11.4	11.4	11.4	57	17.4	26.4	21.4	17.4	21.4	0.5	0.6	0.6	0.5	0.6
1SV16ME402	1	13	14	1	13	14	1	13	14	1	1	1	1	1	9.6	9.6	9.6	9.6	9.6	48	11.6	24.6	23.6	11.6	23.6	0.3	0.6	0.7	0.3	0.7
1SV16ME403	12	6	18	12	6	18	12	6	18	1	1	1	1	1	9.8	9.8	9.8	9.8	9.8	49	22.8	28.8	16.8	22.8	16.8	0.7	0.7	0.5	0.7	0.5
1SV16ME404	12	6	18	12	6	18	12	6	18	1	1	1	1	1	10.2	10.2	10.2	10.2	10.2	51	23.2	29.2	17.2	23.2	17.2	0.7	0.7	0.5	0.7	0.5
1SV16ME405	15	2	17	15	2	17	15	2	17	1	1	1	1	1	7.6	7.6	7.6	7.6	7.6	38	23.6	25.6	10.6	23.6	10.6	0.7	0.6	0.3	0.7	0.3
1SV16ME407	15	1	16	15	1	16	15	1	16	1	1	1	1	1	9	9	9	9	9	45	25	26	11	25	11	0.7	0.6	0.3	0.7	0.3
1SV16ME408	11	3	14	11	3	14	11	3	14	1	1	1	1	1	13.2	13.2	13.2	13.2	13.2	66	25.2	28.2	17.2	25.2	17.2	0.7	0.6	0.5	0.7	0.5
1SV16ME409	12	8	20	12	8	20	12	8	20	1	1	1	1	1	11.4	11.4	11.4	11.4	11.4	57	24.4	32.4	20.4	24.4	20.4	0.7	0.7	0.6	0.7	0.6
1SV16ME410	12	4	16	12	4	16	12	4	16	1	1	1	1	1	10.8	10.8	10.8	10.8	10.8	54	23.8	27.8	15.8	23.8	15.8	0.7	0.6	0.5	0.7	0.5
1SV16ME412	11	6	17	11	6	17	11	6	17	1	1	1	1	1	12.8	12.8	12.8	12.8	12.8	64	24.8	30.8	19.8	24.8	19.8	0.7	0.7	0.6	0.7	0.6
1SV16ME413	1	18	19	1	18	19	1	18	19	1	1	1	1	1	10.8	10.8	10.8	10.8	10.8	54	12.8	30.8	29.8	12.8	29.8	0.4	0.7	0.9	0.4	0.9
1SV16ME416	12	6	18	12	6	18	12	6	18	1	1	1	1	1	10.2	10.2	10.2	10.2	10.2	51	23.2	29.2	17.2	23.2	17.2	0.7	0.7	0.5	0.7	0.5
1SV16ME417	12	5	17	12	5	17	12	5	17	1	1	1	1	1	13	13	13	13	13	65	26	31	19	26	19	0.8	0.7	0.6	0.8	0.6
1SV16ME418	14	3	17	14	3	17	14	3	17	1	1	1	1	1	10.6	10.6	10.6	10.6	10.6	53	25.6	28.6	14.6	25.6	14.6	0.8	0.7	0.4	0.8	0.4
1SV16ME419	12	2	14	12	2	14	12	2	14	1	1	1	1	1	7	7	7	7	7	35	20	22	10	20	10	0.6	0.5	0.3	0.6	0.3
1SV16ME420	13	2	14	12	2	14	12	2	14	1	1	1	1	1	13.8	13.6	13.8	13.8	13.6	68	26.8	28.6	16.6	26.8	16.6	0.8	0.7	0.5	0.8	0.5
1SV16ME421	11	6	17	11	6	17	11	6	17	1	1	1	1	1	9	9	9	9	9	45	21	27	16	21	16	0.6	0.6	0.5	0.6	0.5
1SV16ME423	14	4	18	14	4	18	14	4	18	1	1	1	1	1	6.8	6.8	6.8	6.8	6.8	34	21.8	25.8	11.8	21.8	11.8	0.6	0.6	0.3	0.6	0.3
1SV16ME424	15	0	15	15	0	15	15	0	15	1	1	1	1	1	8.4	8.4	8.4	8.4	8.4	42	24.4	24.4	9.4	24.4	9.4	0.7	0.6	0.3	0.7	0.3
1SV16ME425	15	4	19	15	4	19	15	4	19	1	1	1	1	1	10.6	10.6	10.6	10.6	10.6	53	26.6	30.6	15.6	26.6	15.6	0.8	0.7	0.5	0.8	0.5
TOTAL	728	394	1122	728	394	1122	728	394	1122	68	68	68	68	68	600.4	600.4	600.4	600.4	600.4	3002	1396.4	1790.4	1062.4	1396.4	1062.4	40.7	31.2	41.1	31.2	
NO OF STUDENTS	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68
AVERAGE	11.4	6.2	17.5	11.4	6.2	17.5	11.4	6.2	17.5	1.1	1.1	1.1	1.1	1.1	9.38	9.38	9.38	9.38	9.38	46.91	21.8	28.0	16.6	21.8	16.6	64.2	65.6	48.8	64.2	48.8

H.O.D
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SHRIDEVI	SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY SIRA ROAD, TUMKUR- 572 106.

DEPARTMENT OF MECHANICAL ENGINEERING

SUBJECT	Turbo Machines	SUBJECT CODE	15ME53

COURSE OUTCOME

CO1	Recognize the appropriate turbo machine and dimensionless variables for a given dynamical situation and predict the prototype based on similitude.
CO2	Comprehend the significance of static and stagnation properties for turbines and compressors.
CO3	Summarize the Euler's equation to analyze energy transfer in turbo machines.
CO4	Apply the velocity triangles for steam turbines and hydraulic turbines to estimate various performance parameters.
CO5	Perform the preliminary design of centrifugal pumps and centrifugal compressors.

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: 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	RAVI KUMAR D S											
BRANCH	ME			ACADEMIC YEAR			2017-18					
COURSE	B.E	SEMESTER	V	SECTION								
SUBJECT	Turbo Machines			SUBJECT CODE	15ME53							
CO & PO MAPPING												
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	3	3									
CO2	3	3	3									
CO3	3	3	3									
CO4	3	3	3									
CO5	3	3	3									
AVERAGE	3	3	3									
OVERALL MAPPING OF SUBJECT												3.0

CO AND PO ATTAINMENT

	CO%	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	58.1	1.74	1.74	1.74									
CO2	61.1	1.83	1.83	1.83									
CO3	39.2	1.17	1.17	1.17									
CO4	58.3	1.74	1.74	1.74									
CO5	39.2	1.17	1.17	1.17									
AVERAGE	51.18	1.53	1.53	1.53									
FINAL ATTAINMENT LEVEL													1.53

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Academic year	2017-18			SEM	V		Total strength	68		Subject	Turbo Machines			Subject Code	15MES3														
SEM/Y	IA TEST 1(20M)			IA TEST 2(20M)			IA TEST 3(20M)	ASSIGNEMENT / QUIZ(10 M)					SEE MARK(60M)						Total Cos ATTAINMENT					% of individual CO						
USN	CO1	CO2	TOTAL	CO2	CO3	TOTAL	CO4	CO5	TOTAL	CO1	CO2	CO3	CO4	CO5	CO1=12	CO2	CO3	CO4	CO5	TOTAL	CO1=34	CO2=44	CO3=34	CO4=34	CO5=34	CO1	CO2	CO3	CO4	CO5
1SV14ME011	8	4	12	8	4	12	8	4	12	1	1	1	1	1	4.4	4.4	4.4	4.4	4.4	22	13.4	17.6	9.4	13.4	9.4	0.4	0.4	0.3	0.4	0.3
1SV14ME016	9	8	17	9	8	17	9	8	17	1	1	1	1	1	3.2	3.2	3.2	3.2	3.2	16	13.2	21.2	12.2	13.2	12.2	0.4	0.5	0.4	0.4	0.4
1SV14ME018	11	7	18	11	7	18	11	7	18	1	1	1	1	1	2.8	2.8	2.8	2.8	2.8	14	14.8	21.8	10.8	14.8	10.8	0.4	0.5	0.3	0.4	0.3
1SV14ME026	12	8	20	12	8	20	12	8	20	1	1	1	1	1	2.8	2.8	2.8	2.8	2.8	14	15.8	23.8	11.8	15.8	11.8	0.5	0.5	0.3	0.5	0.3
1SV14ME034	14	5	19	14	5	19	14	5	19	1	1	1	1	1	3.8	3.8	3.8	3.8	3.8	19	18.8	23.8	9.8	18.8	9.8	0.6	0.5	0.3	0.6	0.3
1SV14ME055	11	8	19	11	8	19	11	8	19	1	1	1	1	1	5.6	5.6	5.6	5.6	5.6	28	17.6	25.6	14.6	17.6	14.6	0.5	0.6	0.4	0.5	0.4
1SV14ME064	12	5	17	12	5	17	12	5	17	1	1	1	1	1	4.4	4.4	4.4	4.4	4.4	22	17.4	22.4	10.4	17.4	10.4	0.5	0.5	0.3	0.5	0.3
1SV14ME083	11	7	18	11	7	18	11	7	18	1	1	1	1	1	5.6	5.6	5.6	5.6	5.6	28	17.6	24.6	13.6	17.6	13.6	0.5	0.6	0.4	0.5	0.4
1SV14ME084	12	7	19	12	7	19	12	7	19	1	1	1	1	1	5.6	5.6	5.6	5.6	5.6	28	18.6	25.6	13.6	18.6	13.6	0.5	0.6	0.4	0.5	0.4
1SV15ME001	11	5	16	11	5	16	11	5	16	1	1	1	1	1	7	7	7	7	7	35	19	24	13	19	13	0.6	0.5	0.4	0.6	0.4
1SV15ME003	12	8	20	12	8	20	12	8	20	1	1	1	1	1	8.6	8.6	8.6	8.6	8.6	43	21.6	29.6	17.6	21.6	17.6	0.6	0.7	0.5	0.6	0.5
1SV15ME007	12	8	20	12	8	20	12	8	20	1	1	1	1	1	7.2	7.2	7.2	7.2	7.2	36	20.2	28.2	16.2	20.2	16.2	0.6	0.6	0.5	0.6	0.5
1SV15ME008	11	9	20	11	9	20	11	9	20	1	1	1	1	1	5.6	5.6	5.6	5.6	5.6	28	17.6	26.6	15.6	17.6	15.6	0.5	0.6	0.5	0.5	0.5
1SV15ME010	12	7	19	12	7	19	12	7	19	1	1	1	1	1	5.6	5.6	5.6	5.6	5.6	28	18.6	25.6	13.6	18.6	13.6	0.5	0.6	0.4	0.5	0.4
1SV15ME011	11	5	16	11	5	16	11	5	16	1	1	1	1	1	2.8	2.8	2.8	2.8	2.8	14	14.8	19.8	8.8	14.8	8.8	0.4	0.5	0.3	0.4	0.3
1SV15ME017	12	7	19	12	7	19	12	7	19	1	1	1	1	1	7.6	7.6	7.6	7.6	7.6	38	20.6	27.6	15.6	20.6	15.6	0.6	0.6	0.5	0.6	0.5
1SV15ME018	12	5	17	12	5	17	12	5	17	1	1	1	1	1	6.8	6.8	6.8	6.8	6.8	34	19.8	24.8	12.8	19.8	12.8	0.6	0.6	0.4	0.6	0.4
1SV15ME019	12	7	19	12	7	19	12	7	19	1	1	1	1	1	5.6	5.6	5.6	5.6	5.6	28	18.6	25.6	13.6	18.6	13.6	0.5	0.6	0.4	0.5	0.4
1SV15ME023	11	9	20	11	9	20	11	9	20	1	1	1	1	1	8.6	8.6	8.6	8.6	8.6	43	20.6	29.6	18.6	20.6	18.6	0.6	0.7	0.5	0.6	0.5
1SV15ME025	2	18	20	2	18	20	2	18	20	1	1	1	1	1	6	6	6	6	6	30	9	27	25	9	25	0.3	0.6	0.7	0.3	0.7
1SV15ME027	2	18	20	2	18	20	2	18	20	1	1	1	1	1	4.2	4.2	4.2	4.2	4.2	21	7.2	25.2	23.2	7.2	23.2	0.2	0.6	0.7	0.2	0.7
1SV15ME028	11	9	20	11	9	20	11	9	20	1	1	1	1	1	5.6	5.6	5.6	5.6	5.6	28	17.6	26.6	15.6	17.6	15.6	0.5	0.6	0.5	0.5	0.5
1SV15ME032	12	7	19	12	7	19	12	7	19	1	1	1	1	1	6	6	6	6	6	30	19	29	14	19	14	0.6	0.9	0.4	0.6	0.4
1SV15ME034	14	5	19	14	5	19	14	5	19	1	1	1	1	1	5.6	5.6	5.6	5.6	5.6	28	20.6	25.6	11.6	20.6	11.6	0.6	0.6	0.3	0.6	0.3
1SV15ME039	4	16	20	4	16	20	4	16	20	1	1	1	1	1	5.6	5.6	5.6	5.6	5.6	28	10.6	26.6	22.6	10.6	22.6	0.3	0.6	0.7	0.3	0.7
1SV15ME042	11	7	18	11	7	18	11	7	18	1	1	1	1	1	5.6	5.6	5.6	5.6	5.6	28	17.6	24.6	13.6	17.6	13.6	0.5	0.6	0.4	0.5	0.4
1SV15ME044	15	4	19	15	4	19	15	4	19	1	1	1	1	1	5.6	5.6	5.6	5.6	5.6	28	21.6	25.6	10.6	21.6	10.6	0.6	0.6	0.3	0.6	0.3
1SV15ME045	15	3	18	15	3	18	15	3	18	1	1	1	1	1	5.6	5.6	5.6	5.6	5.6	28	21.6	24.6	9.6	21.6	9.6	0.6	0.6	0.3	0.6	0.3
1SV15ME048	16	3	19	16	3	19	16	3	19	1	1	1	1	1	9.4	9.4	9.4	9.4	9.4	47	26.4	29.4	13.4	26.4	13.4	0.8	0.7	0.4	0.8	0.4
1SV15ME049	12	3	15	12	3	15	12	3	15	1	1	1	1	1	3	6	6	6	6	15	16	22	10	19	10	0.5	0.5	0.3	0.6	0.3
1SV15ME051	11	7	18	11	7	18	11	7	18	1	1	1	1	1	6.6	6.6	6.6	6.6	6.6	33	18.6	25.6	14.6	18.6	14.6	0.5	0.6	0.4	0.5	0.4
1SV15ME056	14	5	19	14	5	19	14	5	19	1	1	1	1	1	6	6	6	6	6	30	21	28	12	21	12	0.6	0.6	0.4	0.6	0.4
1SV15ME058	14	3	17	14	3	17	14	3	17	1	1	1	1	1	5.6	5.6	5.6	5.6	5.6	28	20.6	23.6	9.6	20.6	9.6	0.6	0.5	0.3	0.6	0.3
1SV15ME059	12	4	16	12	4	16	12	4	16	1	1	1	1	1	6	6	6	6	6	30	19	29	11	19	11	0.6	0.5	0.3	0.6	0.3
1SV15ME062	12	8	20	12	8	20	12	8	20	1	1	1	1	1	10.8	10.8	10.8	10.8	10.8	54	23.8	31.8	19.8	23.8	19.8	0.7	0.7	0.6	0.7	0.6
1SV15ME066	11	9	20	11	9	20	11	9	20	1	1	1	1	1	6.2	6.2	6.2	6.2	6.2	31	18.2	27.2	18.2	18.2	18.2	0.5	0.6	0.5	0.5	0.5
1SV15ME067	14	4	18	14	4	18	14	4	18	1	1	1	1	1	7.8	7.8	7.8	7.8	7.8	39	22.8	26.8	12.8	22.8	12.8	0.7	0.6	0.4	0.7	0.4
1SV15ME070	18	0	18	18	0	18	18	0	18	1	1	1	1	1	5.6	5.6	5.6	5.6	5.6	28	24.6	24.6	8.6	24.6	8.6	0.7	0.6	0.2	0.7	0.2
1SV15ME072	18	2	20	18	2	20	18	2	20	1	1	1	1	1	6.2	6.2	6.2	6.2	6.2	31	25.2	27.2	9.2	25.2	9.2	0.7	0.6	0.3	0.7	0.3
1SV15ME073	12	7	19	12	7	19	12	7	19	1	1	1	1	1	8	8	8	8	8	40	21	28	16	21	16	0.6	0.6	0.5	0.6	0.5
1SV15ME074	12	8	20	12	8	20	12	8	20	1	1	1	1	1	3.8	3.8	3.8	3.8	3.8	19	16.8	24.8	12.8	16.8	12.8	0.5	0.6	0.4	0.5	0.4
1SV15ME075	14	4	18	14	4	18	14	4	18	1	1	1	1	1	5.6	5.6	5.6	5.6	5.6	28	20.6	24.6	10.6	20.6	10.6	0.6	0.6	0.3	0.6	0.3
1SV15ME076	7	11	18	7	11	18	7	11	18	1	1	1	1	1	1	1	1	1	1	5	9	20	13	9	13	0.3	0.5	0.4	0.3	0.4
1SV15ME077	14	3	17	14	3	17	14	3	17	1	1	1	1	1	4.6	4.6	4.6	4.6	4.6	23	19.6	22.6	8.6	19.6	8.6	0.6	0.5	0.3	0.6	0.3
1SV15ME079	17	2	19	17	2	19	17	2	19	1	1	1	1	1	7.6	7.6	7.6	7.6	7.6	38	25.6	27.6	10.6	25.6	10.6	0.8	0.6	0.3	0.8	0.3
1SV15ME082	14	0	14	14	0	14	14	0	14	1	1	1	1	1	1.4	1.4	1.4	1.4	1.4	7	16.4	16.4	2.4	16.4	2.4	0.5	0.4	0.1	0.5	0.1
1SV15ME083	12	6	18	12	6	18	12	6	18	1	1	1	1	1	5.6	5.6	5.6	5.6	5.6	28	18.6	24.6	12.6	18.6	12.6	0.5	0.6	0.4	0.5	0.4
1SV15ME087	11	6	17	11	6	17	11	6	17	1	1	1	1	1	2.4	2.4	2.4	2.4	2.4	12	14.4	20.4	9.4	14.4	9.4	0.4	0.5	0.3	0.4	0.3
1SV15ME400	12	6	18	12	6	18	12	6	18	1	1	1	1	1	5.6	5.6	5.6	5.6	5.6	28	18.6	24.6	12.6	18.6	12.6	0.5	0.6	0.4	0.5	0.4
1SV16ME402	11	5	16	11	5	16	11	5	16	1	1	1	1	1	6	6	6	6	6	30	18	29	12	18	12	0.5	0.5	0.4	0.5	0.4
1SV16ME403	14	4	18	14	4	18	14	4	18	1	1	1	1	1	6.2	6.2	6.2	6.2	6.2	31	21.2	25.2	11.2	21.2	11.2	0.6	0.6	0.3	0.6	0.3
1SV16ME404	15	2	17	15	2	17	15	2	17	1	1	1	1	1	5.6	5.6	5.6	5.6	5.6	28	21.6	23.6	8.6	21.6	8.6	0.6	0.5	0.3	0.6	0.3
1SV16ME405	15	3	18	15	3	18	15	3	18	1	1	1	1	1	4.8	4.8	4.8	4.8	4.8	24	20.8	23.8	8.8	20.8	8.8	0.6	0.5	0.3	0.6	0.3
1SV16ME407	12	7	19	12	7	19	12	7	19	1	1	1	1	1	1.8	1.8	1.8	1.8	1.8	9	14.8	21.8	9.8	14.8	9.8	0.4	0.5	0.3	0.4	0.3
1SV16ME408	14	4	18	14	4	18	14	4	18	1	1	1	1	1	3.8	3.8	3.8	3.8	3.8	19	18.8	22.8	8.8	18.8	8.8	0.6	0.5	0.3	0.6	0.3
1SV16ME409	14	19	19	14	5	19	14	5	19	1	1	1	1	1	6.6	6.6	6.6	6.6	6.6	33	21.6	40.6	12.6	21.6	12.6	0.6	0.9	0.4	0.6	0.4
1SV16ME410	12	18	18	12	6	18	12	6	18	1	1	1	1	1	6.4	6.4	6.4	6.4	6.4	32	19.4	37.4	13.4	19.4	13.4	0.6	0.9	0.4	0.6	0.4
1SV16ME412	14	18	18	14	4	18	14	4	18	1	1	1	1	1	5.6	5.6	5.6	5.6	5.6	28	20.6	38.6	10.6	20.6	10.6	0.6	0.9	0.3	0.6	0.3
1SV16ME413	14	5	19	14	5	19	14	5	19	1	1	1	1	1	4.6	4.6	4.6	4.6	4.6	23	19.6	24.6	10.6	19.6	10.6	0.6	0.6	0.3	0.6	0.3
1SV16ME416	11	7	18	11	7	18	11	7	18	1	1	1	1	1	3.4	3.4	3.4	3.4	3.4	17	15.4	22.4	11.4	15.4	11.4	0.5	0.5	0.3	0.5	0.3
1SV16ME417	12	7	19	12	7	19	12	7	19	1	1	1	1	1	3.2	3.2	3.2	3.2	3.2	16	18.2	23.2	11.2	16.2	11.2	0.5	0.5	0.3	0.5	0.3
1SV16ME418	12	7	19	12	7	19	12	7	19	1	1	1	1	1	4.2	4.2	4.2	4.2	4.2	21	17.2	24.2	12.2	17.2	12.2	0.5	0.6	0.4	0.5	0.4
1SV16ME419	11	7	18	11	7	18	11	7	18	1	1	1	1	1	4	4	4	4	4	20	16	23	12	16	12	0.5	0.5	0.4	0.5	0.4
1SV16ME420	15	2	17	15	2	17	15	2	17	1	1	1	1	1	4.6	4.6	4.6	4.6	4.6	23	20.6	22.6	7.6	20.6	7.6	0.6	0.5	0.2	0.6	0.2
1SV16ME421	12	5	17	12	5	17	12	5	17	1	1	1	1	1	6.4	6.4	6.4	6.4	6.4	32	19.4	24.4	12.4	19.4	12.4	0.6	0.6	0.4	0.6	0.4
1SV16ME423	14	4	18	14	4	18	14	4	18	1	1	1	1	1	5.2	5.2	5.2	5.2	5.2	26	20.2	24.2	10.2	20.2	10.2	0.6	0.6	0.3	0.6	0.3
1SV16ME424	15	3	18	15	3	18	15	3	18	1	1	1	1	1	8.2	8.2	8.2	8.2	8.2	41	24.2	27.2	12.2	24.2	12.2	0.7	0.6	0.4	0.7	0.4
1SV16ME425	11	8	19	11	8	19	11	8	19	1	1	1	1	1	7.2	7.2	7.2	7.2	7.2	36	19.2	27.2	16.2	19.2	16.2	0.6	0.6	0.5	0.6	0.5
TOTAL	827	452	1239	827	412	1239	827	412	1239	68	68	68	68	68	370	373	373	373	373	1850	1205	1720	853	1268	853					
NO OF STUDENTS	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	69	68	68	68					
AVERAGE	12.9	7.06	19.359	12.9	6.438	19.36	12.92	6.44	19.359	1.1	1.1	1.1	1.1	1.1	5.7813	5.83	5.83	5.83	5.83	28.9	19.8	26.9	13.3	19.8	13.3	58.1	41.1	39.2	58.3	39.2

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SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR- 572 106.

DEPARTMENT OF MECHANICAL ENGINEERING

SUBJECT	Design of Machines Elements-1	SUBJECT CODE	15ME54

COURSE OUTCOME

CO1	Apply the concepts of stresses for 1-d, 2-D and 3-D elements
CO2	Formulate; analyze stresses and strains in machine elements, permanent and temporary joints subjected to various loads.
CO3	Analyze and design for static, fatigue and impact strength, permanent and temporary joints
CO4	Evaluate the stresses in the elements such as Gears, cotter and knuckle joint keys and couplings
CO5	

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

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Dept. of Mechanical
S.I.E.T., TUMKUR -6

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COLLEGE	SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY											
FACULTY NAME	RANGASWAMY H											
BRANCH	ME		ACADEMIC YEAR	2017-18								
COURSE	B.E	SEMESTER	V	SECTION								
SUBJECT	Design of Machines Elements-1			SUBJECT CODE	15ME54							
CO & PO MAPPING												
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	3										
CO2	3	3										
CO3	3	2	3			1						
CO4	3	3										
CO5	2	2	2			1						
AVERAGE	2.8	2.6	2.5			1						
OVERALL MAPPING OF SUBJECT												2.22

CO AND PO ATTAINMENT

	CO%	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	53.2	1.59	1.59										
CO2	53.2	1.59	1.59										
CO3	35.9	1.07	0.71	1.07			0.35						
CO4	54.9	1.64	1.64										
CO5	35.9	0.71	0.71	0.71			0.35						
AVERAGE	46.52	1.32	1.24	0.89			0.35						
FINAL ATTAINMENT LEVEL													0.95

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Academic year	2017-18			SEM	V		Total strength			68		Subject	Design of Machine Elements - 1				Subject Code	15ME54								
SEM/Y	IA TEST 1(20M)			IA TEST 2(20M)			IA TEST 3(20M)			ASSIGNEMENT / QUIZ(10 M)					SEE MARKS(60)						Total Cos ATTAINMENT					% of individual CO				
USN	CO1	CO2	TOTAL	CO2	CO3	TOTAL	CO4	CO5	TOTAL	CO1	CO2	CO3	CO4	CO5	CO1=12	CO1	CO3	CO4	CO5	TOTAL	CO1=34	CO2=44	CO3=34	CO4=34	CO5=34	CO1	CO2	CO3	CO4	CO5
1SV14ME011	6	6	12	6	6	12	6	6	12	1	1	1	1	1	2.2	2.2	2.2	2.2	2.2	11	9.2	35.2	9.2	9.2	9.2	0.3	0.3	0.3	0.3	0.3
1SV14ME016	12	0	12	12	0	12	12	0	12	1	1	1	1	1	2.8	2.8	2.8	2.8	2.8	14	35.8	25.8	3.8	35.8	3.8	0.5	0.4	0.1	0.5	0.1
1SV14ME018	15	0	15	15	0	15	15	0	15	1	1	1	1	1	2.6	2.6	2.6	2.6	2.6	13	38.6	28.6	3.6	38.6	3.6	0.5	0.4	0.1	0.5	0.1
1SV14ME026	1	15	16	1	15	16	1	15	16	1	1	1	1	1	7.8	7.8	7.8	7.8	7.8	39	9.8	24.8	23.8	9.8	23.8	0.3	0.6	0.7	0.3	0.7
1SV14ME034	12	0	12	12	0	12	12	0	12	1	1	1	1	1	6	6	6	6	6	30	19	19	7	19	7	0.6	0.6	0.2	0.6	0.2
1SV14ME055	12	5	17	12	5	17	12	5	17	1	1	1	1	1	7.4	7.4	7.4	7.4	7.4	37	20.4	25.4	13.4	20.4	13.4	0.6	0.6	0.4	0.6	0.4
1SV14ME064	15	0	15	15	0	15	15	0	15	1	1	1	1	1	4.8	4.8	4.8	4.8	4.8	24	20.8	20.8	5.8	20.8	5.8	0.6	0.5	0.2	0.6	0.2
1SV14ME083	11	2	13	11	2	13	11	2	13	1	1	1	1	1	3.8	3.8	3.8	3.8	3.8	19	15.8	17.8	6.8	15.8	6.8	0.5	0.4	0.2	0.5	0.2
1SV14ME084	7	5	12	7	5	12	7	5	12	1	1	1	1	1	3.6	3.6	3.6	3.6	3.6	18	11.6	16.6	9.6	11.6	9.6	0.3	0.4	0.3	0.3	0.3
1SV15ME001	1	11	12	1	11	12	1	11	12	1	1	1	1	1	1.8	1.8	1.8	1.8	1.8	9	3.8	14.8	13.8	3.8	13.8	0.1	0.3	0.4	0.1	0.4
1SV15ME003	8	10	18	8	10	18	8	10	18	1	1	1	1	1	7.6	7.6	7.6	7.6	7.6	38	16.6	26.6	18.6	16.6	18.6	0.5	0.6	0.5	0.5	0.5
1SV15ME007	8	11	19	8	11	19	8	11	19	1	1	1	1	1	6.8	6.8	6.8	6.8	6.8	34	15.8	26.8	18.8	15.8	18.8	0.5	0.6	0.6	0.5	0.6
1SV15ME008	9	9	18	9	9	18	9	9	18	1	1	1	1	1	7.2	7.2	7.2	7.2	7.2	36	17.2	26.2	17.2	17.2	17.2	0.5	0.6	0.5	0.5	0.5
1SV15ME010	4	10	14	4	10	14	4	10	14	1	1	1	1	1	3.8	3.8	3.8	3.8	3.8	19	8.8	18.8	14.8	8.8	14.8	0.3	0.4	0.4	0.3	0.4
1SV15ME011	5	7	12	5	7	12	5	7	12	1	1	1	1	1	6	6	6	6	6	30	12	19	14	12	14	0.4	0.4	0.4	0.4	0.4
1SV15ME017	2	17	19	2	17	19	2	17	19	1	1	1	1	1	8.6	8.6	8.6	8.6	8.6	43	11.6	28.6	26.6	11.6	26.6	0.3	0.7	0.8	0.3	0.8
1SV15ME018	8	8	16	8	8	16	8	8	16	1	1	1	1	1	8.6	8.6	8.6	8.6	8.6	43	17.6	25.6	17.6	17.6	17.6	0.5	0.6	0.5	0.5	0.5
1SV15ME019	8	5	13	8	5	13	8	5	13	1	1	1	1	1	4	4	4	4	4	20	13	18	10	13	10	0.4	0.4	0.3	0.4	0.3
1SV15ME023	12	3	15	12	3	15	12	3	15	1	1	1	1	1	6	6	6	6	6	30	19	22	10	19	10	0.6	0.5	0.3	0.6	0.3
1SV15ME025	18	0	18	18	0	18	18	0	18	1	1	1	1	1	5.6	5.6	5.6	5.6	5.6	28	24.6	24.6	6.6	24.6	6.6	0.7	0.6	0.2	0.7	0.2
1SV15ME027	15	1	16	15	1	16	15	1	16	1	1	1	1	1	5	5	5	5	5	25	21	22	7	21	7	0.6	0.5	0.2	0.6	0.2
1SV15ME028	12	2	14	12	2	14	12	2	14	1	1	1	1	1	4	4	4	4	4	20	17	19	7	17	7	0.5	0.4	0.2	0.5	0.2
1SV15ME032	11	3	14	11	3	14	11	3	14	1	1	1	1	1	6.4	6.4	6.4	6.4	6.4	32	18.4	21.4	10.4	18.4	10.4	0.5	0.5	0.3	0.5	0.3
1SV15ME034	12	1	13	12	1	13	12	1	13	1	1	1	1	1	2.4	2.4	2.4	2.4	2.4	12	15.4	16.4	4.4	15.4	4.4	0.5	0.4	0.1	0.5	0.1
1SV15ME039	1	14	15	1	14	15	1	14	15	1	1	1	1	1	2.8	2.8	2.8	2.8	2.8	14	4.8	16.8	17.8	4.8	17.8	0.1	0.4	0.5	0.1	0.5
1SV15ME042	2	13	15	2	13	15	2	13	15	1	1	1	1	1	6.2	6.2	6.2	6.2	6.2	31	9.2	22.2	20.2	9.2	20.2	0.3	0.5	0.6	0.3	0.6
1SV15ME044	12	3	15	12	3	15	12	3	15	1	1	1	1	1	9.2	9.2	9.2	9.2	9.2	46	22.2	25.2	13.2	22.2	13.2	0.7	0.6	0.4	0.7	0.4
1SV15ME045	12	1	13	12	1	13	12	1	13	1	1	1	1	1	4	4	4	4	4	20	17	18	6	17	6	0.5	0.4	0.2	0.5	0.2
1SV15ME048	11	1	12	11	1	12	11	1	12	1	1	1	1	1	7.6	7.6	7.6	7.6	7.6	38	19.8	30.8	9.8	19.8	9.8	0.6	0.5	0.3	0.6	0.3
1SV15ME049	2	10	12	2	10	12	2	10	12	1	1	1	1	1	5.6	5.6	5.6	5.6	5.6	28	8.6	28.6	16.6	8.6	16.6	0.3	0.4	0.5	0.3	0.5
1SV15ME051	12	2	14	12	2	14	12	2	14	1	1	1	1	1	5.6	5.6	5.6	5.6	5.6	28	18.6	20.6	8.6	18.6	8.6	0.5	0.5	0.3	0.5	0.3
1SV15MD056	12	1	13	12	1	13	12	1	13	1	1	1	1	1	8	8	8	8	8	40	21	22	10	21	10	0.6	0.5	0.3	0.6	0.3
1SV15ME058	11	1	12	11	1	12	11	1	12	1	1	1	1	1	6	6	6	6	6	30	18	19	8	18	8	0.5	0.4	0.2	0.5	0.2
1SV15ME059	12	1	13	12	1	13	12	1	13	1	1	1	1	1	5	5	5	5	5	25	18	19	7	18	7	0.5	0.4	0.2	0.5	0.2
1SV15ME062	11	8	19	11	8	19	11	8	19	1	1	1	1	1	8	8	8	8	8	40	20	28	17	20	17	0.6	0.6	0.5	0.6	0.5
1SV15ME066	12	3	15	12	3	15	12	3	15	1	1	1	1	1	8	8	8	8	8	40	21	24	12	21	12	0.6	0.5	0.4	0.6	0.4
1SV15ME067	11	6	17	11	6	17	11	6	17	1	1	1	1	1	5.6	5.6	5.6	5.6	5.6	28	17.6	23.6	12.6	17.6	12.6	0.5	0.5	0.4	0.5	0.4
1SV15ME070	2	12	14	2	12	14	2	12	14	1	1	1	1	1	5.6	5.6	5.6	5.6	5.6	28	8.6	20.6	18.6	8.6	18.6	0.3	0.5	0.5	0.3	0.5
1SV15ME072	15	2	17	15	2	17	15	2	17	1	1	1	1	1	11.2	11.2	11.2	11.2	11.2	56	27.2	29.2	14.2	27.2	14.2	0.8	0.7	0.4	0.8	0.4
1SV15ME073	12	3	15	12	3	15	12	3	15	1	1	1	1	1	7.6	7.6	7.6	7.6	7.6	38	20.6	23.6	11.6	20.6	11.6	0.6	0.5	0.3	0.6	0.3
1SV15ME074	12	5	17	12	5	17	12	5	17	1	1	1	1	1	5.6	5.6	5.6	5.6	5.6	28	18.6	23.6	11.6	18.6	11.6	0.5	0.5	0.3	0.5	0.3
1SV15ME075	11	5	16	11	5	16	11	5	16	1	1	1	1	1	3.8	3.8	3.8	3.8	3.8	19	15.8	20.8	9.8	15.8	9.8	0.5	0.5	0.3	0.5	0.3
1SV15ME076	11	2	13	11	2	13	11	2	13	1	1	1	1	1	4.2	4.2	4.2	4.2	4.2	21	16.2	18.2	7.2	16.2	7.2	0.5	0.4	0.2	0.5	0.2
1SV15ME077	12	1	13	12	1	13	12	1	13	1	1	1	1	1	4.4	4.4	4.4	4.4	4.4	22	17.4	18.4	6.4	17.4	6.4	0.5	0.4	0.2	0.5	0.2
1SV15ME079	11	6	17	11	6	17	11	6	17	1	1	1	1	1	5.6	5.6	5.6	5.6	5.6	28	17.6	23.6	12.6	17.6	12.6	0.5	0.5	0.4	0.5	0.4
1SV15ME082	11	1	12	11	1	12	11	1	12	1	1	1	1	1	5.8	5.8	5.8	5.8	5.8	29	17.8	18.8	7.8	17.8	7.8	0.5	0.4	0.2	0.5	0.2
1SV15ME083	12	4	16	12	4	16	12	4	16	1	1	1	1	1	2.2	2.2	2.2	2.2	2.2	11	15.2	19.2	7.2	15.2	7.2	0.4	0.4	0.2	0.4	0.2
1SV15ME087	12	2	14	12	2	14	12	2	14	1	1	1	1	1	3.8	3.8	3.8	3.8	3.8	19	16.8	18.8	6.8	16.8	6.8	0.5	0.4	0.2	0.5	0.2
1SV15ME400	11	2	13	11	2	13	11	2	13	1	1	1	1	1	1.4	1.4	1.4	1.4	1.4	7	13.4	15.4	4.4	13.4	4.4	0.4	0.4	0.1	0.4	0.1
1SV16ME402	11	2	13	11	2	13	11	2	13	1	1	1	1	1	2.6	2.6	2.6	2.6	2.6	13	14.6	16.6	5.6	14.6	5.6	0.4	0.4	0.2	0.4	0.2
1SV16ME403	15	3	18	15	3	18	15	3	18	1	1	1	1	1	4	4	4	4	4	20	20	21	8	20	8	0.6	0.5	0.2	0.6	0.2
1SV16ME404	12	4	16	12	4	16	12	4	16	1	1	1	1	1	3.8	3.8	3.8	3.8	3.8	19	16.8	20.8	8.8	16.8	8.8	0.5	0.5	0.3	0.5	0.3
1SV16ME405	18	0	18	18	0	18	18	0	18	1	1	1	1	1	5.6	5.6	5.6	5.6	5.6	28	24.6	24.6	6.6	24.6	6.6	0.7	0.6	0.2	0.7	0.2
1SV16ME407	15	1	16	15	1	16	15	1	16	1	1	1	1	1	9.8	9.8	9.8	9.8	9.8	49	25.8	26.8	11.8	25.8	11.8	0.8	0.6	0.3	0.8	0.3
1SV16ME408	15	3	18	15	3	18	15	3	18	1	1	1	1	1	4	4	4	4	4	20	20	23	8	20	8	0.6	0.5	0.2	0.6	0.2
1SV16ME409	11	8	19	11	8	19	11	8	19	1	1	1	1	1	9	9	9	9	9	45	21	29	18	21	18	0.6	0.7	0.5	0.6	0.5
1SV16ME410	14	3	17	14	3	17	14	3	17	1	1	1	1	1	5.6	5.6	5.6	5.6	5.6	28	20.6	23.6	9.6	20.6	9.6	0.6	0.5	0.3	0.6	0.3
1SV16ME412	12	6	18	12	6	18	12	6	18	1	1	1	1	1	2.8	28	28	28	28	14	15.8	47	35	41	35	0.5	1.1	1.0	1.2	1.0
1SV16ME413	12	6	18	12	6	18	12	6	18	1	1	1	1	1	6.6	6.6	6.6	6.6	6.6	33	19.6	25.6	13.6	19.6	13.6	0.6	0.6	0.4	0.6	0.4
1SV16ME416	11	3	14	11	3	14	11	3	14	1	1	1	1	1	4	4	4	4	4	20	10	19	8	16	8	0.5	0.4	0.2	0.5	0.2
1SV16ME417	12	5	17	12	5	17	12	5	17	1	1	1	1	1	4.4	4.4	4.4	4.4	4.4	22	17.4	22.4	10.4	17.4	10.4	0.5	0.5	0.3	0.5	0.3
1SV16ME418	12	6	18	12	6	18	12	6	18	1	1	1	1	1	8.6	8.6	8.6	8.6	8.6	43	21.6	27.6	15.6	21.6	15.6	0.6	0.6	0.5	0.6	0.5
1SV16ME419	11	4	15	11	4	15	11	4	15	1	1	2	1	1	5.6	5.6	5.6	5.6	5.6	28	17.6	21.6	10.6	17.6	10.6	0.5	0.5	0.3	0.5	0.3
1SV16ME420	12	2	14	12	2	14	12	2	14	1	1	1	1	1	3.6	3.6	3.6	3.6	3.6	18	16.6	18.6	6.6	16.6	6.6	0.5	0.4	0.2	0.5	0.2
1SV16ME421	11	2	13	11	2	13	11	2	13	1	1	1	1	1	5.8	5.8	5.8	5.8	5.8	29	17.8	19.8	8.8	17.8	8.8	0.5	0.5	0.3	0.5	0.3
1SV16ME423	12	4	16	12	4	16	12	4	16	1	1	1	1	1	9	9	9	9	9	45	22	26	14	22	14	0.6	0.6	0.4	0.6	0.4
1SV16ME424	12	6	18	12	6	18	12	6	18	1	1	1	1	1	6	6	6	6	6	30	19	25	13	19	13	0.6	0.6	0.4	0.6	0.4
1SV16ME425	11	6	17	11	6	17	11	6	17	1	1	1	1	1	5.6	5.6	5.6	5.6	5.6	28	17.6	23.6	12.6	17.6	12.6	0.5	0.5	0.4	0.5	0.4
TOTAL	718	314	1030	718	314	1030	716	314	1030	68	68	68			68	374	399.2	399.2	399.2	1670	1158	1497.2	781.2	1183		34.1	34.0	23.0	34.8	23.0
NO OF STUDENTS	68	68	68	68	68	68	68	68	68	68	68	68			68	68	68	68	68	68	68	68	68	68		68	68	68	68	68
AVERAGE	11.19	4.91	16.094	11.2	4.908	16.09	11.19	4.91	16.1	1.1	1.1	1.1			1.1	5.84	6.24	6.24	6.24	29.22	18.1	23.4	12.2	18.5	12.2	53.2	53.2	35.9	54.4	35.9

H.O.D
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SHRIDEVI	**SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY** **SIRA ROAD, TUMKUR- 572 106.**

DEPARTMENT OF MECHANICAL ENGINEERING

SUBJECT	NON-TRADITIONAL MACHINING	SUBJECT CODE	15ME55X

COURSE OUTCOME

CO1	understand the difference between traditional and non-traditional machining process , its need and their applications
CO2	Identify the variables involved in water jet machining and abrasive jet machining, and also its working principle .
CO3	Recognize the different elements that affect the working of chemical and electro-chemical machining.
CO4	Identify the parameters that influence the working of electrical discharge machining
CO5	Analyse the mechanism and working principle of plasma arc and laser beam machining

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: 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	R MANJUNATHA											
BRANCH	ME		ACADEMIC YEAR		2017-18							
COURSE	B.E	SEMESTER	V	SECTION								
SUBJECT	NON-TRADITIONAL MACHINING			SUBJECT CODE	15ME55X							
CO & PO MAPPING												
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2	1										
CO2	2	1										
CO3	2	1										
CO4	2	1										
CO5	2	1										
AVERAGE	2	1										
OVERALL MAPPING OF SUBJECT												1.5

CO AND PO ATTAINMENT

	CO%	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	70.1	1.40	0.70										
CO2	68.7	1.37	0.68										
CO3	54.2	1.08	0.54										
CO4	70.1	1.40	0.70										
CO5	54.2	1.08	0.54										
AVERAGE	63.46	1.26	0.65										
FINAL ATTAINMENT LEVEL													0.95

H.O.D
Dept. of Mechanical
S.I.E.T., TUMKUR -6

PRINCIPAL
SIET., TUMAKURU.

Academic year	2017-18			SEM	V		Total strength			68		Subject	Professional Elective -I					Subject Code	15ME55X										
SEM:V	IA TEST 1(20M)			IA TEST 2(20M)			IA TEST 3(20M)			ASSIGNMENT / QUIZ(10 M)					SEE MARKS(60)					Total Co ATTAINMENT					% of individual CO				
USN	CO1	CO2	TOTAL	CO2	CO3	TOTAL	CO4	CO5	TOTAL	CO1	CO2	CO3	CO4	CO5	CO1=12	CO2	CO3	CO4	CO5	TOTAL	CO1=34	CO2=44	CO3=34	CO4=34	CO5=34	CO1	CO2	CO3	CO4	CO5
1SV14ME011	11	6	17	11	6	17	11	6	17	1	1	1	1	1	9.6	9.6	9.6	9.6	9.6	48	21.8	27.8	16.6	21.6	16.6	0.6	0.6	0.5	0.6	0.5
1SV14ME016	12	6	18	12	6	18	12	6	18	1	1	1	1	1	8.4	8.4	8.4	8.4	8.4	42	21.4	27.4	15.4	21.4	15.4	0.6	0.6	0.5	0.6	0.5
1SV14ME018	12	6	18	12	6	18	12	6	18	1	1	1	1	1	11	11	11	11	11	55	24	30	18	24	18	0.7	0.7	0.5	0.7	0.5
1SV14ME026	15	3	18	15	3	18	15	3	18	1	1	1	1	1	11	11	11	11	11	55	27	30	15	27	15	0.8	0.7	0.4	0.8	0.4
1SV14ME034	11	2	13	11	2	13	11	2	13	1	1	1	1	1	9	9	9	9	9	45	21	23	12	21	12	0.6	0.5	0.4	0.6	0.4
1SV14ME055	12	6	18	12	6	18	12	6	18	1	1	1	1	1	11.2	11.2	11.2	11.2	11.2	56	24.2	30.2	18.2	24.2	18.2	0.7	0.7	0.5	0.7	0.5
1SV14ME064	11	8	19	11	8	19	11	8	19	1	1	1	1	1	10	10	10	10	10	50	22	30	19	22	19	0.6	0.7	0.6	0.6	0.6
1SV14ME083	11	7	18	11	7	18	11	7	18	1	1	1	1	1	9.6	9.6	9.6	9.6	9.6	48	21.6	26.6	17.6	21.6	17.6	0.6	0.7	0.5	0.6	0.5
1SV14ME084	12	4	16	12	4	16	12	4	16	1	1	1	1	1	9.2	9.2	9.2	9.2	9.2	46	22.2	26.2	14.2	22.2	14.2	0.7	0.6	0.4	0.7	0.4
1SV15ME001	1	13	14	1	13	14	1	13	14	1	1	1	1	1	13.4	13.4	13.4	13.4	13.4	67	25.4	28.4	27.4	25.6	27.4	0.5	0.6	0.8	0.5	0.8
1SV15ME003	2	17	19	2	17	19	2	17	19	1	1	1	1	1	13.4	13.4	13.4	13.4	13.4	67	26.4	33.4	31.4	26.4	31.4	0.5	0.8	0.9	0.5	0.9
1SV15ME007	1	19	20	1	19	20	1	19	20	1	1	1	1	1	9.4	9.4	9.4	9.4	9.4	47	11.4	30.4	29.4	11.4	29.4	0.3	0.7	0.9	0.3	0.9
1SV15ME008	11	7	18	11	7	18	11	7	18	1	1	1	1	1	12.2	12.2	12.2	12.2	12.2	61	24.2	31.2	20.2	24.2	20.2	0.7	0.7	0.6	0.7	0.6
1SV15ME010	12	2	14	12	2	14	12	2	14	1	1	1	1	1	9.8	9.8	9.8	9.8	9.8	49	22.8	24.8	12.8	22.8	12.8	0.7	0.6	0.4	0.7	0.4
1SV15ME011	1	14	15	1	14	15	1	14	15	1	1	1	1	1	9.6	9.6	9.6	9.6	9.6	48	11.6	25.6	24.6	11.6	24.6	0.3	0.6	0.7	0.3	0.7
1SV15ME017	2	13	15	2	13	15	2	13	15	1	1	1	1	1	10.8	10.8	10.8	10.8	10.8	54	13.8	26.8	24.8	13.8	24.8	0.4	0.6	0.7	0.4	0.7
1SV15ME018	11	6	17	11	6	17	11	6	17	1	1	1	1	1	8.8	8.8	8.8	8.8	8.8	44	20.8	26.8	15.8	20.8	15.8	0.6	0.6	0.5	0.6	0.5
1SV15ME019	12	4	16	12	4	16	12	4	16	1	1	1	1	1	11.2	11.2	11.2	11.2	11.2	56	24.2	28.2	16.2	24.2	16.2	0.7	0.6	0.5	0.7	0.5
1SV15ME023	15	3	18	15	3	18	15	3	18	1	1	1	1	1	10.4	10.4	10.4	10.4	10.4	52	26.4	29.4	14.4	26.4	14.4	0.8	0.7	0.4	0.8	0.4
1SV15ME025	15	3	18	15	3	18	15	3	18	1	1	1	1	1	11.6	11.6	11.6	11.6	11.6	58	27.6	30.6	15.6	27.6	15.6	0.8	0.7	0.5	0.8	0.5
1SV15ME027	11	2	13	11	2	13	11	2	13	1	1	1	1	1	11.2	11.2	11.2	11.2	11.2	56	23.2	25.2	16.2	23.2	16.2	0.7	0.6	0.4	0.7	0.4
1SV15ME028	12	2	14	12	2	14	12	2	14	1	1	1	1	1	9.8	9.8	9.8	9.8	9.8	49	22.8	24.8	12.8	22.8	12.8	0.7	0.6	0.4	0.7	0.4
1SV15ME032	13	3	16	13	3	16	13	3	16	1	1	1	1	1	10.4	10.4	10.4	10.4	10.4	52	24.4	27.4	14.4	24.4	14.4	0.7	0.6	0.4	0.7	0.4
1SV15ME034	12	2	14	12	2	14	12	2	14	1	1	1	1	1	6.6	6.6	6.6	6.6	6.6	33	19.6	21.6	9.6	19.6	9.6	0.6	0.5	0.3	0.6	0.3
1SV15ME039	15	1	16	15	1	16	15	1	16	1	1	1	1	1	12.6	12.6	12.6	12.6	12.6	63	28.6	29.6	14.6	28.6	14.6	0.8	0.7	0.4	0.8	0.4
1SV15ME042	11	3	14	11	3	14	11	3	14	1	1	1	1	1	8.2	8.2	8.2	8.2	8.2	41	20.2	23.2	12.2	20.2	12.2	0.6	0.5	0.4	0.6	0.4
1SV15ME044	12	3	15	12	3	15	12	3	15	1	1	1	1	1	10	10	10	10	10	50	23	26	14	23	14	0.7	0.6	0.4	0.7	0.4
1SV15ME043	12	2	14	12	2	14	12	2	14	1	1	1	1	1	8.4	8.4	8.4	8.4	8.4	42	21.4	23.4	11.4	21.4	11.4	0.6	0.5	0.3	0.6	0.3
1SV15ME048	14	3	17	14	3	17	14	3	17	1	1	1	1	1	12	12	12	12	12	60	27	30	18	27	18	0.8	0.7	0.5	0.8	0.5
1SV15ME049	12	2	14	12	2	14	12	2	14	1	1	1	1	1	8.6	8.6	8.6	8.6	8.6	43	21.6	23.6	11.6	21.6	11.6	0.6	0.5	0.3	0.6	0.3
1SV15ME051	14	3	17	14	3	17	14	3	17	1	1	1	1	1	10.6	10.6	10.6	10.6	10.6	53	25.6	28.6	14.6	25.6	14.6	0.8	0.7	0.4	0.8	0.4
1SV15ME056	12	5	17	12	5	17	12	5	17	1	1	1	1	1	11.4	11.4	11.4	11.4	11.4	57	24.4	29.4	17.4	24.4	17.4	0.7	0.7	0.5	0.7	0.5
1SV15ME058	15	0	15	15	0	15	15	0	15	1	1	1	1	1	7.4	7.4	7.4	7.4	7.4	37	23.4	23.4	8.4	23.4	8.4	0.7	0.5	0.2	0.7	0.2
1SV15ME059	11	3	14	11	3	14	11	3	14	1	1	1	1	1	10	10	10	10	10	50	22	25	14	22	14	0.6	0.6	0.4	0.6	0.4
1SV15ME062	12	6	18	12	6	18	12	6	18	1	1	1	1	1	11.2	11.2	11.2	11.2	11.2	56	24.2	30.2	18.2	24.2	18.2	0.7	0.7	0.5	0.7	0.5
1SV15ME066	15	2	17	15	2	17	15	2	17	1	1	1	1	1	12.4	12.4	12.4	12.4	12.4	62	28.4	30.4	15.4	28.4	15.4	0.8	0.7	0.5	0.8	0.5
1SV15ME067	11	6	17	11	6	17	11	6	17	1	1	1	1	1	9.8	9.8	9.8	9.8	9.8	49	21.8	27.8	16.8	21.8	16.8	0.6	0.6	0.5	0.6	0.5
1SV15ME070	12	8	20	12	8	20	12	8	20	1	1	1	1	1	12.8	12.8	12.8	12.8	12.8	64	25.8	33.8	21.8	25.8	21.8	0.8	0.8	0.6	0.8	0.6
1SV15ME072	12	7	19	12	7	19	12	7	19	1	1	1	1	1	12	12	12	12	12	60	25	32	20	25	20	0.7	0.7	0.6	0.7	0.6
1SV15ME073	11	9	20	11	9	20	11	9	20	1	1	1	1	1	12.6	12.6	12.6	12.6	12.6	63	24.6	33.6	22.6	24.6	22.6	0.7	0.8	0.7	0.7	0.7
1SV15ME074	12	8	20	12	8	20	12	8	20	1	1	1	1	1	11.2	11.2	11.2	11.2	11.2	56	24.2	32.2	20.2	24.2	20.2	0.7	0.7	0.6	0.7	0.6
1SV15ME075	14	6	20	14	6	20	14	6	20	1	1	1	1	1	8.2	8.2	8.2	8.2	8.2	41	23.2	29.2	15.2	23.2	15.2	0.7	0.7	0.4	0.7	0.4
1SV15ME076	15	3	18	15	3	18	15	3	18	1	1	1	1	1	12.4	12.4	12.4	12.4	12.4	62	28.4	31.4	16.4	28.4	16.4	0.8	0.7	0.5	0.8	0.5
1SV15ME077	14	2	16	14	2	16	14	2	16	1	1	1	1	1	10.6	10.6	10.6	10.6	10.6	53	25.6	27.6	13.6	25.6	13.6	0.8	0.6	0.4	0.8	0.4
1SV15ME079	15	4	19	15	4	19	15	4	19	1	1	1	1	1	12.4	12.4	12.4	12.4	12.4	62	28.4	32.4	17.4	28.4	17.4	0.8	0.7	0.5	0.8	0.5
1SV15ME082	1	15	16	1	15	16	1	15	16	1	1	1	1	1	9.4	9.4	9.4	9.4	9.4	47	11.4	26.4	25.4	11.4	25.4	0.3	0.6	0.7	0.3	0.7
1SV15ME083	5	12	17	5	12	17	5	12	17	1	1	1	1	1	8	8	8	8	8	40	14	26	21	14	21	0.4	0.6	0.6	0.4	0.6
1SV15ME087	11	6	17	11	6	17	11	6	17	1	1	1	1	1	9.4	9.4	9.4	9.4	9.4	47	21.4	27.4	16.4	21.4	16.4	0.6	0.6	0.5	0.6	0.5
1SV15ME400	15	2	17	15	2	17	15	2	17	1	1	1	1	1	7.6	7.6	7.6	7.6	7.6	38	23.6	25.6	10.6	23.6	10.6	0.7	0.6	0.3	0.7	0.3
1SV16ME402	15	4	19	15	4	19	15	4	19	1	1	1	1	1	9.2	9.2	9.2	9.2	9.2	46	25.2	29.2	14.2	25.2	14.2	0.7	0.7	0.4	0.7	0.4
1SV16ME403	14	4	18	14	4	18	14	4	18	1	1	1	1	1	9.4	9.4	9.4	9.4	9.4	47	24.4	28.4	14.4	24.4	14.4	0.7	0.6	0.4	0.7	0.4
1SV16ME404	14	5	19	14	5	19	14	5	19	1	1	1	1	1	9.2	9.2	9.2	9.2	9.2	46	24.2	29.2	15.2	24.2	15.2	0.7	0.7	0.4	0.7	0.4
1SV16ME405	1	14	15	1	14	15	1	14	15	1	1	1	1	1	11.4	11.4	11.4	11.4	11.4	57	13.4	27.4	26.4	13.6	26.4	0.4	0.6	0.8	0.4	0.8
1SV16ME407	15	4	19	15	4	19	15	4	19	1	1	1	1	1	8.8	8.8	8.8	8.8	8.8	44	24.8	28.8	13.8	24.8	13.8	0.7	0.7	0.4	0.7	0.4
1SV16ME408	15	2	17	15	2	17	15	2	17	1	1	1	1	1	11.6	11.6	11.6	11.6	11.6	58	27.6	29.6	14.6	27.6	14.6	0.8	0.7	0.4	0.8	0.4
1SV16ME409	11	9	20	11	9	20	11	9	20	1	1	1	1	1	11.8	11.8	11.8	11.8	11.8	59	23.8	32.8	21.8	23.8	21.8	0.7	0.7	0.6	0.7	0.6
1SV16ME410	12	6	18	12	6	18	12	6	18	1	1	1	1	1	9.8	9.8	9.8	9.8	9.8	49	22.8	28.8	16.8	22.8	16.8	0.7	0.7	0.5	0.7	0.5
1SV16ME412	12	6	18	12	6	18	12	6	18	1	1	1	1	1	11.8	11.8	11.8	11.8	11.8	59	24.8	30.8	18.8	24.8	18.8	0.7	0.7	0.6	0.7	0.6
1SV16ME413	11	6	17	11	6	17	11	6	17	1	1	1	1	1	10	10	10	10	10	50	22	28	17	22	17	0.6	0.6	0.5	0.6	0.5
1SV16ME416	5	12	17	5	12	17	5	12	17	1	1	1	1	1	10.4	10.4	10.4	10.4	10.4	52	16.4	28.4	23.4	16.4	23.4	0.5	0.6	0.7	0.5	0.7
1SV16ME417	14	5	19	14	5	19	14	5	19	1	1	1	1	1	10.6	10.6	10.6	10.6	10.6	53	25.6	30.6	16.6	25.6	16.6	0.8	0.7	0.5	0.8	0.5
1SV16ME418	15	3	18	15	3	18	15	3	18	1	1	1	1	1	9.4	9.4	9.4	9.4	9.4	47	25.4	28.4	13.4	25.4	13.4	0.7	0.6	0.4	0.7	0.4
1SV16ME419	12	7	19	12	7	19	12	7	19	1	1	1	1	1	12.6	12.6	12.6	12.6	12.6	63	25.6	32.6	20.6	25.6	20.6	0.8	0.7	0.6	0.8	0.6
1SV16ME420	12	6	18	12	6	18	12	6	18	1	1	1	1	1	7.6	7.6	7.6	7.6	7.6	38	20.6	26.6	14.6	20.6	14.6	0.6	0.6	0.4	0.6	0.4
1SV16ME421	12	6	18	12	6	18	12	6	18	1	1	1	1	1	10	10	10	10	10	50	23	29	17	23	17	0.7	0.7	0.5	0.7	0.5
1SV16ME423	1	17	18	1	17	18	1	17	18	1	1	1	1	1	7	7	7	7	7	35	9	26	25	9	25	0.3	0.6	0.7	0.3	0.7
1SV16ME424	11	8	19	11	8	19	11	8	19	1	1	1	1	1	12.8	12.8	12.8	12.8	12.8	64	24.8	32.8	21.8	24.8	21.8	0.7	0.7	0.6	0.7	0.6
1SV16ME425	12	5	17	12	5	17	12	5	17	1	1	1	1	1	12.2	12.2	12.2	12.2	12.2	61	25.2	30.2	18.2	25.2	18.2	0.7	0.7	0.5	0.7	0.5
TOTAL	755	408	1163	755	408	1163	755	408	1163	68	68	68		68	702.4	702	702	702	702	35112	1515.4	1933.4	1178.4	1525.4	1178.4					
NO OF STUDENTS	68	68	68	68	68	68	68	68	68	68	68	68		68	68	68	68	68	68	68	68	68	68	68	68	43.9	34.7	44.9	34.7	
AVERAGE	11.8	6.38	18.172	11.8	6.375	18.17	11.8	6.38	18.172	1.1	1.1	1.1		1.1	10.975	11	11	11	11	54.875	23.8	30.2	18.4	23.8	18.4	70.1	68.7	54.2	70.1	54.2

H.O.D
Dept. of Mechanical
S.I.E.T., TUMKUR -6

PRINCIPAL
SIET., TUMAKURU

SHRIDEVI	**SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY** **SIRA ROAD, TUMKUR- 572 106.**

DEPARTMENT OF MECHANICAL ENGINEERING

SUBJECT	OPEN ELECTIVE-1 (ERE)	SUBJECT CODE	15ME56X

COURSE OUTCOME

CO1	Understand thermal energy conversion system for real time applications
CO2	Apply the knowledge of principle of energy conversion by diesel and hydel energy
CO3	analyze the solar radiation parameters, working of solar PV and thermal systems.
CO4	Interpret principle of energy conversion from wind and tidal.
CO5	Review the applications of biomass energy, fuel cell, and thermoelectric conversion and MHD 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 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: A recognition of the need for, and an ability to engage in, to resolve contemporary issues and acquire lifelong learning.

H.O.D
Dept. of Mechanical
S.I.E.T., TUMKUR -6

PRINCIPAL
SIET, TUMAKURU.

COLLEGE	SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY				
FACULTY NAME	BABU KAREGOWDA				
BRANCH	ME	ACADEMIC YEAR	2017-28		
COURSE	B.E	SEMESTER	V	SECTION	
SUBJECT	OPEN ELECTIVE-1 (ERE)	SUBJECT CODE	15ME56X		

CO & PO MAPPING

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2	2				1						
CO2	2	2				1						
CO3	2	2				1						
CO4	2	2				1						
CO5	2	2				1						
AVERAGE	2	2				1						
											OVERALL MAPPING OF SUBJECT	1.66

CO AND PO ATTAINMENT

	CO%	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	70.16	1.40	1.40				0.70						
CO2	65.33	1.30	1.30				0.65						
CO3	45.75	0.90	0.90				0.45						
CO4	70.16	1.40	1.40				0.14						
CO5	45.75	0.91	0.91				0.45						
AVERAGE	59.43	1.18	1.18				0.47						
												FINAL ATTAINMENT LEVEL	0.94

H.O.D
Dept. of Mechanical
S.I.E.T., TUMKUR -6

PRINCIPAL
SIET., TUMAKURU.

Academic year	2017-18			SEM	V		Total strength			68		Subject	Open Elective - I (EBE)					Subject Code	15ME56X										
SESSY	IA TEST 1(20M)			IA TEST 2(20M)			IA TEST 3(20M)			ASSIGNEMENT / QUIZ(10 M)					SEE MARKS(60)						Total Cos ATTAINMENT					% of individual CO				
USN	CO1	CO2	TOTAL	CO2	CO3	TOTAL	CO4	CO5	TOTAL	CO1	CO2	CO3	CO4	CO5	CO1+11	CO2	CO3	CO4	CO5	TOTAL	CO1=34	CO2=34	CO3=34	CO4=34	CO5=34	CO1	CO2	CO3	CO4	CO5
1SV14ME011	11	5	16	11	5	16	11	5	16	1	1	1	1	1	8.2	8.2	8.2	8.2	8.2	41	20.2	25.2	14.2	20.2	14.2	0.59	0.57	0.42	0.59	0.42
1SV14ME016	12	4	16	12	4	16	12	4	16	1	1	1	1	1	6.6	6.6	6.6	6.6	6.6	33	19.6	23.6	11.6	19.6	11.6	0.58	0.54	0.34	0.58	0.34
1SV14ME018	12	7	19	12	7	19	12	7	19	1	1	1	1	1	10.4	10.4	10.4	10.4	10.4	52	23.4	30.4	18.4	23.4	18.4	0.69	0.69	0.54	0.69	0.54
1SV14ME026	11	7	18	11	7	18	11	7	18	1	1	1	1	1	7.6	7.6	7.6	7.6	7.6	38	19.6	26.6	15.6	19.6	15.6	0.58	0.60	0.46	0.58	0.46
1SV14ME034	15	0	15	15	0	15	15	0	15	1	1	1	1	1	7.4	7.4	7.4	7.4	7.4	37	23.4	23.4	8.4	23.4	8.4	0.69	0.51	0.25	0.69	0.25
1SV14ME055	12	7	19	12	7	19	12	7	19	1	1	1	1	1	9.4	9.4	9.4	9.4	9.4	47	22.4	29.4	17.4	22.4	17.4	0.66	0.67	0.51	0.66	0.51
1SV14ME063	11	7	18	11	7	18	11	7	18	1	1	1	1	1	11	11	11	11	11	55	24	31	19	24	19	0.71	0.70	0.56	0.71	0.56
1SV14ME084	15	2	17	15	2	17	15	2	17	1	1	1	1	1	9.6	9.6	9.6	9.6	9.6	48	21.6	28.6	17.6	21.6	17.6	0.64	0.65	0.52	0.64	0.52
1SV15ME001	15	2	17	15	2	17	15	2	17	1	1	1	1	1	5.6	5.6	5.6	5.6	5.6	28	21.6	23.6	8.6	21.6	8.6	0.64	0.54	0.25	0.64	0.25
1SV15ME003	12	7	19	12	7	19	12	7	19	1	1	1	1	1	10.2	10.2	10.2	10.2	10.2	51	26.2	28.2	13.2	26.2	13.2	0.77	0.64	0.39	0.77	0.39
1SV15ME007	15	2	17	15	2	17	15	2	17	1	1	1	1	1	10.8	10.8	10.8	10.8	10.8	54	23.8	30.8	18.8	23.8	18.8	0.70	0.70	0.55	0.70	0.55
1SV15ME008	15	2	17	15	2	17	15	2	17	1	1	1	1	1	7.2	7.2	7.2	7.2	7.2	36	23.2	25.2	10.2	23.2	10.2	0.68	0.57	0.30	0.68	0.30
1SV15ME010	15	2	17	15	2	17	15	2	17	1	1	1	1	1	9	9	9	9	9	45	25	27	12	25	12	0.74	0.61	0.35	0.74	0.35
1SV15ME011	12	3	15	12	3	15	12	3	15	1	1	1	1	1	8.6	8.6	8.6	8.6	8.6	43	24.6	26.6	11.6	24.6	11.6	0.72	0.60	0.34	0.72	0.34
1SV15ME017	11	5	16	11	5	16	11	5	16	1	1	1	1	1	7	7	7	7	7	35	20	23	11	20	11	0.59	0.52	0.32	0.59	0.32
1SV15ME018	12	6	18	12	6	18	12	6	18	1	1	1	1	1	8.2	8.2	8.2	8.2	8.2	41	21.2	26.2	15.2	21.2	15.2	0.62	0.60	0.45	0.62	0.45
1SV15ME019	12	4	16	12	4	16	12	4	16	1	1	1	1	1	9.2	9.2	9.2	9.2	9.2	46	22.2	28.2	16.2	22.2	16.2	0.65	0.64	0.48	0.65	0.48
1SV15ME023	11	7	18	11	7	18	11	7	18	1	1	1	1	1	8.8	8.8	8.8	8.8	8.8	44	21.8	25.8	13.8	21.8	13.8	0.64	0.59	0.41	0.64	0.41
1SV15ME025	12	5	17	12	5	17	12	5	17	1	1	1	1	1	11.4	11.4	11.4	11.4	11.4	57	23.4	30.4	19.4	23.4	19.4	0.69	0.69	0.57	0.69	0.57
1SV15ME027	15	1	16	15	1	16	15	1	16	1	1	1	1	1	11	11	11	11	11	55	24	29	17	24	17	0.71	0.66	0.50	0.71	0.50
1SV15ME028	12	5	17	12	5	17	12	5	17	1	1	1	1	1	11.2	11.2	11.2	11.2	11.2	56	27.2	28.2	13.2	27.2	13.2	0.80	0.64	0.39	0.80	0.39
1SV15ME032	12	4	16	12	4	16	12	4	16	1	1	1	1	1	6	6	6	6	6	30	19	24	12	19	12	0.56	0.55	0.35	0.56	0.35
1SV15ME034	15	2	17	15	2	17	15	2	17	1	1	1	1	1	8.8	8.8	8.8	8.8	8.8	44	21.8	25.8	13.8	21.8	13.8	0.64	0.59	0.41	0.64	0.41
1SV15ME039	12	6	18	12	6	18	12	6	18	1	1	1	1	1	7	7	7	7	7	35	23	25	10	23	10	0.68	0.57	0.29	0.68	0.29
1SV15ME042	1	14	15	1	14	15	1	14	15	1	1	1	1	1	9.8	9.8	9.8	9.8	9.8	49	22.8	28.8	16.8	22.8	16.8	0.67	0.63	0.49	0.67	0.49
1SV15ME044	11	3	14	11	3	14	11	3	14	1	1	1	1	1	8.4	8.4	8.4	8.4	8.4	42	10.4	24.4	23.4	10.4	23.4	0.31	0.55	0.69	0.31	0.69
1SV15ME045	12	2	14	12	2	14	12	2	14	1	1	1	1	1	8.4	8.4	8.4	8.4	8.4	42	10.4	23.4	12.4	20.4	12.4	0.60	0.53	0.36	0.60	0.36
1SV15ME048	15	4	19	15	4	19	15	4	19	1	1	1	1	1	11.2	11.2	11.2	11.2	11.2	56	24.2	26.2	14.2	24.2	14.2	0.71	0.60	0.42	0.71	0.42
1SV15ME049	12	0	12	12	0	12	12	0	12	1	1	1	1	1	10.6	10.6	10.6	10.6	10.6	53	26.6	30.6	15.6	26.6	15.6	0.78	0.70	0.46	0.78	0.46
1SV15ME051	12	7	19	12	7	19	12	7	19	1	1	1	1	1	8.6	8.6	8.6	8.6	8.6	43	21.6	21.6	9.6	21.6	9.6	0.64	0.49	0.28	0.64	0.28
1SV15ME056	12	7	19	12	7	19	12	7	19	1	1	1	1	1	12.2	12.2	12.2	12.2	12.2	61	25.2	32.2	20.2	25.2	20.2	0.74	0.73	0.59	0.74	0.59
1SV15ME058	11	1	12	11	1	12	11	1	12	1	1	1	1	1	10.6	10.6	10.6	10.6	10.6	53	23.6	30.6	18.6	23.6	18.6	0.69	0.70	0.55	0.69	0.55
1SV15ME059	12	5	17	12	5	17	12	5	17	1	1	1	1	1	8.6	8.6	8.6	8.6	8.6	43	20.6	21.6	10.6	20.6	10.6	0.61	0.49	0.31	0.61	0.31
1SV15ME062	15	4	19	15	4	19	15	4	19	1	1	1	1	1	7	7	7	7	7	35	20	25	13	20	13	0.59	0.57	0.38	0.59	0.38
1SV15ME066	11	5	16	11	5	16	11	5	16	1	1	1	1	1	11.4	11.4	11.4	11.4	11.4	57	27.4	31.4	16.4	27.4	16.4	0.81	0.71	0.48	0.81	0.48
1SV15ME067	12	2	14	12	2	14	12	2	14	1	1	1	1	1	8.2	8.2	8.2	8.2	8.2	41	20.2	25.2	14.2	20.2	14.2	0.59	0.57	0.42	0.59	0.42
1SV15ME070	12	7	19	12	7	19	12	7	19	1	1	1	1	1	5.6	5.6	5.6	5.6	5.6	28	18.6	20.6	8.6	18.6	8.6	0.55	0.47	0.25	0.55	0.25
1SV15ME072	12	7	19	12	7	19	12	7	19	1	1	1	1	1	11.2	11.2	11.2	11.2	11.2	56	24.2	31.2	19.2	24.2	19.2	0.71	0.71	0.56	0.71	0.56
1SV15ME073	11	9	20	11	9	20	11	9	20	1	1	1	1	1	8.6	8.6	8.6	8.6	8.6	43	21.6	28.6	16.6	21.6	16.6	0.64	0.65	0.49	0.64	0.49
1SV15ME074	12	7	19	12	7	19	12	7	19	1	1	1	1	1	9.6	9.6	9.6	9.6	9.6	48	21.6	30.6	19.6	21.6	19.6	0.64	0.70	0.58	0.64	0.58
1SV15ME075	12	7	19	12	7	19	12	7	19	1	1	1	1	1	8	8	8	8	8	40	21	28	18	21	18	0.62	0.64	0.47	0.62	0.47
1SV15ME076	14	3	17	14	3	17	14	3	17	1	1	1	1	1	10.2	10.2	10.2	10.2	10.2	51	23.2	30.2	18.2	23.2	18.2	0.68	0.69	0.54	0.68	0.54
1SV15ME077	11	3	14	11	3	14	11	3	14	1	1	1	1	1	11	11	11	11	11	55	26	29	15	26	15	0.76	0.66	0.44	0.76	0.44
1SV15ME079	15	5	20	15	5	20	15	5	20	1	1	1	1	1	9.8	9.8	9.8	9.8	9.8	49	21.8	24.8	13.8	21.8	13.8	0.64	0.56	0.41	0.64	0.41
1SV15ME082	12	6	18	12	6	18	12	6	18	1	1	1	1	1	9.8	9.8	9.8	9.8	9.8	49	25.8	30.8	15.8	25.8	15.8	0.76	0.70	0.46	0.76	0.46
1SV15ME083	14	4	18	14	4	18	14	4	18	1	1	1	1	1	8.4	8.4	8.4	8.4	8.4	42	21.4	27.4	15.4	21.4	15.4	0.63	0.62	0.45	0.63	0.45
1SV15ME087	15	1	16	15	1	16	15	1	16	1	1	1	1	1	8.4	8.4	8.4	8.4	8.4	42	23.4	27.4	13.4	23.4	13.4	0.69	0.62	0.39	0.69	0.39
1SV15ME400	15	3	18	15	3	18	15	3	18	1	1	1	1	1	7.6	7.6	7.6	7.6	7.6	38	23.6	24.6	9.6	23.6	9.6	0.69	0.56	0.28	0.69	0.28
1SV16ME402	14	3	17	14	3	17	14	3	17	1	1	1	1	1	8.6	8.6	8.6	8.6	8.6	43	24.6	27.6	12.6	24.6	12.6	0.72	0.63	0.37	0.72	0.37
1SV16ME403	15	2	17	15	2	17	15	2	17	1	1	1	1	1	9.4	9.4	9.4	9.4	9.4	47	24.4	27.4	13.4	24.4	13.4	0.72	0.62	0.39	0.72	0.39
1SV16ME404	12	6	18	12	6	18	12	6	18	1	1	1	1	1	9.6	9.6	9.6	9.6	9.6	48	25.6	27.6	12.6	25.6	12.6	0.75	0.63	0.37	0.75	0.37
1SV16ME405	12	2	14	12	2	14	12	2	14	1	1	1	1	1	10.4	10.4	10.4	10.4	10.4	52	23.4	29.4	17.4	23.4	17.4	0.69	0.67	0.51	0.69	0.51
1SV16ME407	13	4	17	13	4	17	13	4	17	1	1	1	1	1	6.8	6.8	6.8	6.8	6.8	34	19.8	21.8	9.8	19.8	9.8	0.58	0.50	0.29	0.58	0.29
1SV16ME408	12	3	15	12	3	15	12	3	15	1	1	1	1	1	7.6	7.6	7.6	7.6	7.6	38	21.6	25.6	12.6	21.6	12.6	0.64	0.58	0.37	0.64	0.37
1SV16ME409	11	8	19	11	8	19	11	8	19	1	1	1	1	1	7.2	7.2	7.2	7.2	7.2	36	20.2	23.2	11.2	20.2	11.2	0.59	0.53	0.33	0.59	0.33
1SV16ME410	15	1	16	15	1	16	15	1	16	1	1	1	1	1	8.8	8.8	8.8	8.8	8.8	44	20.8	28.8	17.8	20.8	17.8	0.61	0.65	0.52	0.61	0.52
1SV16ME412	12	4	16	12	4	16	12	4	16	1	1	1	1	1	5.6	5.6	5.6	5.6	5.6	28	21.6	22.6	7.6	21.6	7.6	0.64	0.51	0.22	0.64	0.22
1SV16ME413	11	7	18	11	7	18	11	7	18	1	1	1	1	1	10.4	10.4	10.4	10.4	10.4	52	23.4	27.4	15.4	23.4	15.4	0.69	0.62	0.45	0.69	0.45
1SV16ME416	12	4	16	12	4	16	12	4	16	1	1	1	1	1	8.4	8.4	8.4	8.4	8.4	42	20.4	27.4	16.4	20.4	16.4	0.60	0.62	0.48	0.60	0.48
1SV16ME417	14	3	17	14	3	17	14	3	17	1	1	1	1	1	8.4	8.4	8.4	8.4	8.4	42	21.4	25.4	13.4	21.4	13.4	0.63	0.58	0.39	0.63	0.39
1SV16ME418	12	4	16	12	4	16	12	4	16	1	1	1	1	1	8.8	8.8	8.8	8.8	8.8	44	23.8	26.8	12.8	23.8	12.8	0.70	0.61	0.38	0.70	0.38
1SV16ME419	11	6	17	11	6	17	11	6	17	1	1	1	1	1	8.6	8.6	8.6	8.6	8.6	43	21.6	25.6	13.6	21.6	13.6	0.64	0.58	0.40	0.64	0.40
1SV16ME420	12	4	16	12	4	16	12	4	16	1	1	1	1	1	14.2	14.2	14.2	14.2	14.2	71	26.2	32.2	21.2	26.2	21.2	0.77	0.73	0.62	0.77	0.62
1SV16ME421	11	8	19	11	8	19	11	8	19	1	1	1	1	1	7.4	7.4	7.4	7.4	7.4	37	20.4	24.4	12.4	20.4	12.4	0.60	0.55	0.36	0.60	0.36
1SV16ME423	12	6	18	12	6	18	12	6	18	1	1	1	1	1	11.4	11.4	11.4	11.4	11.4	57	23.4	31.4	20.4	23.4	20.4	0.69	0.71	0.60	0.69	0.60
1SV16ME424	11	8	19	11	8	19	11	8	19	1	1	1	1	1	7.8	7.8	7.8	7.8	7.8	39	20.8	26.8	14.8	20.8	14.8	0.61	0.61	0.44	0.61	0.44
1SV16ME425	12	5	17	12	5	17	12	5	17	1	1	1	1	1	10.8	10.8	10.8	10.8	10.8	54	22.8	30.8	19.8	22.8	19.8	0.67	0.70	0.58	0.67	0.58
TOTAL	844	313	1157	844	313	1157	844	313	1257	68	68	68	68	68	10	10	10	10	10	50	23	28	16	23	16	0.68	0.64	0.47	0.68	0.47
NO OF STUDENTS	68	68	68	68	68	68	68	68	68	68	68	68	68	68	614.6	614.6	614.6	614.6	614.6	3073	1526.6	1839.6	995.6		995.6	44.90	41.81	25.28	44.90	29.28
AVERAGE	12.39	4.89	16.078	13.2	4.891	16.08	12.39	4.89	16.078	1.1	1.1	1.1	1.1	1.1	9.6031	9.603	9.603	9.603	9.603	48.01563	23.9	28.7	15.6	23.9	15.6	70.16	65.33	45.75	70.16	45.75

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PRINCIPAL
SIET., TUMAKURU.

SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR- 572 106.

DEPARTMENT OF MECHANICAL ENGINEERING

SUBJECT	OPEN ELECTIVE-1 (ERE)	SUBJECT CODE	15ME56X

COURSE OUTCOME

CO1	Understand thermal energy conversion system for real time applications
CO2	Apply the knowledge of principle of energy conversion by diesel and hydel energy
CO3	analyze the solar radiation parameters,working of solar PV and thermal systems.
CO4	Interpret principle of energy conversion from wind and tidal.
CO5	Review the applications of biomass energy, fuel cell, thermoelectric conversion and MHD 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 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: 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	BABU KAREGOWDA											
BRANCH	ME		ACADEMIC YEAR		2017-28							
COURSE	B.E	SEMESTER	V	SECTION								
SUBJECT	OPEN ELECTIVE-1 (ERE)			SUBJECT CODE	15ME56X							
CO & PO MAPPING												
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2											
CO2	2											
CO3	2											
CO4	2											
CO5	2											
AVERAGE	2											
OVERALL MAPPING OF SUBJECT												2.0

CO AND PO ATTAINMENT

	CO%	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	70.16	1.40											
CO2	65.33	1.30											
CO3	45.75	0.90											
CO4	70.16	1.40											
CO5	45.75	0.91											
AVERAGE	59.43	1.18											
FINAL ATTAINMENT LEVEL													1.18

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Academic year	2017-18			SEM	V		Total strength			68		Subject			Open Elective - I (ERE)						Subject Code	15ME56X								
SEM:V	IA TEST 1(20M)			IA TEST 2(20M)			IA TEST 3(20M)			ASSIGNEMENT / QUIZ(10 M)					SEE MARKS(60)						Total Cos ATTAINMENT					% of individual CO				
USN	CO1	CO2	TOTAL	CO2	CO3	TOTAL	CO4	CO5	TOTAL	CO1	CO2	CO3	CO4	CO5	CO1=12	CO2	CO3	CO4	CO5	TOTAL	CO1=34	CO2=44	CO3=34	CO4=34	CO5=34	CO1	CO2	CO3	CO4	CO5
1SV14ME011	11	5	16	11	5	16	11	5	16	1	1	1	1	1	8.2	8.2	8.2	8.2	8.2	41	20.2	25.2	14.2	20.2	14.2	0.59	0.57	0.42	0.59	0.42
1SV14ME016	12	4	16	12	4	16	12	4	16	1	1	1	1	1	6.6	6.6	6.6	6.6	6.6	33	19.6	23.6	11.6	19.6	11.6	0.58	0.54	0.34	0.58	0.34
1SV14ME018	12	7	19	12	7	19	12	7	19	1	1	1	1	1	10.4	10.4	10.4	10.4	10.4	52	23.4	30.4	18.4	23.4	18.4	0.69	0.69	0.54	0.69	0.54
1SV14ME026	11	7	18	11	7	18	11	7	18	1	1	1	1	1	7.6	7.6	7.6	7.6	7.6	38	19.6	26.6	15.6	19.6	15.6	0.58	0.60	0.46	0.58	0.46
1SV14ME034	15	0	15	15	0	15	15	0	15	1	1	1	1	1	7.4	7.4	7.4	7.4	7.4	37	23.4	23.4	8.4	23.4	8.4	0.69	0.53	0.25	0.69	0.25
1SV14ME055	12	7	19	12	7	19	12	7	19	1	1	1	1	1	9.4	9.4	9.4	9.4	9.4	47	22.4	29.4	17.4	22.4	17.4	0.66	0.67	0.51	0.66	0.51
1SV14ME064	12	7	19	12	7	19	12	7	19	1	1	1	1	1	11	11	11	11	11	55	24	31	19	24	19	0.71	0.70	0.56	0.71	0.56
1SV14ME083	11	7	18	11	7	18	11	7	18	1	1	1	1	1	9.6	9.6	9.6	9.6	9.6	48	21.6	28.6	17.6	21.6	17.6	0.64	0.65	0.52	0.64	0.52
1SV14ME084	15	2	17	15	2	17	15	2	17	1	1	1	1	1	5.6	5.6	5.6	5.6	5.6	28	21.6	23.6	8.6	21.6	8.6	0.64	0.54	0.25	0.64	0.25
1SV15ME001	15	2	17	15	2	17	15	2	17	1	1	1	1	1	10.2	10.2	10.2	10.2	10.2	51	26.2	28.2	13.2	26.2	13.2	0.77	0.64	0.39	0.77	0.39
1SV15ME003	12	7	19	12	7	19	12	7	19	1	1	1	1	1	10.8	10.8	10.8	10.8	10.8	54	23.8	30.8	18.8	23.8	18.8	0.70	0.70	0.55	0.70	0.55
1SV15ME007	15	2	17	15	2	17	15	2	17	1	1	1	1	1	7.2	7.2	7.2	7.2	7.2	36	23.2	25.2	10.2	23.2	10.2	0.68	0.57	0.30	0.68	0.30
1SV15ME008	15	2	17	15	2	17	15	2	17	1	1	1	1	1	9	9	9	9	9	45	25	27	12	25	12	0.74	0.61	0.35	0.74	0.35
1SV15ME010	15	2	17	15	2	17	15	2	17	1	1	1	1	1	8.6	8.6	8.6	8.6	8.6	43	24.6	26.6	11.6	24.6	11.6	0.72	0.60	0.34	0.72	0.34
1SV15ME011	12	3	15	12	3	15	12	3	15	1	1	1	1	1	7	7	7	7	7	35	20	23	11	20	11	0.59	0.52	0.32	0.59	0.32
1SV15ME017	11	5	16	11	5	16	11	5	16	1	1	1	1	1	9.2	9.2	9.2	9.2	9.2	46	21.2	26.2	15.2	21.2	15.2	0.62	0.60	0.45	0.62	0.45
1SV15ME018	12	6	18	12	6	18	12	6	18	1	1	1	1	1	9.2	9.2	9.2	9.2	9.2	46	22.2	28.2	16.2	22.2	16.2	0.65	0.64	0.48	0.65	0.48
1SV15ME019	12	4	16	12	4	16	12	4	16	1	1	1	1	1	8.8	8.8	8.8	8.8	8.8	44	21.8	25.8	13.8	21.8	13.8	0.64	0.59	0.41	0.64	0.41
1SV15ME023	11	7	18	11	7	18	11	7	18	1	1	1	1	1	11.4	11.4	11.4	11.4	11.4	57	23.4	30.4	19.4	23.4	19.4	0.69	0.69	0.57	0.69	0.57
1SV15ME025	12	5	17	12	5	17	12	5	17	1	1	1	1	1	11	11	11	11	11	55	24	29	17	24	17	0.71	0.66	0.50	0.71	0.50
1SV15ME027	15	1	16	15	1	16	15	1	16	1	1	1	1	1	11.2	11.2	11.2	11.2	11.2	56	27.2	28.2	13.2	27.2	13.2	0.80	0.64	0.39	0.80	0.39
1SV15ME028	12	5	17	12	5	17	12	5	17	1	1	1	1	1	6	6	6	6	6	30	19	24	12	19	12	0.56	0.55	0.35	0.56	0.35
1SV15ME032	12	4	16	12	4	16	12	4	16	1	1	1	1	1	8.8	8.8	8.8	8.8	8.8	44	21.8	25.8	13.8	21.8	13.8	0.64	0.59	0.41	0.64	0.41
1SV15ME034	15	2	17	15	2	17	15	2	17	1	1	1	1	1	7	7	7	7	7	35	23	25	10	23	10	0.68	0.57	0.29	0.68	0.29
1SV15ME039	12	6	18	12	6	18	12	6	18	1	1	1	1	1	9.8	9.8	9.8	9.8	9.8	49	22.8	28.8	16.8	22.8	16.8	0.67	0.65	0.49	0.67	0.49
1SV15ME042	1	14	15	1	14	15	1	14	15	1	1	1	1	1	8.4	8.4	8.4	8.4	8.4	42	10.4	24.4	23.4	10.4	23.4	0.31	0.55	0.69	0.31	0.69
1SV15ME044	11	3	14	11	3	14	11	3	14	1	1	1	1	1	8.4	8.4	8.4	8.4	8.4	42	20.4	23.4	12.4	20.4	12.4	0.60	0.53	0.36	0.60	0.36
1SV15ME045	12	2	14	12	2	14	12	2	14	1	1	1	1	1	11.2	11.2	11.2	11.2	11.2	56	24.2	26.2	14.2	24.2	14.2	0.71	0.60	0.42	0.71	0.42
1SV15ME048	15	4	19	15	4	19	15	4	19	1	1	1	1	1	10.6	10.6	10.6	10.6	10.6	53	26.6	30.6	15.6	26.6	15.6	0.78	0.70	0.46	0.78	0.46
1SV15ME049	12	0	12	12	0	12	12	0	12	1	1	1	1	1	8.6	8.6	8.6	8.6	8.6	43	21.6	21.6	9.6	21.6	9.6	0.64	0.49	0.28	0.64	0.28
1SV15ME051	12	7	19	12	7	19	12	7	19	1	1	1	1	1	12.2	12.2	12.2	12.2	12.2	61	25.2	32.2	20.2	25.2	20.2	0.74	0.73	0.59	0.74	0.59
1SV15ME056	12	7	19	12	7	19	12	7	19	1	1	1	1	1	10.6	10.6	10.6	10.6	10.6	53	23.6	30.6	18.6	23.6	18.6	0.69	0.70	0.55	0.69	0.55
1SV15ME058	11	1	12	11	1	12	11	1	12	1	1	1	1	1	8.6	8.6	8.6	8.6	8.6	43	20.6	21.6	10.6	20.6	10.6	0.61	0.49	0.31	0.61	0.31
1SV15ME059	12	5	17	12	5	17	12	5	17	1	1	1	1	1	7	7	7	7	7	35	20	25	13	20	13	0.59	0.57	0.38	0.59	0.38
1SV15ME062	15	4	19	15	4	19	15	4	19	1	1	1	1	1	11.4	11.4	11.4	11.4	11.4	57	27.4	31.4	16.4	27.4	16.4	0.81	0.71	0.48	0.81	0.48
1SV15ME066	11	5	16	11	5	16	11	5	16	1	1	1	1	1	8.2	8.2	8.2	8.2	8.2	41	20.2	25.2	14.2	20.2	14.2	0.59	0.57	0.42	0.59	0.42
1SV15ME067	12	2	14	12	2	14	12	2	14	1	1	1	1	1	5.6	5.6	5.6	5.6	5.6	28	18.6	20.6	8.6	18.6	8.6	0.55	0.47	0.25	0.55	0.25
1SV15ME070	12	7	19	12	7	19	12	7	19	1	1	1	1	1	11.2	11.2	11.2	11.2	11.2	56	24.2	31.2	19.2	24.2	19.2	0.71	0.71	0.56	0.71	0.56
1SV15ME072	12	7	19	12	7	19	12	7	19	1	1	1	1	1	8.6	8.6	8.6	8.6	8.6	43	21.6	28.6	16.6	21.6	16.6	0.64	0.65	0.49	0.64	0.49
1SV15ME073	11	9	20	11	9	20	11	9	20	1	1	1	1	1	9.6	9.6	9.6	9.6	9.6	48	21.6	30.6	19.6	21.6	19.6	0.64	0.70	0.58	0.64	0.58
1SV15ME074	12	7	19	12	7	19	12	7	19	1	1	1	1	1	8	8	8	8	8	40	21	28	16	21	16	0.62	0.64	0.47	0.62	0.47
1SV15ME075	12	7	19	12	7	19	12	7	19	1	1	1	1	1	10.2	10.2	10.2	10.2	10.2	51	23.2	30.2	18.2	23.2	18.2	0.68	0.69	0.54	0.68	0.54
1SV15ME076	14	3	17	14	3	17	14	3	17	1	1	1	1	1	11	11	11	11	11	55	26	29	15	26	15	0.76	0.66	0.44	0.76	0.44
1SV15ME077	11	3	14	11	3	14	11	3	14	1	1	1	1	1	9.8	9.8	9.8	9.8	9.8	49	21.8	24.8	13.8	21.8	13.8	0.64	0.56	0.41	0.64	0.41
1SV15ME079	15	5	20	15	5	20	15	5	20	1	1	1	1	1	9.8	9.8	9.8	9.8	9.8	49	25.8	30.8	15.8	25.8	15.8	0.76	0.70	0.46	0.76	0.46
1SV15ME082	12	6	18	12	6	18	12	6	18	1	1	1	1	1	8.4	8.4	8.4	8.4	8.4	42	21.4	27.4	15.4	21.4	15.4	0.63	0.62	0.45	0.63	0.45
1SV15ME083	14	4	18	14	4	18	14	4	18	1	1	1	1	1	8.4	8.4	8.4	8.4	8.4	42	23.4	27.4	13.4	23.4	13.4	0.69	0.62	0.39	0.69	0.39

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1SV15ME087	15	1	16	15	1	16	15	1	16	1	1	1	1	1	7.6	7.6	7.6	7.6	7.6	38	23.6	24.6	9.6	23.6	9.6	0.69	0.56	0.28	0.69	0.28
1SV15ME400	15	3	18	15	3	18	15	3	18	1	1	1	1	1	8.6	8.6	8.6	8.6	8.6	43	24.6	27.6	12.6	24.6	12.6	0.72	0.63	0.37	0.72	0.37
1SV16ME402	14	3	17	14	3	17	14	3	17	1	1	1	1	1	9.4	9.4	9.4	9.4	9.4	47	24.4	27.4	13.4	24.4	13.4	0.72	0.62	0.39	0.72	0.39
1SV16ME403	15	2	17	15	2	17	15	2	17	1	1	1	1	1	9.6	9.6	9.6	9.6	9.6	48	25.6	27.6	12.6	25.6	12.6	0.75	0.63	0.37	0.75	0.37
1SV16ME404	12	6	18	12	6	18	12	6	18	1	1	1	1	1	10.4	10.4	10.4	10.4	10.4	52	23.4	29.4	17.4	23.4	17.4	0.69	0.67	0.51	0.69	0.51
1SV16ME405	12	2	14	12	2	14	12	2	14	1	1	1	1	1	6.8	6.8	6.8	6.8	6.8	34	19.8	21.8	9.8	19.8	9.8	0.58	0.50	0.29	0.58	0.29
1SV16ME407	13	4	17	13	4	17	13	4	17	1	1	1	1	1	7.6	7.6	7.6	7.6	7.6	38	21.6	25.6	12.6	21.6	12.6	0.64	0.58	0.37	0.64	0.37
1SV16ME408	12	3	15	12	3	15	12	3	15	1	1	1	1	1	7.2	7.2	7.2	7.2	7.2	36	20.2	23.2	11.2	20.2	11.2	0.59	0.53	0.33	0.59	0.33
1SV16ME409	11	8	19	11	8	19	11	8	19	1	1	1	1	1	8.8	8.8	8.8	8.8	8.8	44	20.8	28.8	17.8	20.8	17.8	0.61	0.65	0.52	0.61	0.52
1SV16ME410	15	1	16	15	1	16	15	1	16	1	1	1	1	1	5.6	5.6	5.6	5.6	5.6	28	21.6	22.6	7.6	21.6	7.6	0.64	0.51	0.22	0.64	0.22
1SV16ME412	12	4	16	12	4	16	12	4	16	1	1	1	1	1	10.4	10.4	10.4	10.4	10.4	52	23.4	27.4	15.4	23.4	15.4	0.69	0.62	0.45	0.69	0.45
1SV16ME413	11	7	18	11	7	18	11	7	18	1	1	1	1	1	8.4	8.4	8.4	8.4	8.4	42	20.4	27.4	16.4	20.4	16.4	0.60	0.62	0.48	0.60	0.48
1SV16ME416	12	4	16	12	4	16	12	4	16	1	1	1	1	1	8.4	8.4	8.4	8.4	8.4	42	21.4	25.4	13.4	21.4	13.4	0.63	0.58	0.39	0.63	0.39
1SV16ME417	14	3	17	14	3	17	14	3	17	1	1	1	1	1	8.8	8.8	8.8	8.8	8.8	44	23.8	26.8	12.8	23.8	12.8	0.70	0.61	0.38	0.70	0.38
1SV16ME418	12	4	16	12	4	16	12	4	16	1	1	1	1	1	8.6	8.6	8.6	8.6	8.6	43	21.6	25.6	13.6	21.6	13.6	0.64	0.58	0.40	0.64	0.40
1SV16ME419	11	6	17	11	6	17	11	6	17	1	1	1	1	1	14.2	14.2	14.2	14.2	14.2	71	26.2	32.2	21.2	26.2	21.2	0.77	0.73	0.62	0.77	0.62
1SV16ME420	12	4	16	12	4	16	12	4	16	1	1	1	1	1	7.4	7.4	7.4	7.4	7.4	37	20.4	24.4	12.4	20.4	12.4	0.60	0.55	0.36	0.60	0.36
1SV16ME421	11	8	19	11	8	19	11	8	19	1	1	1	1	1	11.4	11.4	11.4	11.4	11.4	57	23.4	31.4	20.4	23.4	20.4	0.69	0.71	0.60	0.69	0.60
1SV16ME423	12	6	18	12	6	18	12	6	18	1	1	1	1	1	7.8	7.8	7.8	7.8	7.8	39	20.8	26.8	14.8	20.8	14.8	0.61	0.61	0.44	0.61	0.44
1SV16ME424	11	8	19	11	8	19	11	8	19	1	1	1	1	1	10.8	10.8	10.8	10.8	10.8	54	22.8	30.8	19.8	22.8	19.8	0.67	0.70	0.58	0.67	0.58
1SV16ME425	12	5	17	12	5	17	12	5	17	1	1	1	1	1	10	10	10	10	10	50	23	28	16	23	16	0.68	0.64	0.47	0.68	0.47
TOTAL	844	313	1157	844	313	1157	844	313	1157	68	68	68	68	68	614.6	614.6	614.6	614.6	614.6	3073	1526.6	1839.6	995.6	1526.6	995.6	44.90	41.81	29.28	44.90	29.28
NO OF STUDENTS	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68
AVERAGE	13.19	4.89	18.078	13.2	4.891	18.08	13.19	4.89	18.078	1.1	1.1	1.1	1.1	1.1	9.6031	9.603	9.603	9.603	9.603	48.01563	23.9	28.7	15.6	23.9	15.6	70.16	65.33	45.75	70.16	45.75

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SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR- 572 106.

DEPARTMENT OF MECHANICAL ENGINEERING

SUBJECT	ENGINEERING ECONOMY	SUBJECT CODE	10ME71

COURSE OUTCOME

CO1	Explain the development of management and the role it plays at different levels in an organization
CO2	Comprehend the process and role of effective planning, organizing and staffing for the development of an organization
CO3	Understand the necessity of good leadership, communication and coordination for establishing effective control in an organization
CO4	Understand engineering economics demand supply and its importance in economic decision making and problem solving
CO5	Calculate present worth, annual worth and IRR for different alternatives in economic decision making

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: 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	SANTHOSH T U											
BRANCH	ME			ACADEMIC YEAR			2017-18					
COURSE	B.E	SEMESTER	VII	SECTION								
SUBJECT	ECONOMICS					SUBJECT CODE	10ME71					
CO & PO MAPPING												
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1												
CO2												
CO3												
CO4												
CO5												
AVERAGE												
OVERALL MAPPING OF SUBJECT												

CO AND PO ATTAINMENT

	CO%	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	85.11												
CO2	87.22												
CO3	73.54												
CO4	85.07												
CO5	73.54												
AVERAGE	80.89												
FINAL ATTAINMENT LEVEL													

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Academic year	2017-18			SEM	VII		Total strength			TI		Subject	Economics						Subject Code	10ME71									
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	CO2	CO3	TOTAL	CO4	CO5	TOTAL	CO1	CO2	CO3	CO4	CO5	CO1+2+3	CO2	CO3	CO4	CO5	TOTAL	CO1+3+4	CO2+4+5	CO3+4+5	CO4+5+6	CO5+5+6	CO1	CO2	CO3	CO4	CO5
1SV13ME021	12	6	18	12	6	18	12	6	18	1	1	1	1	1	13.4	13.4	13.4	13.4	13.4	67	26.4	32.4	20.4	26.4	20.4	0.78	0.74	0.60	0.78	0.60
1SV13ME046	11	4	15	11	4	15	11	4	15	1	1	1	1	1	7	7	7	7	7	35	18	23	12	19	12	0.56	0.52	0.35	0.56	0.35
1SV12ME077	12	3	15	12	3	15	12	3	15	1	1	1	1	1	8.2	8.2	8.2	8.2	8.2	41	21.2	24.2	12.2	21.2	12.2	0.62	0.55	0.36	0.62	0.36
1SV13ME018	15	0	15	15	0	15	15	0	15	1	1	1	1	1	8.2	8.2	8.2	8.2	8.2	41	24.2	24.2	9.2	24.2	9.2	0.71	0.55	0.27	0.71	0.27
1SV13ME049	12	10	22	12	10	22	12	10	22	1	1	1	1	1	9.2	9.2	9.2	9.2	9.2	46	22.2	32.2	20.2	22.2	20.2	0.65	0.73	0.59	0.65	0.59
1SV13ME112	12	7	19	12	7	19	12	7	19	1	1	1	1	1	15.6	15.6	15.6	15.6	15.6	78	28.6	35.6	23.6	28.6	23.6	0.84	0.81	0.69	0.84	0.69
1SV14ME001	11	12	23	11	12	23	11	12	23	1	1	1	1	1	17.6	17.6	17.6	17.6	17.6	88	29.6	41.6	30.6	29.6	30.6	0.87	0.95	0.90	0.87	0.90
1SV14ME005	12	6	18	12	6	18	12	6	18	1	1	1	1	1	12.2	12.2	12.2	12.2	12.2	61	25.2	31.2	18.2	25.2	18.2	0.74	0.71	0.54	0.74	0.54
1SV14ME007	12	9	21	12	9	21	12	9	21	1	1	1	1	1	15.4	15.4	15.4	15.4	15.4	77	28.4	33.4	25.4	28.4	25.4	0.84	0.85	0.75	0.84	0.75
1SV14ME009	11	10	21	11	10	21	11	10	21	1	1	1	1	1	13.8	13.8	13.8	13.8	13.8	69	25.8	35.8	24.8	25.8	24.8	0.76	0.83	0.73	0.76	0.73
1SV14ME012	12	12	24	12	12	24	12	12	24	1	1	1	1	1	17.8	17.8	17.8	17.8	17.8	89	30.8	42.8	30.8	30.8	30.8	0.91	0.97	0.91	0.91	0.91
1SV14ME014	12	13	25	12	13	25	12	13	25	1	1	1	1	1	16	16	16	16	16	80	29	42	30	29	30	0.85	0.95	0.88	0.85	0.88
1SV14ME015	11	10	21	11	10	21	11	10	21	1	1	1	1	1	15	15	15	15	15	75	27	37	26	27	26	0.79	0.84	0.76	0.79	0.76
1SV14ME019	12	11	23	12	11	23	12	11	23	1	1	1	1	1	12.4	12.4	12.4	12.4	12.4	62	25.4	36.4	24.4	25.4	24.4	0.75	0.83	0.72	0.75	0.72
1SV14ME020	11	10	21	11	10	21	11	10	21	1	1	1	1	1	13.4	13.4	13.4	13.4	13.4	67	25.4	35.4	24.4	25.4	24.4	0.75	0.80	0.72	0.75	0.72
1SV14ME022	12	5	17	12	5	17	12	5	17	1	1	1	1	1	13.4	13.4	13.4	13.4	13.4	67	26.4	31.4	19.4	26.4	19.4	0.78	0.71	0.57	0.78	0.57
1SV14ME024	12	4	16	12	4	16	12	4	16	1	1	1	1	1	10	10	10	10	10	50	23	27	15	23	15	0.68	0.61	0.44	0.68	0.44
1SV14ME027	1	24	25	1	24	25	1	24	25	1	1	1	1	1	15.2	15.2	15.2	15.2	15.2	76	17.2	41.2	40.2	17.2	40.2	0.51	0.94	1.18	0.51	1.18
1SV14ME043	12	12	24	12	12	24	12	12	24	1	1	1	1	1	13.8	13.8	13.8	13.8	13.8	69	26.8	38.8	26.8	26.8	26.8	0.79	0.88	0.79	0.79	0.79
1SV14ME044	11	8	19	11	8	19	11	8	19	1	1	1	1	1	10.2	10.2	10.2	10.2	10.2	51	22.2	30.2	19.2	22.2	19.2	0.65	0.69	0.56	0.65	0.56
1SV14ME045	12	12	24	12	12	24	12	12	24	1	1	1	1	1	12	12	12	12	12	60	25	37	25	25	25	0.74	0.84	0.74	0.74	0.74
1SV14ME046	15	10	25	15	10	25	15	10	25	1	1	1	1	1	18.2	18.2	18.2	18.2	18.2	91	34.2	44.2	29.2	34.2	29.2	1.01	1.00	0.86	1.01	0.86
1SV14ME049	15	10	25	15	10	25	15	10	25	1	1	1	1	1	17.8	17.2	17.2	17.2	17.2	89	33.8	43.2	28.2	33.2	28.2	0.99	0.98	0.83	0.98	0.83
1SV14ME052	12	13	25	12	13	25	12	13	25	1	1	1	1	1	16.6	16.6	16.6	16.6	16.6	83	29.6	42.6	30.6	29.6	30.6	0.87	0.97	0.90	0.87	0.90
1SV14ME053	13	13	25	12	13	25	12	13	25	1	1	1	1	1	14	14	14	14	14	70	27	40	28	27	28	0.79	0.91	0.82	0.79	0.82
1SV14ME054	14	3	17	14	3	17	14	3	17	1	1	1	1	1	11.6	11.6	11.6	11.6	11.6	58	26.6	29.6	15.6	26.6	15.6	0.78	0.67	0.46	0.78	0.46
1SV14ME057	12	12	24	12	12	24	12	12	24	1	1	1	1	1	12.4	12.4	12.4	12.4	12.4	62	25.4	37.4	25.4	25.4	25.4	0.75	0.85	0.75	0.75	0.75
1SV14ME058	12	12	24	12	12	24	12	12	24	1	1	1	1	1	16	16	16	16	16	80	29	41	29	29	29	0.85	0.93	0.85	0.85	0.85
1SV14ME059	11	6	17	11	6	17	11	6	17	1	1	1	1	1	15.2	15.2	15.2	15.2	15.2	76	27.2	33.2	22.2	27.2	22.2	0.80	0.75	0.65	0.80	0.65
1SV14ME061	12	10	22	12	10	22	12	10	22	1	1	1	1	1	14.2	14.2	14.2	14.2	14.2	71	27.2	37.2	25.2	27.2	25.2	0.80	0.85	0.74	0.80	0.74
1SV14ME063	15	2	17	15	2	17	15	2	17	1	1	1	1	1	11.8	11.8	11.8	11.8	11.8	59	27.8	29.8	14.8	27.8	14.8	0.82	0.68	0.44	0.82	0.44
1SV14ME070	15	0	15	15	0	15	15	0	15	1	1	1	1	1	11.2	11.2	11.2	11.2	11.2	56	27.2	27.2	12.2	27.2	12.2	0.80	0.62	0.36	0.80	0.36
1SV14ME072	12	12	24	12	12	24	12	12	24	1	1	1	1	1	14	14	14	14	14	70	27	39	27	27	27	0.79	0.89	0.79	0.79	0.79
1SV14ME076	12	5	17	12	5	17	12	5	17	1	1	1	1	1	17	17	17	17	17	85	30	35	23	30	23	0.88	0.80	0.68	0.88	0.68
1SV14ME078	11	7	18	11	7	18	11	7	18	1	1	1	1	1	17.4	17.4	17.4	17.4	17.4	87	29.4	36.4	25.4	29.4	25.4	0.86	0.83	0.75	0.86	0.75
1SV14ME079	12	6	18	12	6	18	12	6	18	1	1	1	1	1	13.4	13.4	13.4	13.4	13.4	67	26.4	30.4	18.4	26.4	18.4	0.78	0.69	0.54	0.78	0.54
1SV14ME080	14	7	21	14	7	21	14	7	21	1	1	1	1	1	12.4	12.4	12.4	12.4	12.4	62	27.4	34.4	20.4	27.4	20.4	0.81	0.78	0.60	0.81	0.60
1SV14ME082	12	8	20	12	8	20	12	8	20	1	1	1	1	1	17	17	17	17	17	85	30	38	26	30	26	0.88	0.86	0.76	0.88	0.76
1SV14ME087	12	10	22	12	10	22	12	10	22	1	1	1	1	1	13.2	13.2	13.2	13.2	13.2	66	26.2	36.2	24.2	26.2	24.2	0.77	0.82	0.71	0.77	0.71
1SV14ME089	12	7	19	12	7	19	12	7	19	1	1	1	1	1	11	11	11	11	11	55	24	31	19	24	19	0.71	0.70	0.56	0.71	0.56
1SV14ME090	14	8	22	14	8	22	14	8	22	1	1	1	1	1	11.4	11.4	11.4	11.4	11.4	57	26.4	34.4	20.4	26.4	20.4	0.78	0.78	0.60	0.78	0.60
1SV14ME091	12	12	24	12	12	24	12	12	24	1	1	1	1	1	12.8	12.8	12.8	12.8	12.8	64	25.8	37.8	25.8	25.8	25.8	0.76	0.86	0.76	0.76	0.76
1SV14ME094	12	12	24	12	12	24	12	12	24	1	1	1	1	1	11.8	11.8	11.8	11.8	11.8	59	24.8	36.8	24.8	24.8	24.8	0.73	0.84	0.73	0.73	0.73
1SV14ME401	15	5	20	15	5	20	15	5	20	1	1	1	1	1	0	0	0	0	0	0	16	21	6	16	6	0.47	0.48	0.18	0.47	0.18
1SV14ME410	1	14	15	1	14	15	1	14	15	1	1	1	1	1	15.2	15.2	15.2	15.2	15.2	76	17.2	31.2	30.2	17.2	30.2	0.51	0.71	0.89	0.51	0.89
1SV14ME411	12	3	15	12	3	15	12	3	15	1	1	1	1	1	10	10	10	10	10	50	23	26	14	23	14	0.68	0.59	0.41	0.68	0.41
1SV14ME412	12	3	15	12	3	15	12	3	15	1	1	1	1	1	10.6	10.6	10.6	10.6	10.6	53	23.6	26.6	14.6	23.6	14.6	0.69	0.60	0.43	0.69	0.43
1SV14ME414	12	8	20	12	8	20	12	8	20	1	1	1	1	1	10.4	10.4	10.4	10.4	10.4	52	23.4	31.4	19.4	23.4	19.4	0.69	0.71	0.57	0.69	0.57
1SV15ME400	11	8	19	11	8	19	11	8	19	1	1	1	1	1	11.4	11.4	11.4	11.4	11.4	57	23.4	31.4	20.4	23.4	20.4	0.69	0.71	0.60	0.69	0.60
1SV15ME402	12	9	21	12	9	21	12	9	21	1	1	1	1	1	16.2	16.2	16.2	16.2	16.2	81	29.2	38.2	26.2	29.2	26.2	0.86	0.87	0.77	0.86	0.77
1SV15ME403	15	7	22	15	7	22	15	7	22	1	1	1	1	1	14.2	14.2	14.2	14.2	14.2	71	30.2	37.2	22.2	30.2	22.2	0.89	0.85	0.65	0.89	0.65
1SV15ME404	12	9	21	12	9	21	12	9	21	1	1	1	1	1	14.6	14.6	14.6	14.6	14.6	73	27.6	36.6	24.6	27.6	24.6	0.81	0.83	0.72	0.81	0.72
1SV15ME405	12	4	16	12	4	16	12	4	16	1	1	1	1	1	8.6	8.6	8.6	8.6	8.6	43	21.6	25.6	13.6	21.6	13.6	0.64	0.58	0.40	0.64	0.40
1SV15ME406	12	3	15	12	3	15	12	3	15	1	1	1	1	1	8.8	8.8	8.8	8.8	8.8	44	21.8	24.8	12.8	21.8	12.8	0.64	0.56	0.37	0.64	0.37
1SV15ME407	11	14	25	11	14	25	11	14	25	1	1	1	1	1	17.6	17.6	17.6	17.6	17.6	88	29.6	43.6	32.6	29.6	32.6	0.87	0.99	0.96	0.87	0.96
1SV15ME408	11	11	22	11	11	22	11	11	22	1	1	1	1	1	16.4	16.4	16.4	16.4	16.4	82	28.4	39.4	28.4	28.4	28.4	0.84	0.90	0.84	0.84	0.84
1SV15ME409	12	11	23	12	11	23	12	11	23	1	1	1	1	1	13.6	13.6	13.6	13.6	13.6	68	26.6	37.6	25.6	26.6	25.6	0.78	0.85	0.75	0.78	0.75
1SV15ME411	11	11	22	11	11	22	11	11	22	1	1	1	1	1	7.2	7.2	7.2	7.2	7.2	36	19.2	30.2	19.2	19.2	19.2	0.56	0.69	0.56	0.56	0.56
1SV15ME412	12	9	21	12	9	21	12	9	21	1	1	1	1	1	13	13	13	13	13	65	26	35	23	26	23	0.76	0.80	0.68	0.76	0.68
1SV15ME413	12	9	21	12	9	21	12	9	21	1	1	1	1	1	17.4	17.4	17.4	17.4	17.4	87	30.4	39.4	27.4	30.4	27.4	0.89	0.90	0.81	0.89	0.81
1SV15ME415	16	9	25	16	9	25	16	9	25	1	1	1	1	1	16.8	16.8	16.8	16.8	16.8	84	33.8	42.8	26.8	33.8	26.8	0.99	0.97	0.78	0.99	0.78
1SV15ME416	15	6	21	15	6	21	15	6	21	1	1	1	1	1	7.4	7.4	7.4	7.4	7.4	37	23.4	29.4	14.4	23.4	14.4	0.69	0.67	0.42	0.69	0.42
1SV15ME417	12	10	22	12	10	22	12	10	22	1	1	1	1	1	17.6	17.6	17.6	17.6	17.6	88	30.6	40.6	28.6	30.6	28.6	0.90	0.92	0.84	0.90	0.84
1SV15ME418	12	7	19	12	7	19	12	7	19	1	1	1	1	1	13	13	13	13	13	65	26	33	21	26	21	0.76	0.75	0.62	0.76	0.62
1SV15ME421	12	13	25	12	13	25	12	13	25	1	1	1	1	1	15.8	15.8	15.8	15.8	15.8	79	28.8	41.8	29.8	28.8	29.8	0.85	0.95	0.88	0.85	0.88
1SV15ME422	11	13	24	11	13	24	11	13	24	1	1	1	1	1	13.4	13.4	13.4	13.4	13.4	67	25.4	38.4	27.4	25.4	27.4	0.75	0.87	0.81	0.75	0.81
1SV15ME424	12	13	25	12	13	25	12	13	25	1	1	1	1	1	13.6	13.6	13.6	13.6	13.6	68	26.6	39.6	27.6	26.6	27.6	0.78	0.90	0.81	0.78	0.81
1SV15ME425	12	6	18	12	6	18	12	6	18	1	1	1	1	1	9.8	9.8	9.8	9.8	9.8	49	22.8	28.8	16.8	22.8	16.8	0.67	0.65	0.49	0.67	0.49
1SV15ME427	11	10	21	11	10	21	11	10	21	1	1	1	1	1	11.2	11.2	11.2	11.2	11.2	56	23.2	33.2	22.2	23.2	22.2	0.68	0.75	0.65	0.68	0.65
1SV15ME429	15	9	24	15	9	24	15	9	24	1	1	1	1	1	12.6	12.8	12.6	12.6	12.6	63	28.6	37.6	22.6	28.6	22.6	0.84	0.85	0.66	0.84	0.66
1SV15ME431	15	6	15	15	0	15	15	0	15	1	1	1	1	1	8.4	8.4	8.4	8.4	8.4	42	24.4	24.4	9.4	24.4	9.4	0.72	0.55	0.28	0.72	0.28
TOTAL	856	605	1461	856	605	1461	856	605	1461	71	71	71	(	71	925	924.2	924.2	924.2	924.2	4625	1852	2456.2	1600.2	1851.2	1600.2	(	55.82	47.06	54.45	47.06
NO OF AVERAGE	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71
AVERAGE	13.38	9.45	22.828	13.4	9.453	22.83	13.38	9.45	22.826	1.109	1.109	1.1094	1.109	1.109	14.453	14.44	14.44	14.44	14.44	72.27	28.9	38.4	25.0	28.9	25.0	0.11	87.22	73.54	85.07	73.54

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Dept. of Mechanical
S.I.E.T., TUMKUR -6

PRINCIPAL
SIET., TUMAKURU

SHRIDEVI	**SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY** **SIRA ROAD, TUMKUR- 572 106.**

DEPARTMENT OF MECHANICAL ENGINEERING

SUBJECT	MECHANICAL VIBRATION	SUBJECT CODE	10ME72

COURSE OUTCOME

CO1	Understand the fundamentals of mechanical vibrations.
CO2	Ability to apply different methods for formulating the equation of motion for free and damped vibratory system and their solution cases.
CO3	Analyze the response of rotating imbalance and harmonic excitations, and applications in vibration isolations.
CO4	To learn various methods for calculating influence coefficients and principle modes of vibrations.
CO5	Understand the different modes of vibrations and applications of numerical methods.

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

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SIET, TUMAKURU.

COLLEGE	SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY				
FACULTY NAME	B H VASUDEVAMURTHY				
BRANCH	ME	ACADEMIC YEAR	2017-18		
COURSE	B.E	SEMESTER	VII	SECTION	
SUBJECT	MECHANICAL VIBRATION	SUBJECT CODE	10ME72		

CO & PO MAPPING

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2	3										
CO2	2	3										
CO3	2	3										
CO4	2	3										
CO5	2	3										
AVERAGE	2	3										
OVERALL MAPPING OF SUBJECT												2.5

CO AND PO ATTAINMENT

	CO%	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	70.77	1.41	2.12										
CO2	71.45	1.42	2.14										
CO3	54.28	1.08	1.62										
CO4	70.77	1.41	2.12										
CO5	54.28	1.08	1.62										
AVERAGE	64.31	1.28	1.92										
FINAL ATTAINMENT LEVEL													1.6

H.O.D
Dept. of Mechanical
S.I.E.T., TUMKUR -6

PRINCIPAL
SIET., TUMAKURU.

Academic year	2017-18			SEM	VII		Total strength			Subject	Mechanical Vibration					Subject Code	10ME72								
2016 VII	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	CO2	TOTAL	CO2	CO3	TOTAL	CO1	CO5	TOTAL	CO1	CO2	CO3	CO4	CO5	CO1=CO	CO1	CO2	CO3	CO4	CO5	TOTAL	CO1>=24	CO2>=24	CO3>=24	CO4>=24	CO5>=24	CO1	CO2	CO3	CO4	CO5
1SV13ME021	2	13	15	2	13	15	2	13	15	1	1	1	1	1	8.8	8.8	8.8	8.8	8.8	44	11.8	24.8	22.8	11.8	22.8	0.35	0.56	0.67	0.35	0.67
1SV13ME066	12	4	16	12	4	16	12	4	16	1	1	1	1	1	4	4	4	4	4	20	17	21	9	17	9	0.50	0.48	0.26	0.50	0.26
1SV12ME077	11	4	15	11	4	15	11	4	15	1	1	1	1	1	4.4	4.4	4.4	4.4	4.4	22	16.4	20.4	9.4	16.4	9.4	0.48	0.46	0.28	0.48	0.28
1SV13ME018	12	3	15	12	3	15	12	3	15	1	1	1	1	1	2.4	2.4	2.4	2.4	2.4	12	15.4	18.4	6.4	15.4	6.4	0.45	0.42	0.19	0.45	0.19
1SV13ME049	12	3	15	12	3	15	12	3	15	1	1	1	1	1	9.4	9.4	9.4	9.4	9.4	47	22.4	25.4	13.4	22.4	13.4	0.66	0.58	0.39	0.66	0.39
1SV13ME112	11	4	15	11	4	15	11	4	15	1	1	1	1	1	8	8	8	8	8	40	20	24	13	20	13	0.59	0.55	0.38	0.59	0.38
1SV14ME001	12	6	18	12	6	18	12	6	18	2	2	2	2	2	12.2	12.2	12.2	12.2	12.2	61	25.2	31.2	19.2	25.2	19.2	0.74	0.71	0.56	0.74	0.56
1SV14ME005	12	3	15	12	3	15	12	3	15	1	1	1	1	1	13	13	13	13	13	65	26	29	17	26	17	0.76	0.68	0.50	0.76	0.50
1SV14ME007	12	5	17	12	5	17	12	5	17	1	1	1	1	1	12.4	12.4	12.4	12.4	12.4	62	25.4	30.4	18.4	25.4	18.4	0.75	0.69	0.54	0.75	0.54
1SV14ME009	11	4	15	11	4	15	11	4	15	1	1	1	1	1	14	14	14	14	14	70	26	30	19	26	19	0.76	0.68	0.56	0.76	0.56
1SV14ME012	12	11	23	12	11	23	12	11	23	1	1	1	1	1	11	11	11	11	11	55	24	35	23	24	23	0.71	0.80	0.68	0.71	0.68
1SV14ME014	12	8	20	12	8	20	12	8	20	1	1	1	1	1	7	7	7	7	7	35	20	28	16	20	16	0.59	0.64	0.47	0.59	0.47
1SV14ME015	11	5	16	11	5	16	11	5	16	2	2	2	2	2	12.2	12.2	12.2	12.2	12.2	61	24.2	29.2	18.2	24.2	18.2	0.71	0.66	0.54	0.71	0.54
1SV14ME019	12	8	20	12	8	20	12	8	20	1	1	1	1	1	11.4	11.4	11.4	11.4	11.4	57	24.4	32.4	20.4	24.4	20.4	0.72	0.74	0.60	0.72	0.60
1SV14ME020	11	7	18	11	7	18	11	7	18	1	1	1	1	1	11.6	11.6	11.6	11.6	11.6	58	23.6	30.6	19.6	23.6	19.6	0.69	0.70	0.58	0.69	0.58
1SV14ME022	12	3	15	12	3	15	12	3	15	1	1	1	1	1	11.2	11.2	11.2	11.2	11.2	56	24.2	27.2	15.2	24.2	15.2	0.71	0.62	0.45	0.71	0.45
1SV14ME024	1	14	15	1	14	15	1	14	15	1	1	1	1	1	10.4	10.4	10.4	10.4	10.4	52	12.4	26.4	25.4	12.4	25.4	0.36	0.60	0.75	0.36	0.75
1SV14ME027	1	19	20	1	19	20	1	19	20	1	1	1	1	1	9.4	9.4	9.4	9.4	9.4	47	11.4	30.4	29.4	11.4	29.4	0.34	0.69	0.86	0.34	0.86
1SV14ME043	12	11	23	12	11	23	12	11	23	1	1	1	1	1	7.6	7.6	7.6	7.6	7.6	38	20.6	31.6	19.6	20.6	19.6	0.61	0.72	0.58	0.61	0.58
1SV14ME044	1	22	23	1	22	23	1	22	23	1	1	1	1	1	5.8	5.8	5.8	5.8	5.8	29	7.8	29.8	28.8	7.8	28.8	0.23	0.68	0.85	0.23	0.85
1SV14ME045	1	14	15	1	14	15	1	14	15	1	1	1	1	1	11.4	11.4	11.4	11.4	11.4	57	13.4	27.4	26.4	13.4	26.4	0.39	0.62	0.78	0.39	0.78
1SV14ME046	11	13	24	11	13	24	11	13	24	1	1	1	1	1	12.6	12.6	12.6	12.6	12.6	63	24.6	37.6	26.6	24.6	26.6	0.72	0.85	0.78	0.72	0.78
1SV14ME049	11	10	21	11	10	21	11	10	21	1	1	1	1	1	9.4	9.4	9.4	9.4	9.4	47	21.4	31.4	20.4	21.4	20.4	0.63	0.71	0.60	0.63	0.60
1SV14ME052	12	10	22	12	10	22	12	10	22	1	1	1	1	1	7.6	7.6	7.6	7.6	7.6	38	20.6	30.6	18.6	20.6	18.6	0.61	0.70	0.55	0.61	0.55
1SV14ME053	12	13	25	12	13	25	12	13	25	1	1	1	1	1	11.6	11.6	11.6	11.6	11.6	58	24.6	37.6	25.6	24.6	25.6	0.72	0.85	0.75	0.72	0.75
1SV14ME054	12	3	15	12	3	15	12	3	15	1	1	1	1	1	7.8	7.8	7.8	7.8	7.8	39	20.8	23.8	11.8	20.8	11.8	0.61	0.54	0.35	0.61	0.35
1SV14ME057	11	8	19	11	8	19	11	8	19	1	1	1	1	1	10.8	10.8	10.8	10.8	10.8	54	22.8	30.8	19.8	22.8	19.8	0.67	0.70	0.58	0.67	0.58
1SV14ME058	12	7	19	12	7	19	12	7	19	1	1	1	1	1	14.6	14.6	14.6	14.6	14.6	73	27.6	34.6	22.6	27.6	22.6	0.81	0.79	0.66	0.81	0.66
1SV14ME059	12	3	15	12	3	15	12	3	15	1	1	1	1	1	10.2	10.2	10.2	10.2	10.2	51	23.2	26.2	14.2	23.2	14.2	0.68	0.60	0.42	0.68	0.42
1SV14ME061	11	7	18	11	7	18	11	7	18	1	1	1	1	1	8.8	8.8	8.8	8.8	8.8	44	20.8	27.8	16.8	20.8	16.8	0.61	0.63	0.49	0.61	0.49
1SV14ME063	12	3	15	12	3	15	12	3	15	1	1	1	1	1	9	9	9	9	9	45	22	25	13	22	13	0.65	0.57	0.38	0.65	0.38
1SV14ME070	12	3	15	12	3	15	12	3	15	1	1	1	1	1	7	7	7	7	7	35	20	23	11	20	11	0.59	0.52	0.32	0.59	0.32
1SV14ME072	12	10	22	12	10	22	12	10	22	1	1	1	1	1	10.8	10.8	10.8	10.8	10.8	54	23.8	33.8	21.8	23.8	21.8	0.70	0.77	0.64	0.70	0.64
1SV14ME076	12	3	15	12	3	15	12	3	15	1	1	1	1	1	11.8	11.8	11.8	11.8	11.8	59	24.8	27.8	15.8	24.8	15.8	0.73	0.63	0.46	0.73	0.46
1SV14ME078	12	7	19	12	7	19	12	7	19	1	1	1	1	1	13.8	13.8	13.8	13.8	13.8	69	26.8	33.8	21.8	26.8	21.8	0.79	0.77	0.64	0.79	0.64
1SV14ME079	11	4	15	11	4	15	11	4	15	1	1	1	1	1	7	7	7	7	7	35	19	23	12	19	12	0.56	0.52	0.35	0.56	0.35
1SV14ME080	15	0	15	15	0	15	15	0	15	1	1	1	1	1	13.8	13.8	13.8	13.8	13.8	69	29.8	29.8	14.8	29.8	14.8	0.88	0.68	0.44	0.88	0.44
1SV14ME082	15	5	20	15	5	20	15	5	20	1	1	1	1	1	8.8	8.8	8.8	8.8	8.8	44	24.8	29.8	14.8	24.8	14.8	0.73	0.68	0.44	0.73	0.44
1SV14ME087	14	6	20	14	6	20	14	6	20	1	1	1	1	1	9	9	9	9	9	45	24	30	16	24	16	0.71	0.68	0.47	0.71	0.47
1SV14ME089	15	0	15	15	0	15	15	0	15	1	1	1	1	1	3.6	3.6	3.6	3.6	3.6	18	19.6	19.6	4.6	19.6	4.6	0.58	0.45	0.14	0.58	0.14
1SV14ME090	11	11	22	11	11	22	11	11	22	1	1	1	1	1	7	7	7	7	7	35	19	30	19	19	19	0.56	0.68	0.56	0.56	0.56
1SV14ME091	12	12	24	12	12	24	12	12	24	1	1	1	1	1	8	8	8	8	8	40	21	32	21	21	21	0.62	0.75	0.62	0.62	0.62
1SV14ME094	11	9	20	11	9	20	11	9	20	1	1	1	1	1	11.2	11.2	11.2	11.2	11.2	56	23.2	32.2	21.2	23.2	21.2	0.68	0.73	0.62	0.68	0.62
1SV14ME401	12	3	15	12	3	15	12	3	15	1	1	1	1	1	0	0	0	0	0	0	13	16	4	13	4	0.38	0.36	0.12	0.38	0.12
1SV14ME410	12	3	15	12	3	15	12	3	15	1	1	1	1	1	5.6	5.6	5.6	5.6	5.6	28	18.6	21.6	9.6	18.6	9.6	0.55	0.49	0.28	0.55	0.28
1SV14ME411	11	4	15	11	4	15	11	4	15	1	1	1	1	1	7.2	7.2	7.2	7.2	7.2	36	19.2	23.2	12.2	19.2	12.2	0.56	0.53	0.36	0.56	0.36
1SV14ME412	11	4	15	11	4	15	11	4	15	1	1	1	1	1	4	4	4	4	4	20	16	20	9	16	9	0.47	0.45	0.26	0.47	0.26
1SV14ME414	12	3	15	12	3	15	12	3	15	1	1	1	1	1	7.2	7.2	7.2	7.2	7.2	36	20.2	23.2	11.2	20.2	11.2	0.59	0.53	0.33	0.59	0.33
1SV15ME400	14	2	16	14	2	16	14	2	16	1	1	1	1	1	12.2	12.2	12.2	12.2	12.2	61	27.2	29.2	15.2	27.2	15.2	0.80	0.66	0.45	0.80	0.45
1SV15ME402	15	2	17	15	2	17	15	2	17	1	1	1	1	1	10.6	10.6	10.6	10.6	10.6	53	25.6	28.6	13.6	26.6	13.6	0.78	0.65	0.40	0.78	0.40
1SV15ME403	14	3	17	14	3	17	14	3	17	1	1	1	1	1	11.8	11.8	11.8	11.8	11.8	59	26.8	29.8	15.8	26.8	15.8	0.79	0.68	0.46	0.79	0.46
1SV15ME404	12	6	18	12	6	18	12	6	18	1	1	1	1	1	9.4	9.4	9.4	9.4	9.4	47	22.4	28.4	16.4	22.4	16.4	0.66	0.65	0.48	0.66	0.48
1SV15ME405	12	3	15	12	3	15	12	3	15	1	1	1	1	1	7	7	7	7	7	35	20	23	11	20	11	0.59	0.52	0.32	0.59	0.32
1SV15ME406	15	0	15	15	0	15	15	0	15	1	1	1	1	1	9.8	9.8	9.8	9.8	9.8	49	25.8	25.8	10.8	25.8	10.8	0.76	0.59	0.32	0.76	0.32
1SV15ME407	12	13	25	12	13	25	12	13	25	1	1	1	1	1	14	14	14	14	14	70	27	40	28	27	28	0.79	0.91	0.82	0.79	0.82
1SV15ME408	12	8	20	12	8	20	12	8	20	1	1	1	1	1	8.6	8.6	8.6	8.6	8.6	43	23.6	29.6	17.6	23.6	17.6	0.64	0.67	0.52	0.64	0.52
1SV15ME409	11	10	21	11	10	21	11	10	21	1	1	1	1	1	8	8	8	8	8	40	20	30	19	20	19	0.59	0.68	0.56	0.59	0.56
1SV15ME411	12	9	21	12	9	21	12	9	21	1	1	1	1	1	7.8	7.8	7.8	7.8	7.8	39	20.8	29.8	17.8	20.8	17.8	0.61	0.68	0.52	0.61	0.52
1SV15ME412	12	4	16	12	4	16	12	4	16	1	1	1	1	1	8.4	8.4	8.4	8.4	8.4	42	21.4	25.4	13.4	21.4	13.4	0.63	0.58	0.39	0.63	0.39
1SV15ME413	12	8	20	12	8	20	12	8	20	1	1	1	1	1	11	11	11	11	11	55	24	32	20	24	20	0.71	0.73	0.59	0.71	0.59
1SV15ME415	11	10	21	11	10	21	11	10	21	1	1	1	1	1	11	11	11	11	11	55	23	33	22	23	22	0.68	0.75	0.65	0.68	0.65
1SV15ME416	12	11	23	12	11	23	12	11	23	1	1	1	1	1	12	12	12	12	12	60	25	36	24	25	24	0.74	0.82	0.71	0.74	0.71
1SV15ME417	11	11	22	11	11	22	11	11	22	1	1	1	1	1	13.8	13.8	13.8	13.8	13.8	69	25.8	36.8	25.8	25.8	25.8	0.79	0.84	0.78	0.78	0.78
1SV15ME418	12	5	17	12	5	17	12	5	17	1	1	1	1	1	12.2	12.2	12.2	12.2	12.2	61	25.2	30.2	18.2	25.2	18.2	0.74	0.69	0.56	0.74	0.56
1SV15ME421	12	13	25	12	13	25	12	13	25	1	1	1	1	1	11	11	11	11	11	55	24	37	25	24	25	0.71	0.84	0.74	0.71	0.74
1SV15ME422	11	4	15	11	4	15	11	4	15	1	1	1	1	1	8.2	8.2	8.2	8.2	8.2	41	20.2	24.2	13.2	20.2	13.2	0.59	0.55	0.39	0.59	0.39
1SV15ME424	21	2	23	21	2	23	21	2	23	1	1	1	1	1	7.8	7.8	7.8	7.8	7.8	39	29.8	31.8	10.8	29.8	10.8	0.88	0.72	0.32	0.88	0.32
1SV15ME425	12	3	15	12	3	15	12	3	15	1	1	1	1	1	8	8	8	8	8	40	21	24	12	21	12	0.62	0.55	0.35	0.62	0.35
1SV15ME427	12	3	15	12	3	15	12	3	15	1	1	1	1	1	7	7	7	7	7	35	20	23	11	20	11	0.59	0.52	0.32	0.59	0.32
1SV15ME429	11	4	15	11	4	15	11	4	15	1	1	1	1	1	7	7	7	7	7	35	19	23	12	19	12	0.56	0.52	0.35	0.56	0.35
1SV15ME431	12	3	15	12	3	15	12	3	15	1	1	1	1	1	7.6	7.6	7.6	7.6	7.6	38	20.6	23.6	11.6	20.6	11.6	0.61	0.54	0.34	0.61	0.34
TOTAL	809	472	1281	809	472	1281	809	472	1281	71	71	71	71		660	660	660	660	660	3300	1540	2012	1203	1540	1203	45.29	45.78		45.29	35.38
NO OF AVERAGE	71	71	71	71	71	71	71	71	71	71	71	71	71		71	71	71	71	71	71	71	71	71		71	71	71		71	71
AVERAGE	12.6	7.38	20.016	12.64	7.38	20.016	12.6	7.38	20.016	1.11	1.109	1.11	1.109938	1.109	10.313	10.3	10.3	10.3	10.3	51.563	24.1	31.4	18.8	24.1	18.8	70.77	71.45	55.28	70.77	55.28

H.O.D
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PRINCIPAL
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SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY

SIRA ROAD, TUMKUR- 572 106.

DEPARTMENT OF MECHANICAL ENGINEERING

SUBJECT	HYDRAULICS & PNEUMATICS	SUBJECT CODE	10ME73

COURSE OUTCOME

CO1	Understand the basic concepts (principles) of working and maintenance of fluid power system with its potential applications.
CO2	Interpret the construction and working of input and output elements of fluid power systems viz. hydraulic and pneumatic pumps, motors and cylinders.
CO3	Demonstrate the functioning of control valves for obtaining desired output from fluid power systems.
CO4	Formulate (construct) the hydraulic and pneumatic circuits for various outputs
CO5	Integrate fluid power system with electrical and logic elements, controls to maintain the sequence of operations

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: 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	CHETHAN K M				
BRANCH	ME	ACADEMIC YEAR	2017-18		
COURSE	B.E	SEMESTER	VII	SECTION	
SUBJECT	HYDRAULICS & PNEUMATICS	SUBJECT CODE	10ME73		

CO & PO MAPPING

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2											1
CO2	2	2										1
CO3	2	2										1
CO4	2	2										1
CO5	2	3										1
AVERAGE	2	2.25										1
OVERALL MAPPING OF SUBJECT												1.75

CO AND PO ATTAINMENT

	CO%	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	74.54	1.49											0.74
CO2	75.57	1.51	1.51										0.75
CO3	55.74	1.11	1.11										0.55
CO4	74.54	1.49	1.49										0.74
CO5	55.74	1.11	1.67										0.55
AVERAGE	67.22	1.34	1.44										0.66
FINAL ATTAINMENT LEVEL													0.44

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SIET., TUMAKURU.

Academic year	2017-18			SEM	VII		Total strength		71		Subject	Hydraulics & Pneumatics						Subject Code	10ME73										
SEM-VII	IA TEST 1(30M)			IA TEST 2(30M)			IA TEST 3(30M)		ASSIGNMENT / QUIZ(10 M			SEE MARKS(100)						Total Cos ATTAINMENT						% of individual CO				
USN	CO1	CO2	TOTAL	CO2	CO3	TOTAL	CO4	CO5	TOTAL	CO1	CO2	CO3	CO4	CO5	CO1=(12	CO2	CO3	CO4	CO5	TOTAL	CO1=3*	CO2=4*	CO3=3*	CO4=3*	CO5=3*	CO1	CO2	CO3	CO4	CO5
1SV11ME023	11	10	21	11	10	21	11	10	21	1	1	1	1	1	10.2	10.2	10.2	10.2	10.2	51	22.2	32.2	21.2	22.2	21.2	0.65	0.71	0.62	0.65	0.62
1SV11ME046	12	3	15	12	3	15	12	3	15	1	1	1	1	1	5.6	5.6	5.6	5.6	5.6	28	18.6	21.6	9.6	18.6	9.6	0.55	0.49	0.28	0.55	0.28
1SV12ME077	11	4	15	11	4	15	11	4	15	1	1	1	1	1	7.4	7.4	7.4	7.4	7.4	37	19.4	23.4	12.4	19.4	12.4	0.57	0.53	0.36	0.57	0.36
1SV13ME049	11	7	18	11	7	18	11	7	18	1	1	1	1	1	5	5	5	5	5	25	18	21	9	18	9	0.53	0.48	0.26	0.53	0.26
1SV13ME122	12	7	19	12	7	19	12	7	19	1	1	1	1	1	7	7	7	7	7	35	19	26	15	19	15	0.56	-0.58	0.44	0.56	0.44
1SV14ME001	12	8	20	12	8	20	12	8	20	1	1	1	1	1	7.4	7.4	7.4	7.4	7.4	37	20.4	27.4	15.4	20.4	15.4	0.60	0.62	0.45	0.60	0.45
1SV14ME005	12	6	18	12	6	18	12	6	18	1	1	1	1	1	8.6	8.6	8.6	8.6	8.6	43	21.6	29.6	17.6	21.6	17.6	0.64	0.67	0.52	0.64	0.52
1SV14ME007	11	12	23	11	12	23	11	12	23	1	1	1	1	1	9.6	9.6	9.6	9.6	9.6	48	22.6	28.6	16.6	22.6	16.6	0.66	0.65	0.49	0.66	0.49
1SV14ME009	12	9	21	12	9	21	12	9	21	1	1	1	1	1	13.8	13.8	13.8	13.8	13.8	69	25.8	37.8	16.8	25.8	16.8	0.76	0.86	0.78	0.76	0.78
1SV14ME012	12	5	17	12	5	17	12	5	17	1	1	1	1	1	13.4	13.4	13.4	13.4	13.4	67	26.4	35.4	33.4	26.4	23.4	0.78	0.80	0.69	0.78	0.69
1SV14ME014	12	12	24	12	12	24	12	12	24	1	1	1	1	1	13.4	13.4	13.4	13.4	13.4	67	26.4	31.4	19.4	26.4	18.4	0.78	0.71	0.57	0.78	0.57
1SV14ME015	12	10	22	12	10	22	12	10	22	1	1	1	1	1	11	11	11	11	11	55	24	36	24	24	24	0.71	0.82	0.71	0.71	0.71
1SV14ME019	11	11	22	11	11	22	11	11	22	1	1	1	1	1	7.4	7.4	7.4	7.4	7.4	37	20.4	30.4	18.4	20.4	18.4	0.60	0.69	0.54	0.60	0.54
1SV14ME020	12	8	20	12	8	20	12	8	20	1	1	1	1	1	10.8	10.8	10.8	10.8	10.8	54	22.8	33.8	22.8	22.8	22.8	0.67	0.77	0.67	0.67	0.67
1SV14ME022	11	9	20	11	9	20	11	9	20	1	1	1	1	1	5.6	5.6	5.6	5.6	5.6	28	16.6	24.6	12.6	16.6	12.6	0.49	0.56	0.37	0.49	0.37
1SV14ME024	12	8	20	12	8	20	12	8	20	1	1	1	1	1	5.8	5.8	5.8	5.8	5.8	29	17.8	26.8	15.8	17.8	13.8	0.52	0.61	0.46	0.52	0.46
1SV14ME027	12	13	25	12	13	25	12	13	25	1	1	1	1	1	7	7	7	7	7	35	20	28	16	20	16	0.59	0.64	0.47	0.59	0.47
1SV14ME043	15	7	22	15	7	22	15	7	22	1	1	1	1	1	9.4	9.4	9.4	9.4	9.4	47	22.4	35.4	23.4	22.4	23.4	0.66	0.80	0.69	0.66	0.69
1SV14ME044	12	9	21	12	9	21	12	9	21	1	1	1	1	1	11	11	11	11	11	55	27	34	19	27	19	0.79	0.77	0.56	0.79	0.56
1SV14ME045	11	13	24	11	13	24	11	13	24	1	1	1	1	1	9.6	9.6	9.6	9.6	9.6	48	22.6	31.6	19.6	22.6	19.6	0.66	0.72	0.58	0.66	0.58
1SV14ME046	12	13	25	12	13	25	12	13	25	1	1	1	1	1	7.8	7.8	7.8	7.8	7.8	39	19.8	32.8	21.8	19.8	21.8	0.58	0.75	0.64	0.58	0.64
1SV14ME049	12	11	23	12	11	23	12	11	23	1	1	1	1	1	10	10	10	10	10	50	23	36	24	23	24	0.68	0.82	0.71	0.68	0.71
1SV14ME052	12	10	22	12	10	22	12	10	22	1	1	1	1	1	7	7	7	7	7	35	20	31	19	20	19	0.59	0.70	0.56	0.59	0.56
1SV14ME053	15	7	22	15	7	22	15	7	22	1	1	1	1	1	8	8	8	8	8	40	21	31	19	21	19	0.62	0.70	0.56	0.62	0.56
1SV14ME054	15	4	19	15	4	19	15	4	19	1	1	1	1	1	8.8	8.8	8.8	8.8	8.8	44	24.8	31.8	16.8	24.8	16.8	0.73	0.72	0.49	0.73	0.49
1SV14ME057	14	7	21	14	7	21	14	7	21	1	1	1	1	1	7.2	7.2	7.2	7.2	7.2	36	23.2	27.2	12.2	23.2	12.2	0.68	0.62	0.36	0.68	0.36
1SV14ME058	15	5	20	15	5	20	15	5	20	1	1	1	1	1	11	11	11	11	11	55	26	33	19	26	19	0.76	0.75	0.56	0.76	0.56
1SV14ME059	15	7	22	15	7	22	15	7	22	1	1	1	1	1	11	11	11	11	11	55	27	32	17	27	17	0.79	0.73	0.50	0.79	0.50
1SV14ME061	15	7	22	15	7	22	15	7	22	1	1	1	1	1	10	10	10	10	10	50	26	33	18	26	18	0.76	0.75	0.53	0.76	0.53
1SV14ME063	12	7	19	12	7	19	12	7	19	1	1	1	1	1	7.2	7.2	7.2	7.2	7.2	36	23.2	30.2	15.2	23.2	15.2	0.68	0.69	0.45	0.68	0.45
1SV14ME070	12	10	22	12	10	22	12	10	22	1	1	1	1	1	9	9	9	9	9	45	22	29	17	22	17	0.65	0.66	0.50	0.65	0.50
1SV14ME072	14	5	19	14	5	19	14	5	19	1	1	1	1	1	9.4	9.4	9.4	9.4	9.4	47	23.4	32.4	20.4	22.4	20.4	0.68	0.74	0.60	0.68	0.60
1SV14ME076	15	9	24	15	9	24	15	9	24	1	1	1	1	1	7	7	7	7	7	35	22	27	13	22	13	0.65	0.61	0.38	0.65	0.38
1SV14ME078	14	6	20	14	6	20	14	6	20	1	1	1	1	1	11	11	11	11	11	55	27	36	21	27	21	0.79	0.82	0.62	0.79	0.62
1SV14ME079	12	10	22	12	10	22	12	10	22	1	1	1	1	1	11.2	11.2	11.2	11.2	11.2	56	26.2	32.2	18.2	26.2	18.2	0.77	0.73	0.54	0.77	0.54
1SV14ME080	12	12	24	12	12	24	12	12	24	1	1	1	1	1	8.8	8.8	8.8	8.8	8.8	44	21.8	31.8	19.8	21.8	19.8	0.64	0.72	0.59	0.64	0.59
1SV14ME083	15	7	22	15	7	22	15	7	22	1	1	1	1	1	8.6	8.6	8.6	8.6	8.6	43	21.6	33.6	21.6	21.6	21.6	0.64	0.76	0.64	0.64	0.64
1SV14ME087	12	8	20	12	8	20	12	8	20	1	1	1	1	1	10.8	10.8	10.8	10.8	10.8	54	26.8	33.8	18.8	26.8	18.8	0.79	0.77	0.55	0.79	0.55
1SV14ME089	11	4	15	11	4	15	11	4	15	1	1	1	1	1	7	7	7	7	7	35	20	28	16	20	16	0.59	0.64	0.47	0.59	0.47
1SV14ME090	11	11	22	11	11	22	11	11	22	1	1	1	1	1	5	5	5	5	5	25	17	21	10	17	10	0.50	0.48	0.29	0.50	0.29
1SV14ME091	15	6	21	15	6	21	15	6	21	1	1	1	1	1	7.2	7.2	7.2	7.2	7.2	36	19.2	30.2	19.2	19.2	19.2	0.56	0.69	0.56	0.56	0.56
1SV14ME096	12	9	21	12	9	21	12	9	21	1	1	1	1	1	8.4	8.4	8.4	8.4	8.4	42	24.4	30.4	15.4	24.4	15.4	0.72	0.69	0.45	0.72	0.45
1SV14ME401	16	4	18	14	4	18	14	4	18	1	1	1	1	1	7.2	7.2	7.2	7.2	7.2	36	20.2	29.2	17.2	20.2	17.2	0.59	0.66	0.51	0.59	0.51
1SV14ME410	12	5	17	12	5	17	12	5	17	1	1	1	1	1	0	0	0	0	0	0	15	19	5	15	5	0.44	0.43	0.15	0.44	0.15
1SV14ME411	12	3	15	12	3	15	12	3	15	1	1	1	1	1	7.6	7.6	7.6	7.6	7.6	38	20.6	25.6	13.6	20.6	13.6	0.61	0.58	0.40	0.61	0.40
1SV14ME412	15	4	19	15	4	19	15	4	19	1	1	1	1	1	7	7	7	7	7	35	20	23	11	20	11	0.59	0.52	0.32	0.59	0.32
1SV14ME414	12	6	18	12	6	18	12	6	18	1	1	1	1	1	7	7	7	7	7	35	23	27	12	23	12	0.68	0.61	0.35	0.68	0.35
1SV15ME400	12	2	14	12	2	14	12	2	14	1	1	1	1	1	9.8	9.8	9.8	9.8	9.8	49	22.8	28.8	16.8	22.8	16.8	0.67	0.65	0.49	0.67	0.49
1SV15ME402	17	11	28	12	11	23	12	11	23	1	1	1	1	1	8	8	8	8	8	40	21	23	11	21	11	0.62	0.52	0.32	0.62	0.32
1SV15ME403	14	7	21	14	7	21	14	7	21	1	1	1	1	1	11.6	11.6	11.6	11.6	11.6	58	24.6	35.6	23.6	24.6	23.6	0.72	0.81	0.69	0.72	0.69
1SV15ME404	14	2	16	14	2	16	14	2	16	1	1	1	1	1	9.6	9.6	9.6	9.6	9.6	48	24.6	31.6	17.6	24.6	17.6	0.72	0.72	0.52	0.72	0.52
1SV15ME405	15	5	20	15	5	20	15	5	20	1	1	1	1	1	7.6	7.6	7.6	7.6	7.6	38	22.6	24.6	10.6	22.6	10.6	0.66	0.56	0.31	0.66	0.31
1SV15ME406	15	4	19	15	4	19	15	4	19	1	1	1	1	1	9	9	9	9	9	45	25	30	15	25	15	0.74	0.68	0.44	0.74	0.44
1SV15ME407	15	10	25	15	10	25	15	10	25	1	1	1	1	1	7	7	7	7	7	35	23	27	12	23	12	0.68	0.61	0.35	0.68	0.35
1SV15ME408	12	8	20	12	8	20	12	8	20	1	1	1	1	1	12.2	12.2	12.2	12.2	12.2	61	28.2	36.2	21.2	28.2	23.2	0.82	0.87	0.68	0.82	0.68
1SV15ME409	12	6	18	12	6	18	12	6	18	1	1	1	1	1	8.4	8.4	8.4	8.4	8.4	42	21.4	29.4	17.4	21.4	17.4	0.63	0.67	0.51	0.63	0.51
1SV15ME411	12	3	15	12	3	15	12	3	15	1	1	2	1	1	12.2	12.2	12.2	12.2	12.2	61	25.2	31.2	19.2	25.2	19.2	0.74	0.71	0.56	0.74	0.56
1SV15ME412	15	3	18	15	3	18	15	3	18	1	1	1	2	1	11	11	11	11	11	55	24	27	15	24	15	0.71	0.61	0.44	0.71	0.44
1SV15ME413	16	0	16	16	0	16	16	0	16	1	1	1	1	1	11	11	11	11	11	55	27	30	15	27	15	0.79	0.68	0.44	0.79	0.44
1SV15ME415	16	7	23	16	7	23	16	7	23	1	1	1	1	1	10	10	10	10	10	50	27	27	11	27	11	0.79	0.61	0.32	0.79	0.32
1SV15ME416	12	8	20	12	8	20	12	8	20	1	1	1	1	1	15.2	15.2	15.2	15.2	15.2	76	32.2	39.2	23.2	32.2	23.2	0.95	0.89	0.68	0.95	0.68
1SV15ME417	12	6	18	12	6	18	12	6	18	1	1	1	1	1	14	14	14	14	14	70	27	35	23	27	23	0.79	0.80	0.68	0.79	0.68
1SV15ME418	14	7	21	14	7	21	14	7	21	1	1	1	2	1	8.8	8.8	8.8	8.8	8.8	44	21.8	27.8	15.8	21.8	15.8	0.64	0.63	0.46	0.64	0.46
1SV15ME421	15	10	25	15	10	25	15	10	25	1	1	1	1	1	10.2	10.2	10.2	10.2	10.2	51	25.2	32.2	18.2	25.2	18.2	0.74	0.73	0.54	0.74	0.54
1SV15ME422	12	5	17	12	5	17	12	5	17	1	1	1	1	1	13.2	13.2	13.2	13.2	13.2	66	29.2	33.2	24.2	29.2	24.2	0.86	0.89	0.71	0.86	0.71
1SV15ME424	15	9	24	15	9	24	15	9	24	1	1	1	1	1	7.6	7.6	7.6	7.6	7.6	38	20.6	25.6	13.6	20.6	13.6	0.61	0.58	0.40	0.61	0.40
1SV15ME425	12	6	18	12	6	18	12	6	18	1	1	1	1	1	9.4	9.4	9.4	9.4	9.4	47	25.4	34.4	19.4	25.4	19.4	0.75	0.78	0.57	0.75	0.57
1SV15ME427	15	3	18	15	3	18	15	3	18	1	1	1	1	1	8.2	8.2	8.2	8.2	8.2	41	23.2	27.2	15.2	23.2	15.2	0.62	0.62	0.45	0.62	0.45
1SV15ME429	12	8	20	12	8	20	12	8	20	1	1	1	1	1	8.6	8.6	8.6	8.6	8.6	43	24.6	27.6	12.6	24.6	12.6	0.73	0.63	0.37	0.73	0.37
1SV15ME431	11	5	16	11	5	16	11	5	16	1	1	1	1	1	8	8	8	8	8	40	21	29	17	21	17	0.62	0.66	0.50	0.62	0.50
TOTAL	915	506	1421	915	506	1421	915	506	1421	71	71	71	71	71	8.2	8.2	8.2	8.2	8.2	41	20.2	25.2	14.2	20.2	14.2	0.59	0.57	0.42	0.59	0.42
NO OF AVERAGE	71	71	71	71	71	71	71	71	71	71	71	71	71	71		8.06	8.06	8.06	8.06	3180	1622	2128	1213	1622	1213	47.71	48.38	35.		71	35.68
AVERAGE	14.3	7.91	22.203	14.3	7.91	22.203	14.3	7.91	22.203	1.1	1.1	1.1	1.1	1.1	9.9375	8.94	8.94	8.94	8.94	49.688	25.3	33.3	19.0	25.3	19.0	74.54	75.57	55.74	74.54	55.74

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SHRIDEVI	**SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY** **SIRA ROAD, TUMKUR- 572 106.**

DEPARTMENT OF MECHANICAL ENGINEERING

SUBJECT	OPERATION RESEARCH	SUBJECT CODE	10ME74

COURSE OUTCOME

CO1	Apply the significance of Operations Research in decision making and identify and develop mathematical model from verbal description of real system problems
CO2	Obtain the solution of formulated real life problem with its inherent resources and constraints.
CO3	Recognize and formulate a transportation and assignment model and obtain optimal solution with all the variants of models.
CO4	Construct network diagram and determine critical path, floats for deterministic and PERT networks including crashing of networks and waiting line problems for M/M/1 and M/M/K queuing theory
CO5	Solve problems on game theory for pure and mixed strategy under competitive environment and also Determine minimum processing times for sequencing of n jobs-2 machines, n jobs-3machines,n jobs-mmachines and 2 jobs-n machines using Johnson's algorithm.

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: 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	RAVI KUMAR K R				
BRANCH	ME	ACADEMIC YEAR	2017-18		
COURSE	B.E	SEMESTER	VII	SECTION	
SUBJECT	OPERATION RESEARCH	SUBJECT CODE	10ME74		

CO & PO MAPPING

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3											
CO2	3	2	2									
CO3	3	2	2									
CO4	3	2	2									
CO5	3	2	2									
AVERAGE	3	2	2									
											OVERALL MAPPING OF SUBJECT	2.33

CO AND PO ATTAINMENT

	CO%	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	77.89	2.33											
CO2	76.59	2.29	1.53	1.53									
CO3	59.87	1.79	1.19	1.19									
CO4	77.89	2.33	1.55	1.55									
CO5	59.87	1.79	1.19	1.19									
AVERAGE	70.42	2.10	1.36	1.36									
												FINAL ATTAINMENT LEVEL	1.60

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Academic year	2017-18			SEM	VII		Total strength			71			Subject	Operation Research						Subject Code	10ME74								
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	CO2	CO3	TOTAL	CO6	CO5	TOTAL	CO1	CO2	CO3	CO4	CO5	CO1=12	CO2	CO3	CO4	CO5	TOTAL	CO1=34	CO2=34	CO3=34	CO4=34	CO5=34	CO1	CO2	CO3	CO4	CO5
1SV13ME021	11	8	19	11	8	19	11	8	19	1	1	1	1	1	8.2	8.2	8.2	8.2	8.2	41	20.2	28.2	17.2	20.2	17.2	0.59	0.64	0.51	0.59	0.51
1SV13ME046	12	7	19	12	7	19	12	7	19	1	1	1	1	1	7.2	7.2	7.2	7.2	7.2	36	20.2	27.2	15.2	20.2	15.2	0.59	0.62	0.45	0.59	0.45
1SV12ME077	11	4	15	11	4	15	11	4	15	1	1	1	1	1	6.8	6.8	6.8	6.8	6.8	34	18.8	22.8	11.8	18.8	11.8	0.55	0.52	0.35	0.55	0.35
1SV13ME018	12	3	15	12	3	15	12	3	15	1	1	1	1	1	8.6	8.6	8.6	8.6	8.6	43	21.6	26.6	12.6	21.6	12.6	0.64	0.56	0.37	0.64	0.37
1SV13ME049	11	4	15	11	4	15	11	4	15	1	1	1	1	1	5.4	5.4	5.4	5.4	5.4	27	17.4	21.4	10.4	17.4	10.4	0.51	0.45	0.31	0.51	0.31
1SV13ME112	12	5	17	12	5	17	12	5	17	1	1	1	1	1	7.4	7.4	7.4	7.4	7.4	37	20.4	25.4	13.4	20.4	13.4	0.60	0.58	0.39	0.60	0.39
1SV14ME001	1	16	17	1	16	17	1	16	17	1	1	1	1	1	14.8	14.8	14.8	14.8	14.8	74	16.8	32.8	31.8	16.8	31.8	0.49	0.75	0.94	0.49	0.94
1SV14ME005	12	6	18	12	6	18	12	6	18	1	1	1	1	1	8	8	8	8	8	40	21	27	15	21	15	0.62	0.61	0.44	0.62	0.44
1SV14ME007	12	7	19	12	7	19	12	7	19	1	1	1	1	1	13.6	13.6	13.6	13.6	13.6	68	26.6	33.6	21.6	26.6	21.6	0.78	0.78	0.64	0.78	0.64
1SV14ME009	11	4	15	11	4	15	11	4	15	1	1	1	1	1	10.2	10.2	10.2	10.2	10.2	51	22.2	26.2	15.2	22.2	15.2	0.65	0.60	0.45	0.65	0.45
1SV14ME012	12	8	20	12	8	20	12	8	20	1	1	1	1	1	14.2	14.2	14.2	14.2	14.2	71	27.2	35.2	23.2	27.2	23.2	0.80	0.80	0.68	0.80	0.68
1SV14ME014	11	11	22	11	11	22	11	11	22	1	1	1	1	1	15.4	15.4	15.4	15.4	15.4	77	27.4	38.4	27.4	27.4	27.4	0.81	0.87	0.81	0.81	0.81
1SV14ME015	12	6	18	12	6	18	12	6	18	1	1	1	1	1	9	9	9	9	9	45	22	28	16	22	16	0.65	0.64	0.47	0.65	0.47
1SV14ME019	11	8	19	11	8	19	11	8	19	1	1	1	1	1	15.8	15.8	15.8	15.8	15.8	79	27.8	35.8	24.8	27.8	24.8	0.82	0.81	0.73	0.82	0.73
1SV14ME020	21	0	21	21	0	21	21	0	21	1	1	1	1	1	9.8	9.8	9.8	9.8	9.8	49	31.8	31.8	10.8	31.8	10.8	0.94	0.72	0.32	0.94	0.32
1SV14ME022	12	4	16	12	4	16	12	4	16	1	1	1	1	1	12.2	12.2	12.2	12.2	12.2	61	25.2	29.2	17.2	25.2	17.2	0.74	0.66	0.51	0.74	0.51
1SV14ME024	12	6	18	12	6	18	12	6	18	1	1	1	1	1	8.6	8.6	8.6	8.6	8.6	43	21.6	27.6	15.6	21.6	15.6	0.64	0.63	0.46	0.64	0.46
1SV14ME027	12	8	20	12	8	20	12	8	20	1	1	1	1	1	8.6	8.6	8.6	8.6	8.6	43	21.6	29.6	17.6	21.6	17.6	0.64	0.67	0.52	0.64	0.52
1SV14ME043	15	8	23	15	8	23	15	8	23	1	1	1	1	1	11	11	11	11	11	55	27	35	20	27	20	0.79	0.80	0.59	0.79	0.59
1SV14ME044	14	4	18	14	4	18	14	4	18	1	1	1	1	1	10.8	10.8	10.8	10.8	10.8	54	25.8	29.8	15.8	25.8	15.8	0.76	0.68	0.46	0.76	0.46
1SV14ME045	15	5	20	15	5	20	15	5	20	1	1	1	1	1	11.2	11.2	11.2	11.2	11.2	56	27.2	32.2	17.2	27.2	17.2	0.80	0.73	0.51	0.80	0.51
1SV14ME046	15	9	24	15	9	24	15	9	24	1	1	1	1	1	17.2	17.2	17.2	17.2	17.2	86	33.2	42.2	27.2	33.2	27.2	0.98	0.96	0.80	0.98	0.80
1SV14ME049	12	11	23	12	11	23	12	11	23	1	1	1	1	1	14.8	14.8	14.8	14.8	14.8	74	27.8	36.8	26.8	27.8	26.8	0.82	0.84	0.79	0.82	0.79
1SV14ME052	12	10	22	12	10	22	12	10	22	1	1	1	1	1	12.2	12.2	12.2	12.2	12.2	61	25.2	35.2	23.2	25.2	23.2	0.74	0.80	0.68	0.74	0.68
1SV14ME053	15	7	22	15	7	22	15	7	22	1	1	1	1	1	17	17	17	17	17	85	33	40	25	33	25	0.97	0.91	0.74	0.97	0.74
1SV14ME054	12	4	16	12	4	16	12	4	16	1	1	1	1	1	8.6	8.6	8.6	8.6	8.6	43	21.6	25.6	13.6	21.6	13.6	0.64	0.58	0.40	0.64	0.40
1SV14ME057	12	5	17	12	5	17	12	5	17	1	1	1	1	1	14.2	14.2	14.2	14.2	14.2	71	27.2	32.2	20.2	27.2	20.2	0.80	0.73	0.59	0.80	0.59
1SV14ME058	1	22	23	1	22	23	1	22	23	1	1	1	1	1	15.4	15.4	15.4	15.4	15.4	77	17.4	39.4	38.4	17.4	38.4	0.51	0.90	1.13	0.51	1.13
1SV14ME059	12	3	15	12	3	15	12	3	15	1	1	1	1	1	10.6	10.6	10.6	10.6	10.6	53	23.6	26.6	14.6	23.6	14.6	0.69	0.60	0.43	0.69	0.43
1SV14ME061	12	6	18	12	6	18	12	6	18	1	1	1	1	1	12.4	12.4	12.4	12.4	12.4	62	25.4	31.4	19.4	25.4	19.4	0.75	0.71	0.57	0.75	0.57
1SV14ME063	11	4	15	11	4	15	11	4	15	1	1	1	1	1	5.4	5.4	5.4	5.4	5.4	27	17.4	21.4	10.4	17.4	10.4	0.51	0.49	0.31	0.51	0.31
1SV14ME070	11	9	20	11	9	20	11	9	20	1	1	1	1	1	14.2	14.2	14.2	14.2	14.2	71	26.2	35.2	24.2	26.2	24.2	0.77	0.80	0.71	0.77	0.71
1SV14ME072	11	12	23	11	12	23	11	12	23	1	1	1	1	1	15.8	15.8	15.8	15.8	15.8	79	27.8	39.8	28.8	27.8	28.8	0.82	0.90	0.85	0.82	0.85
1SV14ME076	15	4	19	15	4	19	15	4	19	1	1	1	1	1	13.8	13.8	13.8	13.8	13.8	69	29.8	33.8	18.8	29.8	18.8	0.88	0.77	0.55	0.88	0.55
1SV14ME078	15	8	23	15	8	23	15	8	23	1	1	1	1	1	12.6	12.6	12.6	12.6	12.6	63	28.6	36.6	21.6	28.6	21.6	0.84	0.83	0.64	0.84	0.64
1SV14ME079	15	1	16	15	1	16	15	1	16	1	1	1	1	1	8.6	8.6	8.6	8.6	8.6	43	24.6	25.6	10.6	24.6	10.6	0.72	0.58	0.31	0.72	0.31
1SV14ME040	15	2	17	15	2	17	15	2	17	1	1	1	1	1	11	11	11	11	11	55	27	29	14	27	14	0.79	0.66	0.41	0.79	0.41
1SV14ME082	15	6	21	15	6	21	15	6	21	1	1	1	1	1	14.4	14.4	14.4	14.4	14.4	72	30.4	36.4	21.4	30.4	21.4	0.89	0.83	0.63	0.89	0.63
1SV14ME087	15	14	29	15	14	29	15	14	29	1	1	1	1	1	14	14	14	14	14	70	30	44	28	30	29	0.88	1.00	0.82	0.88	0.82
1SV14ME089	14	3	17	14	3	17	14	3	17	1	1	1	1	1	8.4	8.4	8.4	8.4	8.4	42	23.4	26.4	12.4	23.4	12.4	0.69	0.60	0.36	0.69	0.36
1SV14ME090	14	0	14	14	0	14	14	0	14	1	1	1	1	1	4.4	4.4	4.4	4.4	4.4	22	19.4	19.4	5.4	19.4	5.4	0.57	0.44	0.16	0.57	0.16
1SV14ME091	14	7	21	14	7	21	14	7	21	1	1	1	1	1	13.2	13.2	13.2	13.2	13.2	66	28.2	85.2	21.2	28.2	21.2	0.83	0.80	0.62	0.83	0.62
1SV14ME094	14	7	21	14	7	21	14	7	21	1	1	1	1	1	12.2	12.2	12.2	12.2	12.2	61	27.2	34.2	20.2	27.2	20.2	0.80	0.78	0.59	0.80	0.59
1SV14ME401	14	3	17	14	3	17	14	3	17	1	1	1	1	1	0	0	0	0	0	0	15	18	4	15	4	0.44	0.61	0.12	0.44	0.12
1SV14ME410	14	3	17	14	3	17	14	3	17	1	1	1	1	1	7	7	7	7	7	35	22	25	11	22	11	0.65	0.57	0.32	0.65	0.32
1SV14ME411	12	1	13	12	1	13	12	1	13	1	1	1	1	1	3.8	3.8	3.8	3.8	3.8	19	16.8	17.8	5.8	16.8	5.8	0.49	0.40	0.17	0.49	0.17
1SV14ME412	1	14	15	1	14	15	1	14	15	1	1	1	1	1	5.2	5.2	5.2	5.2	5.2	26	7.2	21.2	20.2	7.2	20.2	0.21	0.48	0.59	0.21	0.59
1SV14ME414	12	5	17	12	5	17	12	5	17	1	1	1	1	1	10.2	10.2	10.2	10.2	10.2	51	23.2	26.2	16.2	23.2	16.2	0.68	0.60	0.48	0.68	0.48
1SV15ME400	12	3	15	12	3	15	12	3	15	1	1	1	1	1	9.6	9.6	9.6	9.6	9.6	48	22.6	25.6	13.6	22.6	13.6	0.66	0.58	0.40	0.66	0.40
1SV15ME402	12	10	22	12	10	22	12	10	22	1	1	1	1	1	9.6	9.6	9.6	9.6	9.6	48	22.6	33.6	20.6	22.6	20.6	0.66	0.76	0.61	0.66	0.61
1SV15ME403	12	7	19	12	7	19	12	7	19	1	1	1	1	1	13.2	13.2	13.2	13.2	13.2	66	26.2	33.2	21.2	26.2	21.2	0.77	0.75	0.62	0.77	0.62
1SV15ME404	12	3	15	12	3	15	12	3	15	1	1	1	1	1	7.6	7.6	7.6	7.6	7.6	38	20.6	23.6	11.6	20.6	11.6	0.61	0.54	0.34	0.61	0.34
1SV15ME405	1	16	17	1	16	17	1	16	17	1	1	1	1	1	9.2	9.2	9.2	9.2	9.2	46	11.2	27.2	26.2	11.2	26.2	0.33	0.62	0.77	0.33	0.77
1SV15ME406	11	5	16	11	5	16	11	5	16	1	1	1	1	1	10.6	10.6	10.6	10.6	10.6	53	22.6	27.6	16.6	22.6	16.6	0.66	0.63	0.49	0.66	0.49
1SV15ME407	12	9	21	12	9	21	12	9	21	1	1	1	1	1	14.8	14.8	14.8	14.8	14.8	74	27.8	36.8	24.8	27.8	24.8	0.82	0.84	0.73	0.82	0.73
1SV15ME408	12	10	22	12	10	22	12	10	22	1	1	1	1	1	14.8	14.8	14.8	14.8	14.8	74	27.8	37.8	25.8	27.8	25.8	0.82	0.86	0.76	0.82	0.76
1SV15ME409	11	9	20	11	9	20	11	9	20	1	1	1	1	1	12.4	12.4	12.4	12.4	12.4	62	24.4	33.4	22.4	24.4	22.4	0.72	0.76	0.66	0.72	0.66
1SV15ME411	12	6	18	12	6	18	12	6	18	1	1	1	1	1	9.6	9.6	9.6	9.6	9.6	48	22.6	28.6	16.6	22.6	16.6	0.66	0.65	0.49	0.66	0.49
1SV15ME412	12	4	16	12	4	16	12	4	16	1	1	1	1	1	10.8	10.8	10.8	10.8	10.8	54	23.8	27.8	15.8	23.8	15.8	0.70	0.63	0.46	0.70	0.46
1SV15ME413	12	4	16	12	4	16	12	4	16	1	1	1	1	1	10	10	10	10	10	50	23	27	15	23	15	0.68	0.63	0.44	0.68	0.44
1SV15ME415	11	9	20	11	9	20	11	9	20	1	1	1	1	1	14.8	14.8	14.8	14.8	14.8	74	26.8	35.8	24.8	26.8	24.8	0.79	0.81	0.73	0.79	0.73
1SV15ME416	15	4	19	15	4	19	15	4	19	1	1	1	1	1	11.8	11.8	11.8	11.8	11.8	59	27.8	31.8	16.8	27.8	16.8	0.82	0.72	0.49	0.82	0.49
1SV15ME417	1	19	20	1	19	20	1	19	20	1	1	1	1	1	11.4	11.4	11.4	11.4	11.4	57	13.4	32.4	31.4	13.4	31.4	0.39	0.74	0.92	0.39	0.92
1SV15ME418	12	4	16	12	4	16	12	4	16	1	1	1	1	1	11	11	11	11	11	55	26	28	16	26	16	0.71	0.64	0.47	0.71	0.47
1SV15ME421	12	9	21	12	9	21	12	9	21	1	1	1	1	1	15.6	15.6	15.6	15.6	15.6	78	28.6	37.6	25.6	28.6	25.6	0.84	0.85	0.75	0.84	0.75
1SV15ME422	15	2	17	15	2	17	15	2	17	1	1	1	1	1	8.4	8.4	8.4	8.4	8.4	42	24.4	26.4	11.4	24.4	11.4	0.72	0.60	0.34	0.72	0.34
1SV15ME424	15	9	24	15	9	24	15	9	24	1	1	1	1	1	16.2	16.2	16.2	16.2	16.2	81	32.2	41.2	26.2	32.2	26.2	0.95	0.94	0.77	0.95	0.77
1SV15ME425	15	3	18	15	3	18	15	3	18	1	1	1	1	1	7.2	7.2	7.2	7.2	7.2	36	23.2	26.2	11.2	23.2	11.2	0.68	0.60	0.33	0.68	0.33
1SV15ME427	14	1	15	14	1	15	14	1	15	1	1	1	1	1	12	12	12	12	12	60	27	28	14	27	14	0.79	0.64	0.41	0.79	0.41
1SV15ME429	12	3	15	12	3	15	12	3	15	1	1	1	1	1	8.8	8.8	8.8	8.8	8.8	44	21.8	24.8	12.8	21.8	12.8	0.64	0.56	0.38	0.64	0.38
1SV15ME431	14	1	15	14	1	15	14	1	15	1	1	1	1	1	7	7	7	7	7	35	22	23	9	22	9	0.65	0.52	0.26	0.65	0.26
TOTAL	854	462	1316	854	462	1316	854	462	1316	71	71	71	71	71	769.8	770	770	770	770	3849	1694.8	2156.8	1302.8	1694.8	1302.8	49.85	49.02	38.32	49.85	38.32
NO OF AVERAGE	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71
AVERAGE	11.3	7.22	20.563	11.34	7.22	20.563	11.3	7.22	20.563	1.1	1.1	1.1	1.1	1.1	12.0281	12	12	12	12	60.143	26.5	33.7	20.4	26.5	20.4	77.89	76.59	59.87	77.89	59.87

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	SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY SIRA ROAD, TUMKUR- 572 106.

DEPARTMENT OF MECHANICAL ENGINEERING

SUBJECT	NON CONVENTIONAL ENERGY SOURCES	SUBJECT CODE	10ME754

COURSE OUTCOME

CO1	Understand the need of energy convention of various methods of energy storage.
CO2	Explain the fields application of solar energy.
CO3	Identify wind energy as alternate form of energy and to know how it can be tapped.
CO4	Explain biogas generation and its environment.
C05	Understand the geothermal and tidal energy and its mechanism of production and its application.

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: A recognition of the need for, and an ability to engage in, to resolve

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contemporary issues and acquire lifelong learning.

COLLEGE	SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY											
FACULTY NAME	RAVI KUMAR D S											
BRANCH	ME			ACADEMIC YEAR		2017-18						
COURSE	B.E	SEMESTER	VII	SECTION								
SUBJECT	NON CONVENTIONAL ENERGY SOURCES			SUBJECT CODE	10ME754							
CO & PO MAPPING												
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2	1		1		2						1
CO2	2	1		1		2						1
CO3	2	1		1		2						1
CO4	2	1		1		2						1
CO5	2	1		1		2						1
AVERAGE	2	1		1		2						1
OVERALL MAPPING OF SUBJECT												1.4

CO AND PO ATTAINMENT

	CO%	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	79.40	1.58	0.79		0.79		1.58						0.79
CO2	93.18	1.86	0.93		0.93		1.86						0.93
CO3	82.67	1.65	0.82		0.82		1.65						0.82
CO4	79.41	1.58	0.79		0.79		1.58						0.79
CO5	82.67	1.65	0.82		0.82		1.65						0.82
AVERAGE	83.46	1.66	0.83		0.83		1.66						0.83
FINAL ATTAINMENT LEVEL													1.16

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Academic year	2017-18			SEM	VII		Total strength		71		Subject	Non Conventional Energy Sources					Subject Code	10ME754									
SEM: VII	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	CO2	TOTAL	CO2	CO3	TOTAL	CO4	CO5	TOTAL	CO1	CO2	CO3	CO4	CO5	CO1=(1	CO2	CO3	CO4	CO5	TOTAL	CO1=34	CO2=41	CO3=34	CO4=34	CO5=34	CO1	CO2	CO3	CO4	CO5
1SV11ME021	11	14	25	11	14	25	11	14	25	1	1	1	1	1	8.8	8.8	8.8	8.8	8.8	44	20.8	36.8	23.8	20.8	23.8	0.61	0.79	0.70	0.61	0.70
1SV11ME046	11	4	15	11	4	15	11	4	15	1	1	1	1	1	10	10	10	10	10	50	22	26	15	22	15	0.65	0.59	0.44	0.65	0.44
1SV12ME077	12	3	15	12	3	15	12	3	15	1	1	1	1	1	8.2	8.2	8.2	8.2	8.2	41	21.2	24.2	12.2	21.2	12.2	0.62	0.55	0.36	0.62	0.36
1SV13ME018	12	5	17	12	5	17	12	5	17	1	1	1	1	1	9	9	9	9	9	45	22	27	15	22	15	0.65	0.61	0.44	0.65	0.44
1SV13ME049	11	10	21	11	10	21	11	10	21	1	1	1	1	1	11.4	11.4	11.4	11.4	11.4	57	23.6	33.6	22.6	23.4	22.4	0.69	0.76	0.66	0.69	0.66
1SV13ME112	12	11	23	12	11	23	12	11	23	1	1	1	1	1	10	10	10	10	10	50	23	34	22	23	22	0.68	0.77	0.65	0.68	0.65
1SV14ME001	11	13	24	11	13	24	11	13	24	1	1	1	1	1	11	11	11	11	11	55	23	36	25	23	25	0.68	0.82	0.74	0.68	0.74
1SV14ME005	12	8	20	12	8	20	12	8	20	1	1	1	1	1	13.6	13.6	13.6	13.6	13.6	68	26.6	36.6	22.6	26.6	22.6	0.78	0.79	0.66	0.78	0.66
1SV14ME007	15	10	25	15	10	25	15	10	25	1	1	1	1	1	13	13	13	13	13	65	29	39	24	29	24	0.85	0.89	0.71	0.85	0.71
1SV14ME009	12	5	17	12	5	17	12	5	17	1	1	1	1	1	12.6	12.6	12.6	12.6	12.6	63	25.6	30.6	18.6	25.6	18.6	0.75	0.70	0.55	0.75	0.55
1SV14ME012	12	10	22	12	10	22	12	10	22	1	1	1	1	1	13.4	13.4	13.4	13.4	13.4	67	26.4	36.4	24.4	26.4	24.4	0.78	0.83	0.72	0.78	0.72
1SV14ME014	11	14	25	11	14	25	11	14	25	1	1	1	1	1	12.8	12.8	12.8	12.8	12.8	64	24.8	38.8	27.8	24.8	27.8	0.73	0.88	0.82	0.73	0.82
1SV14ME015	12	11	23	12	11	23	12	11	23	1	1	1	1	1	10.6	10.6	10.6	10.6	10.6	53	23.6	34.6	22.6	23.6	22.6	0.69	0.79	0.66	0.69	0.66
1SV14ME019	12	12	24	12	12	24	12	12	24	1	1	1	1	1	12.4	12.4	12.4	12.4	12.4	62	25.4	37.4	25.4	25.4	25.4	0.75	0.83	0.75	0.75	0.75
1SV14ME020	11	11	22	11	11	22	11	11	22	1	1	1	1	1	13.6	13.6	13.6	13.6	13.6	68	25.6	31.6	25.6	25.6	25.6	0.75	0.83	0.75	0.75	0.75
1SV14ME022	12	6	18	12	6	18	12	6	18	1	1	1	1	1	14	14	14	14	14	70	27	33	21	27	21	0.79	0.75	0.62	0.79	0.62
1SV14ME024	11	13	24	11	13	24	11	13	24	1	1	1	1	1	14.8	14.8	14.8	14.8	14.8	74	26.8	39.8	28.8	26.8	28.8	0.79	0.96	0.85	0.79	0.85
1SV14ME027	12	12	24	12	12	24	12	12	24	1	1	1	1	1	14	14	14	14	14	70	27	39	27	27	27	0.79	0.89	0.79	0.79	0.79
1SV14ME043	11	13	24	11	13	24	11	13	24	1	1	1	1	1	12.4	12.4	12.4	12.4	12.4	62	24.4	37.4	26.4	24.4	26.4	0.72	0.85	0.78	0.72	0.78
1SV14ME044	12	10	22	12	10	22	12	10	22	1	1	1	1	1	13	13	13	13	13	65	26	36	24	26	24	0.76	0.82	0.71	0.76	0.71
1SV14ME045	12	13	25	12	13	25	12	13	25	1	1	1	1	1	10.4	10.4	10.4	10.4	10.4	52	23.4	30.4	24.4	23.4	24.4	0.69	0.83	0.72	0.69	0.72
1SV14ME046	14	11	25	14	11	25	14	11	25	1	1	1	1	1	14.2	14.2	14.2	14.2	14.2	71	29.2	40.2	26.2	29.2	26.2	0.86	0.91	0.77	0.86	0.77
1SV14ME049	12	11	23	12	11	23	12	11	23	1	1	1	1	1	13.2	13.2	13.2	13.2	13.2	66	26.2	37.2	25.2	26.2	25.2	0.77	0.85	0.74	0.77	0.74
1SV14ME052	11	10	21	11	10	21	11	10	21	1	1	1	1	1	11.8	11.8	11.8	11.8	11.8	59	23.8	33.8	22.8	23.8	22.8	0.70	0.77	0.67	0.70	0.67
1SV14ME053	12	12	24	12	12	24	12	12	24	1	1	1	1	1	13.4	13.4	13.4	13.4	13.4	67	26.4	38.4	26.4	26.4	26.4	0.78	0.87	0.78	0.78	0.78
1SV14ME054	11	8	19	11	8	19	11	8	19	1	1	1	1	1	10.8	10.8	10.8	10.8	10.8	54	22.8	30.8	19.8	22.8	19.8	0.67	0.70	0.58	0.67	0.58
1SV14ME057	11	12	23	11	12	23	11	12	23	1	1	1	1	1	15.6	15.6	15.6	15.6	15.6	78	27.6	39.6	28.6	27.6	28.6	0.81	0.90	0.84	0.81	0.84
1SV14ME058	12	11	23	12	11	23	12	11	23	1	1	1	1	1	11.4	11.4	11.4	11.4	11.4	57	24.4	35.4	23.4	24.4	23.4	0.72	0.80	0.69	0.72	0.69
1SV14ME059	11	11	22	11	11	22	11	11	22	1	1	1	1	1	12.4	12.4	12.4	12.4	12.4	62	24.4	35.4	24.4	24.4	24.4	0.72	0.80	0.72	0.72	0.72
1SV14ME061	12	9	21	12	9	21	12	9	21	1	1	1	1	1	13	13	13	13	13	65	26	35	23	26	23	0.76	0.80	0.68	0.76	0.68
1SV14ME063	11	14	25	11	14	25	11	14	25	1	1	1	1	1	11	11	11	11	11	55	23	37	26	23	26	0.68	0.84	0.76	0.68	0.76
1SV14ME070	12	9	21	12	9	21	12	9	21	1	1	1	1	1	11.2	11.2	11.2	11.2	11.2	56	24.2	33.2	21.2	24.2	21.2	0.71	0.75	0.62	0.71	0.62
1SV14ME072	11	8	19	11	8	19	11	8	19	1	1	1	1	1	11	11	11	11	11	55	23	31	20	23	20	0.68	0.70	0.59	0.68	0.59
1SV14ME076	12	9	21	12	9	21	12	9	21	1	1	1	1	1	14.2	14.2	14.2	14.2	14.2	71	27.2	36.2	24.2	27.2	24.2	0.80	0.82	0.71	0.80	0.71
1SV14ME078	11	13	24	11	13	24	11	13	24	1	1	1	1	1	15	15	15	15	15	75	27	40	29	27	29	0.79	0.91	0.85	0.79	0.85
1SV14ME079	12	11	23	12	11	23	12	11	23	1	1	1	1	1	8.8	8.8	8.8	8.8	8.8	44	21.8	32.8	20.8	21.8	20.8	0.64	0.75	0.61	0.64	0.61
1SV14ME080	11	14	25	11	14	25	11	14	25	1	1	1	1	1	14	14	14	14	14	70	26	40	29	26	29	0.76	0.91	0.85	0.76	0.85
1SV14ME082	12	6	18	12	6	18	12	6	18	1	1	1	1	1	11.4	11.4	11.4	11.4	11.4	57	24.4	30.4	18.4	24.4	18.4	0.72	0.69	0.54	0.72	0.54
1SV14ME087	11	10	21	11	10	21	11	10	21	1	1	1	1	1	10	10	10	10	10	50	22	33	21	22	21	0.65	0.73	0.62	0.65	0.62
1SV14ME089	2	18	20	2	18	20	2	18	20	1	1	1	1	1	11.2	11.2	11.2	11.2	11.2	56	14.2	32.2	30.2	14.2	30.2	0.42	0.73	0.89	0.42	0.89
1SV14ME090	12	3	15	12	3	15	12	3	15	1	1	1	1	1	7	7	7	7	7	35	20	23	11	20	11	0.59	0.52	0.32	0.59	0.32
1SV14ME091	11	12	23	11	12	23	11	12	23	1	1	1	1	1	14	14	14	14	14	70	26	38	27	26	27	0.76	0.86	0.79	0.76	0.79
1SV14ME094	12	11	23	12	11	23	12	11	23	1	1	1	1	1	16.4	16.4	16.4	16.4	16.4	82	28.4	40.4	28.4	28.4	28.4	0.86	0.92	0.84	0.86	0.84
1SV14ME401	12	10	22	12	10	22	12	10	22	1	1	1	1	1	0	0	0	0	0	0	13	23	11	13	11	0.38	0.52	0.32	0.38	0.32
1SV14ME410	11	10	21	11	10	21	11	10	21	1	1	1	1	1	10.2	10.2	10.2	10.2	10.2	51	22.2	32.2	21.2	22.2	21.2	0.65	0.78	0.62	0.65	0.62
1SV14ME411	12	8	20	12	8	20	12	8	20	1	1	1	1	1	10.4	10.4	10.4	10.4	10.4	52	23.4	31.4	19.4	23.4	19.4	0.69	0.71	0.57	0.69	0.57
1SV14ME412	11	8	19	11	8	19	11	8	19	1	1	1	1	1	7	7	7	7	7	35	19	27	16	19	16	0.56	0.61	0.47	0.56	0.47
1SV14ME414	12	10	22	12	10	22	12	10	22	1	1	1	1	1	15.2	15.2	15.2	15.2	15.2	76	28.2	38.2	26.2	28.2	26.2	0.83	0.87	0.77	0.83	0.77
1SV15ME400	13	6	19	13	6	19	13	6	19	1	1	1	1	1	14.2	14.2	14.2	14.2	14.2	71	28.2	34.2	21.2	28.2	21.2	0.83	0.78	0.62	0.83	0.62
1SV15ME402	12	11	23	12	11	23	12	11	23	1	1	1	1	1	13	13	13	13	13	65	26	37	25	26	25	0.76	0.84	0.74	0.76	0.74
1SV15ME403	13	209	222	13	209	222	13	209	222	1	1	1	1	1	14.4	14.4	14.4	14.4	14.4	72	28.4	237.4	224.4	28.4	224.4	0.84	5.40	6.60	0.84	6.60
1SV15ME404	13	10	23	13	10	23	13	10	23	1	1	1	1	1	10.6	10.6	10.6	10.6	10.6	53	24.6	34.6	21.6	24.6	21.6	0.72	0.79	0.64	0.72	0.64
1SV15ME405	12	6	18	12	6	18	12	6	18	1	1	1	1	1	9.2	9.2	9.2	9.2	9.2	46	22.2	28.2	16.2	22.2	16.2	0.65	0.64	0.48	0.65	0.48
1SV15ME406	12	8	20	12	8	20	12	8	20	1	1	1	1	1	9.4	9.6	9.6	9.4	9.4	47	22.4	30.4	18.4	22.4	18.4	0.66	0.69	0.54	0.66	0.54
1SV15ME407	11	13	24	11	13	24	11	13	24	1	1	1	1	1	14.4	14.6	14.4	14.4	14.4	72	26.4	39.4	28.4	26.4	28.4	0.78	0.90	0.84	0.78	0.84
1SV15ME408	12	8	20	12	8	20	12	8	20	1	1	1	1	1	13.4	13.4	13.4	13.4	13.4	67	26.4	34.4	22.4	26.4	22.4	0.78	0.78	0.66	0.78	0.66
1SV15ME409	11	9	20	11	9	20	11	9	20	1	1	1	1	1	13.4	13.4	13.4	13.4	13.4	67	25.4	34.4	23.4	25.4	23.4	0.75	0.78	0.69	0.75	0.69
1SV15ME411	11	10	21	11	10	21	11	10	21	1	1	1	1	1	10.2	10.2	10.2	10.2	10.2	51	22.2	32.2	21.2	22.2	21.2	0.65	0.78	0.62	0.65	0.62
1SV15ME412	12	8	20	12	8	20	12	8	20	1	1	1	1	1	13.2	13.2	13.2	13.2	13.2	66	26.2	34.2	22.2	26.2	22.2	0.77	0.78	0.65	0.77	0.65
1SV15ME413	11	6	17	11	6	17	11	6	17	1	1	1	1	1	11.4	11.4	11.4	11.4	11.4	57	23.4	29.4	18.4	23.4	18.4	0.69	0.67	0.54	0.69	0.54
1SV15ME415	15	9	24	15	9	24	15	9	24	1	1	1	1	1	13.4	13.4	13.4	13.4	13.4	67	29.4	38.4	23.4	29.4	23.4	0.86	0.87	0.69	0.86	0.69
1SV15ME416	10	11	21	10	11	21	10	11	21	1	1	1	1	1	12.2	12.2	12.2	12.2	12.2	61	23.2	34.2	24.2	23.2	24.2	0.68	0.78	0.71	0.68	0.71
1SV15ME417	11	11	22	11	11	22	11	11	22	1	1	1	1	1	12	12	12	12	12	60	24	35	24	24	24	0.71	0.80	0.71	0.71	0.71
1SV15ME418	12	8	20	12	8	20	12	8	20	1	1	1	1	1	8.4	8.4	8.4	8.4	8.4	42	21.4	29.4	17.4	21.4	17.4	0.63	0.67	0.51	0.63	0.51
1SV15ME421	12	12	24	12	12	24	12	12	24	1	1	1	1	1	14.4	14.4	14.4	14.4	14.4	72	27.4	39.4	27.4	27.4	27.4	0.81	0.90	0.81	0.81	0.81
1SV15ME422	13	5	18	13	5	18	13	5	18	1	1	1	1	1	11	11	11	11	11	55	25	30	17	25	17	0.74	0.68	0.50	0.74	0.50
1SV15ME424	12	12	24	12	12	24	12	12	24	1	1	1	1	1	12	12	12	12	12	60	25	37	25	25	25	0.74	0.84	0.74	0.74	0.74
1SV15ME425	11	9	20	11	9	20	11	9	20	1	1	1	1	1	8.6	8.69	8.69	8.69	8.69	43	20.6	29.69	18.69	20.69	18.69	0.61	0.67	0.55	0.61	0.55
1SV15ME427	12	10	22	12	10	22	12	10	22	1	1	1	1	1	14	14	14	14	14	70	27	37	25	27	25	0.79	0.84	0.74	0.79	0.74
1SV15ME429	11	10	21	11	10	21	11	10	21	1	1	1	1	1	14	14	14	14	14	70	26	36	25	26	25	0.76	0.82	0.74	0.76	0.74
1SV15ME431	12	8	20	12	8	20	12	8	20	1	1	1	1	1	2.2	2.2	2.2	2.2	2.2	11	15.2	23.2	11.2	15.2	11.2	0.45	0.53	0.33	0.45	0.33
TOTAL	825	896	1721	825	896	1721	825	896	1721	71	71	71	71	71	831.8	832	831.89	832	832	4159	1727.8	2623.89	1796.89	1727.89	1796.89	50.82	59.63	52.91	50.82	52.91
NO OF AVERAGE	71	71	71	71	71	71	71	71	71	1	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71
AVERAGE	12.9	14	26.891	12.89	14	26.891	12.9	14	26.8	1.1	1.1	1.1	1.1	1.1	12.9969	13	12.9983	13	13	64.984	27.0	41.0	28.1	27.0	28.1	79.40	93.18	82.67	79.41	82.67

H.O.D
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PRINCIPAL
SIET., TUMAKURU.

SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR- 572 106.

DEPARTMENT OF MECHANICAL ENGINEERING

SUBJECT	SMART MATERIALS	SUBJECT CODE	10ME764

COURSE OUTCOME

CO1	Understand and classification of smart materials and various functions of intelligent materials.
CO2	Categorize the various types of smart structure systems, actuators and sensors.
CO3	Describe the various types' batteries, such as lithium ion batteries.
CO4	Describe the various types of SMA based hybrid composites and smart battery materials.
CO5	Understand the structure and properties of various types of nano tubes.

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.

O5 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: 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	MAMATHA K M				
BRANCH	ME	ACADEMIC YEAR	2017-18		
COURSE	B.E	SEMESTER	VII	SECTION	
SUBJECT	SMART MATERIALS	SUBJECT CODE	10ME764		

CO & PO MAPPING

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2	2										
CO2	3	2										
CO3	2	3										
CO4	3	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	82.91	1.65	1.65										
CO2	83.35	1.66	2.5										
CO3	69.08	1.38	2.07										
CO4	82.50	2.46	2.46										
CO5	69.08	1.38	2.07										
AVERAGE	77.38	1.70	2.13										
FINAL ATTAINMENT LEVEL													1.91

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Academic year	2017-18			SEM	VII		Total strength			T1		Subject	Smart Materials					Subject Code	10ME764									
SEM/VII	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	CO2	TOTAL	CO3	CO4	TOTAL	CO5	CO6	TOTAL	CO1	CO2	CO3	CO4	CO5	CO1=12	CO2	CO3	CO4	CO5	TOTAL	CO1=36	CO2=46	CO3=36	CO4=36	CO5=36	CO1	CO2	CO3	CO4	CO5
1SV11ME021	12	3	15	12	3	15	12	3	15	1	1	1	1	1	11.6	11.6	11.6	11.6	11.6	58	24.6	27.6	15.6	24.6	15.6	0.72	0.63	0.46	0.72	0.46
1SV11ME046	11	4	15	11	4	15	11	4	15	1	1	1	1	1	9.2	9.2	9.2	9.2	9.2	46	21.2	25.2	14.2	21.2	14.2	0.62	0.57	0.42	0.62	0.42
1SV12ME077	12	6	18	12	6	18	12	6	18	1	1	1	1	1	9	9	9	9	9	45	22	28	16	22	16	0.65	0.64	0.47	0.65	0.47
1SV13ME018	12	5	17	12	5	17	12	5	17	1	1	1	1	1	7	7	7	7	7	35	20	25	13	20	13	0.59	0.57	0.38	0.59	0.38
1SV13ME049	12	4	16	12	4	16	12	4	16	1	1	1	1	1	10.6	10.6	10.6	10.6	10.6	53	23.6	27.6	15.6	23.6	15.6	0.69	0.63	0.46	0.69	0.46
1SV13ME112	11	4	15	11	4	15	11	4	15	1	1	1	1	1	10.2	10.2	10.2	10.2	10.2	51	22.2	26.2	15.2	22.2	15.2	0.65	0.60	0.45	0.65	0.45
1SV14ME001	12	11	23	12	11	23	12	11	23	1	1	1	1	1	12.4	12.4	12.4	12.4	12.4	62	25.4	36.4	24.4	25.4	24.4	0.75	0.83	0.72	0.75	0.72
1SV14ME005	11	6	17	11	6	17	11	6	17	1	1	1	1	1	11.6	11.6	11.6	11.6	11.6	58	23.6	29.6	18.6	23.6	18.6	0.69	0.67	0.55	0.69	0.55
1SV14ME007	1	17	18	1	17	18	1	17	18	1	1	1	1	1	12.8	12.8	12.8	12.8	12.8	64	14.8	31.8	30.8	14.8	30.8	0.44	0.72	0.91	0.44	0.91
1SV14ME009	12	7	19	12	7	19	12	7	19	1	1	1	1	1	14.6	14.6	14.6	14.6	14.6	73	27.6	34.6	22.6	27.6	22.6	0.81	0.79	0.66	0.81	0.66
1SV14ME012	5	15	20	5	15	20	5	15	20	1	1	1	1	1	13.8	13.8	13.8	13.8	13.8	69	19.8	34.8	29.8	19.8	29.8	0.58	0.79	0.88	0.58	0.88
1SV14ME014	8	13	21	8	13	21	8	13	21	1	1	1	1	1	13.8	13.8	13.8	13.8	13.8	69	22.8	35.8	27.8	22.8	27.8	0.67	0.81	0.82	0.67	0.82
1SV14ME015	14	7	21	14	7	21	14	7	21	1	1	1	1	1	9.6	9.6	9.6	9.6	9.6	48	24.6	31.6	17.6	24.6	17.6	0.72	0.72	0.52	0.72	0.52
1SV14ME019	12	8	20	12	8	20	12	8	20	1	1	1	1	1	11.6	11.6	11.6	11.6	11.6	58	24.6	32.6	20.6	24.6	20.6	0.72	0.74	0.61	0.72	0.61
1SV14ME020	12	9	21	12	9	21	12	9	21	1	1	1	1	1	11.8	11.6	11.6	11.6	11.6	58	24.6	33.6	21.6	24.6	21.6	0.72	0.76	0.64	0.72	0.64
1SV14ME022	11	6	17	11	6	17	11	6	17	1	1	1	1	1	13.4	13.4	13.4	13.4	13.4	67	25.4	31.4	20.4	25.4	20.4	0.75	0.71	0.60	0.75	0.60
1SV14ME024	2	16	18	2	16	18	2	16	18	1	1	1	1	1	10.8	1.8	1.8	1.8	1.8	54	13.8	20.8	18.8	4.8	18.8	0.41	0.47	0.55	0.14	0.55
1SV14ME027	12	11	23	12	11	23	12	11	23	1	1	1	1	1	15.8	15.8	15.8	15.6	15.8	79	28.8	39.8	27.8	28.8	27.8	0.85	0.90	0.82	0.85	0.82
1SV14ME043	11	6	17	11	6	17	11	6	17	1	1	1	1	1	12	12	12	12	12	60	24	30	19	24	19	0.71	0.68	0.56	0.71	0.56
1SV14ME044	12	4	16	12	4	16	12	4	16	1	1	1	1	1	8.6	8.6	8.6	8.6	8.6	43	21.6	25.6	13.6	21.6	13.6	0.64	0.58	0.40	0.64	0.40
1SV14ME045	15	8	23	15	8	23	15	8	23	1	1	1	1	1	15.6	15.6	15.6	15.6	15.6	78	31.6	39.6	24.6	31.6	24.6	0.93	0.90	0.72	0.93	0.72
1SV14ME046	12	13	25	12	13	25	12	13	25	1	1	1	1	1	14.8	14.8	14.8	14.8	14.8	74	27.8	40.8	28.8	27.8	28.8	0.82	0.93	0.85	0.82	0.85
1SV14ME049	12	9	21	12	9	21	12	9	21	1	1	1	1	1	12.8	12.8	12.8	12.8	12.8	64	25.8	34.8	22.8	25.8	22.8	0.76	0.79	0.67	0.76	0.67
1SV14ME052	11	9	20	11	9	20	11	9	20	1	1	1	1	1	11.6	11.6	11.6	11.6	11.6	58	23.6	32.6	21.6	23.6	21.6	0.69	0.74	0.64	0.69	0.64
1SV14ME053	2	20	22	2	20	22	2	20	22	1	1	1	1	1	13.8	13.8	13.8	13.8	13.8	69	16.8	36.8	34.8	16.8	34.8	0.49	0.84	1.02	0.49	1.02
1SV14ME054	12	5	17	12	5	17	12	5	17	1	1	1	1	1	12	12	12	12	12	60	25	30	18	25	18	0.74	0.68	0.50	0.74	0.53
1SV14ME057	14	10	24	14	10	24	14	10	24	1	1	1	1	1	13.8	13.8	13.8	13.8	13.8	69	28.8	38.8	24.8	28.8	24.8	0.85	0.88	0.73	0.85	0.73
1SV14ME058	12	8	20	12	8	20	12	8	20	1	1	1	1	1	12.4	12.4	12.4	12.4	12.4	62	25.4	33.4	21.4	25.4	21.4	0.75	0.76	0.63	0.75	0.63
1SV14ME059	11	8	19	11	8	19	11	8	19	1	1	1	1	1	11.6	11.6	11.6	11.6	11.6	58	23.6	31.6	20.6	23.6	20.6	0.69	0.72	0.61	0.69	0.61
1SV14ME061	12	7	19	12	7	19	12	7	19	1	1	1	1	1	11.4	11.4	11.4	11.4	11.4	57	24.4	31.4	19.4	24.4	19.4	0.72	0.71	0.57	0.72	0.57
1SV14ME063	15	7	22	15	7	22	15	7	22	1	1	1	1	1	12.8	12.8	12.8	12.8	12.8	64	28.8	35.8	20.8	28.8	20.8	0.85	0.81	0.61	0.85	0.61
1SV14ME070	14	7	21	14	7	21	14	7	21	1	1	1	1	1	13	13	13	13	13	65	28	35	21	28	21	0.82	0.80	0.62	0.82	0.62
1SV14ME072	15	8	23	15	8	23	15	8	23	1	1	1	1	1	13.6	13.6	13.6	13.6	13.6	68	29.6	37.6	22.6	29.6	22.6	0.87	0.85	0.66	0.87	0.66
1SV14ME076	14	4	18	14	4	18	14	4	18	1	1	1	1	1	15.4	15.4	15.4	15.4	15.4	77	30.4	34.4	20.4	30.4	20.4	0.89	0.78	0.60	0.89	0.60
1SV14ME078	15	4	19	15	4	19	15	4	19	1	1	1	1	1	13.4	13.4	13.4	13.4	13.4	67	29.4	33.4	18.4	29.4	18.4	0.86	0.76	0.54	0.86	0.54
1SV14ME079	14	8	22	14	8	22	14	8	22	1	1	1	1	1	12	12	12	12	12	60	27	35	21	27	21	0.79	0.80	0.62	0.79	0.62
1SV14ME080	11	11	22	11	11	22	11	11	22	1	1	1	1	1	14.8	14.8	14.8	14.8	14.8	74	26.8	37.8	26.8	26.8	26.8	0.79	0.86	0.79	0.79	0.79
1SV14ME082	15	6	21	15	6	21	15	6	21	1	1	1	1	1	12.2	12.2	12.2	12.2	12.2	61	28.2	34.2	19.2	28.2	19.2	0.83	0.78	0.56	0.83	0.56
1SV14ME087	14	4	18	14	4	18	14	4	18	1	1	1	1	1	13.2	13.2	13.2	13.2	13.2	66	28.2	32.2	18.2	28.2	18.2	0.83	0.73	0.54	0.83	0.54
1SV14ME089	15	6	21	15	6	21	15	6	21	1	1	1	1	1	12	12	12	12	12	60	28	34	19	28	19	0.82	0.77	0.56	0.82	0.56
1SV14ME090	11	9	20	11	9	20	11	9	20	1	1	1	1	1	9.4	9.4	9.4	9.4	9.4	47	21.4	30.4	19.4	21.4	19.4	0.63	0.69	0.57	0.63	0.57
1SV14ME091	15	7	22	15	7	22	15	7	22	1	1	1	1	1	14.2	14.2	14.2	14.2	14.2	71	30.2	37.2	22.2	30.2	22.2	0.89	0.85	0.65	0.89	0.65
1SV14ME094	11	12	23	11	12	23	11	12	23	1	1	1	1	1	14.4	14.4	14.4	14.4	14.4	72	26.4	38.4	27.4	26.4	27.4	0.78	0.87	0.81	0.78	0.81
1SV14ME401	4	10	14	4	10	14	4	10	14	1	1	1	1	1	0	0	0	0	0	0	5	15	11	5	11	0.15	0.34	0.32	0.15	0.32
1SV14ME410	15	3	18	15	3	18	15	3	18	1	1	1	1	1	11	11	11	11	11	55	27	30	15	27	15	0.79	0.68	0.44	0.79	0.44
1SV14ME413	14	1	15	14	1	15	14	1	15	1	1	1	1	1	11.2	11.2	11.2	11.2	11.2	56	26.2	27.2	13.2	26.2	13.2	0.77	0.62	0.39	0.77	0.39
1SV14ME413	12	8	20	12	8	20	12	8	20	1	1	1	1	1	12.4	12.4	12.4	12.4	12.4	62	25.4	33.4	21.4	25.4	21.4	0.75	0.76	0.63	0.75	0.63
1SV14ME414	12	7	19	12	7	19	12	7	19	1	1	1	1	1	14	14	14	14	14	70	27	34	22	27	22	0.79	0.77	0.65	0.79	0.65
1SV15ME400	11	10	21	11	10	21	11	10	21	1	1	1	1	1	13.6	13.6	13.6	13.6	13.6	68	25.6	35.6	24.6	25.6	24.6	0.75	0.85	0.72	0.75	0.72
1SV15ME402	15	9	24	15	9	24	15	9	24	1	1	1	1	1	15.4	15.4	15.4	15.4	15.4	77	31.4	40.4	25.4	31.4	25.4	0.92	0.92	0.75	0.92	0.75
1SV15ME403	14	7	21	14	7	21	14	7	21	1	1	1	1	1	13.6	13.6	13.6	13.6	13.6	68	28.6	35.6	21.6	28.6	21.6	0.84	0.81	0.64	0.84	0.64
1SV15ME404	12	8	20	12	8	20	12	8	20	1	1	1	1	1	15	15	15	15	15	75	28	36	24	28	24	0.82	0.82	0.71	0.82	0.71
1SV15ME405	12	4	16	12	4	16	12	4	16	1	1	1	1	1	12.6	12.6	12.6	12.6	12.6	63	25.6	29.6	17.6	25.6	17.6	0.75	0.67	0.52	0.75	0.52
1SV15ME406	11	5	16	11	5	16	11	5	16	1	1	1	1	1	10.8	10.8	10.8	10.8	10.8	54	22.8	27.8	16.8	22.8	16.8	0.67	0.63	0.49	0.67	0.49
1SV15ME407	12	12	24	12	12	24	12	12	24	1	1	1	1	1	13.8	13.8	13.8	13.8	13.8	69	26.8	38.8	26.8	26.8	26.8	0.79	0.88	0.79	0.79	0.79
1SV15ME408	11	9	20	11	9	20	11	9	20	1	1	1	1	1	13	13	13	13	13	65	25	34	23	25	23	0.74	0.77	0.68	0.74	0.68
1SV15ME409	11	14	25	11	14	25	11	14	25	1	1	1	1	1	13.2	13.2	13.2	13.2	13.2	66	25.2	39.2	28.2	25.2	28.2	0.74	0.88	0.83	0.74	0.83
1SV15ME411	11	10	21	11	10	21	11	10	21	1	1	1	1	1	13.6	13.6	13.6	13.6	13.6	68	25.6	35.6	24.6	25.6	24.6	0.75	0.81	0.72	0.75	0.72
1SV15ME412	11	14	25	11	14	25	11	14	25	1	1	1	1	1	15.2	15.2	15.2	15.2	15.2	76	27.2	41.2	30.2	27.2	30.2	0.80	0.94	0.89	0.80	0.89
1SV15ME413	15	3	18	15	3	18	15	3	18	1	1	1	1	1	12.8	12.8	12.8	12.8	12.8	64	26.8	31.8	16.8	26.8	16.8	0.85	0.72	0.49	0.85	0.49
1SV15ME415	14	9	23	14	9	23	14	9	23	1	1	1	1	1	17.6	17.6	17.6	17.6	17.6	88	32.6	41.6	27.6	32.6	27.6	0.96	0.95	0.81	0.96	0.81
1SV15ME416	15	7	22	15	7	22	15	7	22	1	1	1	1	1	12.2	12.2	12.2	12.2	12.2	61	28.2	35.2	20.2	28.2	20.2	0.83	0.80	0.59	0.83	0.59
1SV15ME417	11	6	17	11	6	17	11	6	17	1	1	1	1	1	10.8	10.8	10.8	10.8	10.8	54	22.8	28.8	17.8	22.8	17.8	0.67	0.65	0.52	0.67	0.52
1SV15ME418	15	0	15	15	0	15	15	0	15	1	1	1	1	1	13.6	13.6	13.6	13.6	13.6	68	29.6	29.6	16.6	29.6	16.6	0.87	0.67	0.49	0.87	0.49
1SV15ME421	15	9	24	15	9	24	15	9	24	1	1	1	1	1	15.6	15.0	15.6	15.6	15.6	78	31.6	40.6	25.6	31.6	25.6	0.93	0.92	0.75	0.93	0.75
1SV15ME422	11	9	20	11	9	20	11	9	20	1	1	1	1	1	11.6	11.6	11.6	11.6	11.6	58	23.6	32.6	21.6	23.6	21.6	0.69	0.74	0.64	0.69	0.64
1SV15ME424	14	8	22	14	8	22	14	8	22	1	1	1	1	1	15.2	15.2	15.2	15.2	15.2	76	30.2	38.2	24.2	30.2	24.2	0.89	0.87	0.71	0.89	0.71
1SV15ME425	15	1	16	15	1	16	15	1	16	1	1	1	1	1	11.4	11.4	11.4	11.4	11.4	57	27.4	28.4	13.4	27.4	13.4	0.81	0.65	0.39	0.81	0.39
1SV15ME427	12	0	12	12	0	12	12	0	12	1	1	1	1	1	15	15	15	15	15	75	28	28	16	28	16	0.82	0.64	0.47	0.82	0.47
1SV15ME429	11	9	20	11	9	20	11	9	20	1	1	1	1	1	13.8	13.8	13.8	13.8	13.8	69	25.8	34.8	23.8	25.8	23.8	0.76	0.79	0.70	0.76	0.70
1SV15ME431	11	8	19	11	8	19	11	8	19	1	1	1	1	1	11	11	11	11	11	55	23	31	20	23	20	0.68	0.70	0.59	0.68	0.59
TOTAL	844	552	1396	844	552	1396	844	552	1396	71	71	71	71	71	889.2	880.2	880.2	880.2	880.2	4441	1804.2	2	1503.2	1795.2	1503.2	53.06	53.35	44.21	52.80	44.21
NO OF AVERAGE	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71
AVERAGE	11.2	8.63	21.813	13.19	8.63	21.813	13.2	8.63	21.813	1.1	1.1	1.1	1.1	1.1	13.8939	13.753	13.753	13.75	13.75	69.469	28.2	36.7	23.5	28.1	23.5	82.91	83.35	69.08	82.50	69.08

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PRINCIPAL
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SHRIDEVI INSTITUTE OF ENGINEERING AND TECHNOLOGY
DEPARTMENT OF MECHANICAL ENGINEERING

EVEN SEM

2017-18

SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR- 572 106.

DEPARTMENT OF MECHANICAL ENGINEERING

SUBJECT	FINITE ELEMENT METHOD	SUBJECT CODE	15ME61

COURSE OUTCOME

CO1	Demonstrate the basic concepts of Finite Element methods with its potential applications.
CO2	Interpret the use of the basic finite elements for structural applications using truss, beam, frame, and plane elements.
CO3	Derive element matrix equation by different methods by applying basic laws in mechanics.
CO4	Make use of professional-level finite element software to solve engineering problems in Solid mechanics, fluid mechanics and heat transfer.
CO5	Implement finite element methods for simple problems such as beam analysis and 1-D heat conduction either by hand calculation or by programming.

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: 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	MALTESHA P J				
BRANCH	ME	ACADEMIC YEAR	2017-18		
COURSE	B.E	SEMESTER	VI	SECTION	
SUBJECT	FINITE ELEMENT METHOD	SUBJECT CODE	15ME61		

CO & PO MAPPING

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3											
CO2	2											
CO3	1	3										
CO4	3	2										
CO5		2	3		2							
AVERAGE	2.25	2.3	3		2							
OVERALL MAPPING OF SUBJECT												2.38

CO AND PO ATTAINMENT

	CO%	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	68.24	2.04											
CO2	61.47	1.22											
CO3	37.50	0.37	1.12										
CO4	68.24	2.04	1.36										
CO5	37.50		0.75	1.12	0.75								
AVERAGE	54.59	1.41	1.07	1.12	0.75								
FINAL ATTAINMENT LEVEL													1.08

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Academic year	2017-18			SEM	VI		Total strength		60		Subject	FINITE ELEMENTS METHOD				Subject Code	15ME61								
SEM-VI	IA TEST 1(20M)			IA TEST 2(20M)			IA TEST 3(20M)			ASSIGNEMENT / QUIZ/10 M					SEE MARK(60)						Total Co ATTAINMENT					% of Individual CO				
USN	CO1	CO2	TOTAL	CO2	CO3	TOTAL	CO4	CO5	TOTAL	CO1	CO2	CO3	CO4	CO5	CO1=12	CO2	CO3	CO4	CO5	TOTAL	CO1=24	CO2=44	CO3=24	CO4=24	CO5=24	CO1	CO2	CO3	CO4	CO5
1SV14ME011	11	2	13	11	2	13	11	2	13	1	1	1	1	1	5.8	5.8	5.8	5.8	5.8	29	17.8	19.8	8.8	17.8	8.8	0.52	0.45	0.26	0.52	0.26
1SV14ME016	12	2	14	12	2	14	12	2	14	1	1	1	1	1	5.6	5.6	5.6	5.6	5.6	28	18.6	20.6	8.8	18.6	8.8	0.55	0.47	0.25	0.55	0.25
1SV14ME018	11	6	17	11	6	17	11	6	17	1	1	1	1	1	6.4	6.4	6.4	6.4	6.4	32	18.4	24.4	13.4	18.4	13.4	0.54	0.55	0.39	0.54	0.39
1SV14ME026	12	5	17	12	5	17	12	5	17	1	1	1	1	1	9.4	9.4	9.4	9.4	9.4	47	23.4	27.4	15.4	22.4	15.4	0.68	0.62	0.45	0.66	0.45
1SV14ME034	12	5	17	12	5	17	12	5	17	1	1	1	1	1	6.2	6.2	6.2	6.2	6.2	31	19.2	24.2	12.2	19.2	12.2	0.56	0.55	0.36	0.56	0.36
1SV14ME055	15	3	18	15	3	18	15	3	18	1	1	1	1	1	9.2	9.2	9.2	9.2	9.2	46	25.2	28.2	13.2	25.2	13.2	0.74	0.64	0.39	0.74	0.39
1SV14ME064	15	5	20	15	5	20	15	5	20	1	1	1	1	1	7.8	7.8	7.8	7.8	7.8	39	23.8	28.8	13.8	23.8	13.8	0.70	0.65	0.41	0.70	0.41
1SV14ME083	12	7	19	12	7	19	12	7	19	1	1	1	1	1	5.6	5.6	5.6	5.6	5.6	28	18.6	25.6	13.6	18.6	13.6	0.55	0.58	0.40	0.55	0.40
1SV14ME084	12	7	19	12	7	19	12	7	19	1	1	1	1	1	7.6	7.6	7.6	7.6	7.6	38	20.6	27.6	15.6	20.6	15.6	0.61	0.63	0.46	0.61	0.46
1SV15ME001	11	2	13	11	2	13	11	2	13	1	1	1	1	1	7.6	7.6	7.6	7.6	7.6	38	19.6	21.6	10.6	19.6	10.6	0.58	0.49	0.31	0.58	0.31
1SV15ME003	12	6	18	12	6	18	12	6	18	1	1	1	1	1	10.8	10.8	10.8	10.8	10.8	54	23.8	29.8	17.8	23.8	17.8	0.70	0.68	0.52	0.70	0.52
1SV15ME007	15	4	19	15	4	19	15	4	19	1	1	1	1	1	10.8	10.8	10.8	10.8	10.8	54	26.8	30.8	15.8	26.8	15.8	0.79	0.70	0.46	0.79	0.46
1SV15ME008	15	3	18	15	3	18	15	3	18	1	1	1	1	1	9.8	9.8	9.8	9.8	9.8	49	25.8	28.8	13.8	25.8	13.8	0.76	0.65	0.41	0.76	0.41
1SV15ME010	12	5	17	12	5	17	12	5	17	1	1	1	1	1	7.6	7.6	7.6	7.6	7.6	38	20.6	25.6	13.6	20.6	13.6	0.61	0.58	0.40	0.61	0.40
1SV15ME011	11	3	14	11	3	14	11	3	14	1	1	1	1	1	6.4	6.4	6.4	6.4	6.4	32	18.4	21.4	10.4	18.4	10.4	0.54	0.49	0.31	0.54	0.31
1SV15ME017	15	1	16	15	1	16	15	1	16	1	1	1	1	1	9.6	9.6	9.6	9.6	9.6	48	25.6	26.6	11.6	25.6	11.6	0.75	0.60	0.34	0.75	0.34
1SV15ME018	15	3	18	15	3	18	15	3	18	1	1	1	1	1	6.2	6.2	6.2	6.2	6.2	31	22.2	25.2	10.2	22.2	10.2	0.65	0.57	0.30	0.65	0.30
1SV15ME019	12	3	15	12	3	15	12	3	15	1	1	1	1	1	8.2	8.2	8.2	8.2	8.2	41	21.2	24.2	12.2	21.2	12.2	0.62	0.55	0.36	0.62	0.36
1SV15ME023	12	7	19	12	7	19	12	7	19	1	1	1	1	1	8.4	8.4	8.4	8.4	8.4	42	21.4	28.4	16.4	21.4	16.4	0.63	0.65	0.48	0.63	0.48
1SV15ME025	15	4	19	15	4	19	15	4	19	1	1	1	1	1	8.4	8.4	8.4	8.4	8.4	42	24.4	28.4	13.4	24.4	13.4	0.72	0.65	0.39	0.72	0.39
1SV15ME027	12	4	16	12	4	16	12	4	16	1	1	1	1	1	8.4	8.4	8.4	8.4	8.4	42	21.4	25.4	13.4	21.4	13.4	0.63	0.58	0.39	0.63	0.39
1SV15ME028	15	2	17	15	2	17	15	2	17	1	1	1	1	1	8.8	8.8	8.8	8.8	8.8	44	24.8	26.8	11.8	24.8	11.8	0.73	0.61	0.35	0.73	0.35
1SV15ME032	11	3	14	11	3	14	11	3	14	1	1	1	1	1	9.6	9.6	9.6	9.6	9.6	48	21.6	24.6	13.6	21.6	13.6	0.64	0.56	0.40	0.64	0.40
1SV15ME034	12	0	12	12	0	12	12	0	12	1	1	1	1	1	8.8	8.8	8.8	8.8	8.8	44	21.8	21.8	9.8	21.8	9.8	0.64	0.50	0.29	0.64	0.29
1SV15ME039	12	5	17	12	5	17	12	5	17	1	1	1	1	1	8.2	8.2	8.2	8.2	8.2	41	21.2	26.2	14.2	21.2	14.2	0.62	0.60	0.42	0.62	0.42
1SV15ME042	15	0	15	15	0	15	15	0	15	1	1	1	1	1	7.4	7.4	7.4	7.4	7.4	37	23.4	23.4	8.4	23.4	8.4	0.69	0.53	0.25	0.69	0.25
1SV15ME044	15	2	17	15	2	17	15	2	17	1	1	1	1	1	6.6	6.6	6.6	6.6	6.6	33	22.6	24.6	9.6	22.6	9.6	0.66	0.56	0.28	0.66	0.28
1SV15ME045	15	2	17	15	2	17	15	2	17	1	1	1	1	1	9.6	9.6	9.6	9.6	9.6	48	25.6	27.6	12.6	25.6	12.6	0.75	0.63	0.37	0.75	0.37
1SV15ME048	12	7	19	12	7	19	12	7	19	1	1	1	1	1	9.4	9.4	9.4	9.4	9.4	47	22.4	26.4	17.4	22.4	17.4	0.66	0.67	0.51	0.66	0.51
1SV15ME049	12	3	15	12	3	15	12	3	15	1	1	1	1	1	7.8	7.8	7.8	7.8	7.8	39	20.8	23.8	11.8	20.8	11.8	0.61	0.54	0.35	0.61	0.35
1SV15ME051	15	0	15	15	0	15	15	0	15	1	1	1	1	1	9	9	9	9	9	45	25	25	10	25	10	0.74	0.57	0.29	0.74	0.29
1SV15ME056	15	2	17	15	2	17	15	2	17	1	1	1	1	1	12.8	12.8	12.8	12.8	12.8	64	28.8	30.8	15.8	28.8	15.8	0.85	0.70	0.46	0.85	0.46
1SV15ME058	12	3	15	12	3	15	12	3	15	1	1	1	1	1	9.4	9.4	9.4	9.4	9.4	47	22.4	25.4	13.4	22.4	13.4	0.66	0.58	0.39	0.66	0.39
1SV15ME059	14	0	14	14	0	14	14	0	14	1	1	1	1	1	7	7	7	7	7	35	22	22	8	22	8	0.65	0.50	0.24	0.65	0.24
1SV15ME062	15	5	20	15	5	20	15	5	20	1	1	1	1	1	10.2	10.2	10.2	10.2	10.2	51	26.2	31.2	16.2	26.2	16.2	0.77	0.71	0.48	0.77	0.48
1SV15ME066	10	0	10	10	0	10	10	0	10	1	1	1	1	1	7.2	7.2	7.2	7.2	7.2	36	26.2	26.2	8.2	26.2	8.2	0.77	0.60	0.24	0.77	0.24
1SV15ME067	12	1	13	12	1	13	12	1	13	1	1	1	1	1	5.6	5.6	5.6	5.6	5.6	28	18.6	19.6	7.6	18.6	7.6	0.55	0.45	0.22	0.55	0.22
1SV15ME070	11	9	20	11	9	20	11	9	20	1	1	1	1	1	5.8	5.8	5.8	5.8	5.8	29	17.8	26.8	15.8	17.8	15.8	0.52	0.61	0.46	0.52	0.46
1SV15ME072	12	6	18	12	6	18	12	6	18	1	1	1	1	1	10.8	10.8	10.8	10.8	10.8	54	23.8	29.8	17.8	23.8	17.8	0.70	0.68	0.52	0.70	0.52
1SV15ME073	15	4	19	15	4	19	15	4	19	1	1	1	1	1	7.4	7.4	7.4	7.4	7.4	37	23.4	27.4	12.4	23.4	12.4	0.69	0.62	0.36	0.69	0.36
1SV15ME074	15	5	20	15	5	20	15	5	20	1	1	1	1	1	6.4	6.4	6.4	6.4	6.4	32	22.4	27.4	12.4	22.4	12.4	0.66	0.62	0.36	0.66	0.36
1SV15ME075	12	5	17	12	5	17	12	5	17	1	1	1	1	1	7.4	7.4	7.4	7.4	7.4	37	20.4	25.4	13.4	20.4	13.4	0.60	0.58	0.39	0.60	0.39
1SV15ME076	12	6	18	12	6	18	12	6	18	1	1	1	1	1	5.8	5.8	5.8	5.8	5.8	29	18.8	24.8	12.8	18.8	12.8	0.55	0.56	0.38	0.55	0.38
1SV15ME077	15	4	19	15	4	19	15	4	19	1	1	1	1	1	6.2	6.2	6.2	6.2	6.2	31	22.2	26.2	11.2	22.2	11.2	0.65	0.60	0.33	0.65	0.33
1SV15ME079	15	5	20	15	5	20	15	5	20	1	1	1	1	1	10.6	10.6	10.6	10.6	10.6	53	25.6	31.6	16.6	25.6	16.6	0.78	0.72	0.49	0.78	0.49
1SV15ME082	12	6	18	12	6	18	12	6	18	1	1	1	1	1	1.8	1.8	1.8	1.8	1.8	9	14.8	20.8	8.8	14.8	8.8	0.44	0.47	0.26	0.44	0.26
1SV15ME083	12	6	18	12	6	18	12	6	18	1	1	1	1	1	7	7	7	7	7	35	20	26	14	20	14	0.59	0.59	0.41	0.59	0.41
1SV15ME087	15	1	16	15	1	16	15	1	16	1	1	1	1	1	8.6	8.6	8.6	8.6	8.6	43	24.6	25.6	10.6	24.6	10.6	0.72	0.58	0.31	0.72	0.31
1SV15ME400	12	2	14	12	2	14	12	2	14	1	1	1	1	1	4.4	4.4	4.4	4.4	4.4	22	17.4	19.4	7.4	17.4	7.4	0.51	0.44	0.22	0.51	0.22
1SV16ME402	15	0	15	15	0	15	15	0	15	1	1	1	1	1	4.4	4.4	4.4	4.4	4.4	22	20.4	20.4	5.4	20.4	5.4	0.60	0.46	0.16	0.60	0.16
1SV16ME403	12	5	17	12	5	17	12	5	17	1	1	1	1	1	6.4	6.4	6.4	6.4	6.4	32	19.4	24.4	12.4	19.4	12.4	0.57	0.55	0.36	0.57	0.36
1SV16ME404	12	6	18	12	6	18	12	6	18	1	1	1	1	1	7.2	7.2	7.2	7.2	7.2	36	20.2	26.2	14.2	20.2	14.2	0.59	0.60	0.42	0.59	0.42
1SV16ME405	15	1	16	15	1	16	15	1	16	1	1	1	1	1	6	6	6	6	6	30	22	23	8	22	8	0.65	0.52	0.24	0.65	0.24
1SV16ME407	15	5	20	15	5	20	15	5	20	1	1	1	1	1	8	8	8	8	8	40	24	29	14	24	14	0.71	0.66	0.41	0.71	0.41
1SV16ME408	12	5	17	12	5	17	12	5	17	1	1	1	1	1	5.6	5.6	5.6	5.6	5.6	28	18.6	23.6	11.6	18.6	11.6	0.55	0.54	0.34	0.55	0.34
1SV16ME409	12	6	18	12	6	18	12	6	18	1	1	1	1	1	8.6	8.6	8.6	8.6	8.6	43	21.6	27.6	15.6	21.6	15.6	0.64	0.63	0.46	0.64	0.46
1SV16ME410	15	4	19	15	4	19	15	4	19	1	1	1	1	1	5.8	5.8	5.8	5.8	5.8	29	21.8	25.8	10.8	21.8	10.8	0.64	0.59	0.32	0.64	0.32
1SV16ME412	15	3	18	15	3	18	15	3	18	1	1	1	1	1	6.4	6.4	6.4	6.4	6.4	32	22.4	25.4	10.4	22.4	10.4	0.66	0.58	0.31	0.66	0.31
1SV16ME413	15	2	18	15	3	18	15	3	18	1	1	1	1	1	5.6	5.6	5.6	5.6	5.6	28	21.6	24.6	9.6	21.6	9.6	0.64	0.56	0.28	0.64	0.28
1SV16ME416	12	6	18	12	6	18	12	6	18	1	1	1	1	1	6.2	6.2	6.2	6.2	6.2	31	19.2	25.2	13.2	19.2	13.2	0.56	0.57	0.39	0.56	0.39
1SV16ME417	15	1	16	15	1	16	15	1	16	1	1	1	1	1	3.8	3.8	3.8	3.8	3.8	19	19.8	20.8	5.8	19.8	5.8	0.58	0.47	0.17	0.58	0.17
1SV16ME418	15	2	17	15	2	17	15	2	17	1	1	1	1	1	9	9	9	9	9	45	25	27	12	25	12	0.74	0.61	0.35	0.74	0.35
1SV16ME419	15	4	19	15	4	19	15	4	19	1	1	1	1	1	3.8	3.8	3.8	3.8	3.8	19	19.8	23.8	8.8	19.8	8.8	0.58	0.54	0.26	0.58	0.26
1SV16ME420	14	3	17	14	3	17	14	3	17	1	1	1	1	1	0	0	0	0	0	0	15	18	4	15	4	0.44	0.41	0.12	0.44	0.12
1SV16ME421	14	2	16	14	2	16	14	2	16	1	1	1	1	1	6.8	6.8	6.8	6.8	6.8	34	21.8	23.8	9.8	21.8	9.8	0.64	0.54	0.29	0.64	0.29
1SV16ME423	14	4	18	14	4	18	14	4	18	1	1	1	1	1	8	8	8	8	8	40	23	27	13	23	13	0.68	0.61	0.38	0.68	0.38
1SV16ME424	15	4	19	15	4	19	15	4	19	1	1	1	1	1	5.8	5.8	5.8	5.8	5.8	29	21.8	25.8	10.8	21.8	10.8	0.64	0.59	0.32	0.64	0.32
1SV16ME425	16	1	17	16	1	17	16	1	17	1	1	1	1	1	9.2	9.2	9.2	9.2	9.2	46	26.2	27.2	11.2	26.2	11.2	0.77	0.62	0.33	0.77	0.33
TOTAL	915	246	1161	915	246	1161	915	246	1161	60	60	60	60	60	502	502	502	502	502	2510	1485	1731	816	1485	816	43.68	39.34	24.00	43.68	24.00
NO OF STUDENTS	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60
AVERAGE	14.3	3.84	18.141	14.3	3.84	18.141	14.3	3.84	18.141	1.1	1.1	1.1	1.1	1.1	7.84375	7.84	7.84375	7.84	7.84	39.219	23.2	27.0	12.8	23.2	12.8	68.26	61.47	37.50	68.24	37.50

H.O.D
Dept. of Mechanical
S.I.E.T., TUMKUR -6

PRINCIPAL
SIET, TUMAKURU.

	SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY SIRA ROAD, TUMKUR- 572 106.

DEPARTMENT OF MECHANICAL ENGINEERING

SUBJECT	COMPUTER INTEGRATED MANUFACTURING	SUBJECT CODE	15ME62

COURSE OUTCOME

CO1	Interpret various automation methods and to develop mathematical models in production system
CO2	Analyse the design processes using computer graphics software and CAPP.
CO3	Develop an algorithm for line balancing to improve the productivity by adopting flexible manufacturing system.
CO4	Apply different computer applications in manufacturing and prepare part programs for simple jobs on CNC machine tools and robot technology.
CO5	Identify the modern trends in manufacturing process like additive manufacturing, Industry 4.0 and applications of IOT leading to smart manufacturing

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

H.O.D
Dept. of Mechanical
S.I.E.T., TUMKUR-6

PRINCIPAL
SIET., TUMAKURU.

COLLEGE	SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY				
FACULTY NAME	VEERESH R B				
BRANCH	ME	ACADEMIC YEAR	2017-18		
COURSE	B.E	SEMESTER	VI	SECTION	
SUBJECT	COMPUTER INTEGRATED MANUFACTURING	SUBJECT CODE	15ME62		

CO & PO MAPPING

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2											
CO2	2	2										
CO3		2										
CO4	2											
CO5		2										
AVERAGE	2	2										
OVERALL MAPPING OF SUBJECT												2.0

CO AND PO ATTAINMENT

	CO%	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	70.06	1.14											
CO2	64.78	1.29	1.29										
CO3	46.33		0.92										
CO4	70.04	1.40											
CO5	46.33		0.92										
AVERAGE	59.50	1.27	1.04										
FINAL ATTAINMENT LEVEL													1.15

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Academic year	2017-18			SEM	VI		Total strength			68		Subject	Computer Integrated Manufacturing				Subject Code	15MEA2								
SEM-VI	IA TEST 1(20M)			IA TEST 2(20M)			IA TEST 3(20M)			ASSIGNEMENT / QUIZ(10 M)				SEE MARKS(60)							Total Cos ATTAINMENT					% of individual CO				
USN	CO1	CO2	TOTAL	CO2	CO3	TOTAL	CO4	CO5	TOTAL	CO1	CO2	CO3	CO4	CO5	CO1=12	CO2	CO3	CO4	CO5	TOTAL	CO1=34	CO2=44	CO3=34	CO4=34	CO5=34	CO1	CO2	CO3	CO4	CO5
1SV14ME011	11	3	14	11	3	14	11	3	14	1	1	1	1	1	10.2	10.2	10.2	10.2	10.2	51	22.2	25.2	14.2	22.2	14.2	0.65	0.57	0.42	0.65	0.42
1SV14ME016	12	2	14	12	2	14	12	2	14	1	1	1	1	1	7	7	7	7	7	35	20	22	10	20	10	0.59	0.50	0.29	0.59	0.29
1SV14ME018	11	4	15	11	4	15	11	4	15	1	1	1	1	1	7.6	7.6	7.6	7.6	7.6	38	19.6	23.6	12.6	19.6	12.6	0.58	0.54	0.37	0.58	0.37
1SV14ME026	12	3	15	12	3	15	12	3	15	1	1	1	1	1	5.6	5.6	5.6	5.6	5.6	28	16.6	21.6	9.6	18.6	9.6	0.55	0.49	0.28	0.55	0.28
1SV14ME034	12	3	15	12	3	15	12	3	15	1	1	1	1	1	8.4	8.4	8.4	8.4	8.4	42	21.4	24.4	12.4	21.4	12.4	0.63	0.55	0.36	0.63	0.36
1SV14ME055	11	6	17	11	6	17	11	6	17	1	1	1	1	1	10	10	10	10	10	50	22	28	17	22	17	0.65	0.64	0.50	0.65	0.50
1SV14ME064	12	6	18	12	6	18	12	6	18	1	1	1	1	1	7	7	7	7	7	35	20	26	14	20	14	0.59	0.59	0.41	0.59	0.41
1SV14ME083	11	6	17	12	5	17	12	5	17	1	1	1	1	1	11.4	11.4	11.4	11.4	11.4	57	24.4	29.4	17.4	24.4	17.4	0.72	0.67	0.51	0.72	0.51
1SV14ME084	11	3	14	11	3	14	11	3	14	1	1	1	1	1	5.6	5.6	5.6	5.6	5.6	28	17.6	20.6	9.6	17.6	9.6	0.52	0.47	0.28	0.52	0.28
1SV15ME001	12	4	16	12	4	16	12	4	16	1	1	1	1	1	8.6	8.6	8.6	8.6	8.6	43	21.6	25.6	13.6	21.6	13.6	0.64	0.58	0.40	0.64	0.40
1SV15ME003	12	8	20	12	8	20	12	8	20	1	1	1	1	1	11	11	11	11	11	55	24	32	20	24	20	0.71	0.73	0.59	0.71	0.59
1SV15ME007	15	3	18	15	3	18	15	3	18	1	1	1	1	1	10.6	10.6	10.6	10.6	10.6	53	26.6	29.6	14.6	26.6	14.6	0.78	0.67	0.43	0.78	0.43
1SV15ME008	12	7	19	12	7	19	12	7	19	1	1	1	1	1	12	12	12	12	12	60	25	32	20	25	20	0.74	0.73	0.59	0.74	0.59
1SV15ME010	12	6	18	12	6	18	12	6	18	1	1	1	1	1	11.2	11.2	11.2	11.2	11.2	56	24.2	30.2	18.2	24.2	18.2	0.71	0.69	0.54	0.71	0.54
1SV15ME011	15	2	17	15	2	17	15	2	17	1	1	1	1	1	8	8	8	8	8	40	24	26	11	24	11	0.71	0.59	0.32	0.71	0.32
1SV15ME017	12	7	19	12	7	19	12	7	19	1	1	1	1	1	8.8	8.8	8.8	8.8	8.8	44	21.8	28.8	16.8	21.8	16.8	0.64	0.65	0.49	0.64	0.49
1SV15ME018	12	4	16	12	4	16	12	4	16	1	1	1	1	1	10.4	10.4	10.4	10.4	10.4	52	23.4	27.4	15.4	23.4	15.4	0.69	0.62	0.45	0.69	0.45
1SV15ME019	12	2	14	12	2	14	12	2	14	1	1	1	1	1	9.8	9.8	9.8	9.8	9.8	49	22.8	24.8	12.8	22.8	12.8	0.67	0.56	0.38	0.67	0.38
1SV15ME023	1	17	18	1	17	18	1	17	18	1	1	1	1	1	11.2	11.2	11.2	11.2	11.2	56	13.2	30.2	29.2	13.2	29.2	0.39	0.69	0.86	0.39	0.86
1SV15ME025	12	4	16	12	4	16	12	4	16	1	1	1	1	1	11.4	11.4	11.4	11.4	11.4	57	24.4	28.4	16.4	24.4	16.4	0.72	0.65	0.48	0.72	0.48
1SV15ME027	12	7	19	12	7	19	12	7	19	1	1	1	1	1	9.6	9.6	9.6	9.6	9.6	48	22.6	29.6	17.6	22.6	17.6	0.66	0.67	0.52	0.66	0.52
1SV15ME028	11	5	16	11	5	16	11	5	16	1	1	1	1	1	9.8	9.8	9.8	9.8	9.8	49	21.8	26.8	15.8	21.8	15.8	0.64	0.61	0.46	0.64	0.46
1SV15ME032	15	0	15	15	0	15	15	0	15	1	1	1	1	1	10.2	10.2	10.2	10.2	10.2	51	26.2	26.2	11.2	26.2	11.2	0.77	0.60	0.33	0.77	0.33
1SV15ME034	12	3	15	12	3	15	12	3	15	1	1	1	1	1	7.6	7.6	7.6	7.6	7.6	38	20.6	23.6	11.6	20.6	11.6	0.61	0.54	0.34	0.61	0.34
1SV15ME039	12	6	18	12	6	18	12	6	18	1	1	1	1	1	9	9	9	9	9	45	22	28	16	22	16	0.65	0.64	0.47	0.65	0.47
1SV15ME042	12	5	17	12	5	17	12	5	17	1	1	1	1	1	13.2	13.2	13.2	13.2	13.2	66	26.2	31.2	19.2	26.2	19.2	0.77	0.71	0.56	0.77	0.56
1SV15ME044	12	6	18	12	6	18	12	6	18	1	1	1	1	1	11.4	11.4	11.4	11.4	11.4	57	24.4	30.4	18.4	24.4	18.4	0.72	0.69	0.54	0.72	0.54
1SV15ME045	15	2	17	15	2	17	15	2	17	1	1	1	1	1	10.8	10.8	10.8	10.8	10.8	54	26.8	28.8	13.8	26.8	13.8	0.79	0.65	0.41	0.79	0.41
1SV15ME048	14	5	19	14	5	19	14	5	19	1	1	1	1	1	12.8	12.8	12.8	12.8	12.8	64	27.8	32.8	18.8	27.8	18.8	0.82	0.75	0.55	0.82	0.55
1SV15ME049	12	3	15	12	3	15	12	3	15	1	1	1	1	1	10.8	10.8	10.8	10.8	10.8	54	23.8	26.8	14.8	23.8	14.8	0.70	0.61	0.44	0.70	0.44
1SV15ME051	14	2	16	14	2	16	14	2	16	1	1	1	1	1	10.2	10.2	10.2	10.2	10.2	51	25.2	27.2	13.2	25.2	13.2	0.74	0.62	0.39	0.74	0.39
1SV15ME056	12	4	16	12	4	16	12	4	16	1	1	1	1	1	13	13	13	13	13	65	26	30	18	26	18	0.76	0.68	0.53	0.76	0.53
1SV15ME058	12	3	15	12	3	15	12	3	15	1	1	1	1	1	10.6	10.6	10.6	10.6	10.6	53	23.6	26.6	14.6	23.6	14.6	0.69	0.60	0.43	0.69	0.43
1SV15ME059	12	3	15	12	3	15	12	3	15	1	1	1	1	1	7	7	7	7	7	35	20	23	11	20	11	0.59	0.52	0.32	0.59	0.32
1SV15ME062	12	8	20	12	8	20	12	8	20	1	1	1	1	1	13.6	13.6	13.6	13.6	13.6	68	26.6	34.6	22.6	26.6	22.6	0.78	0.79	0.66	0.78	0.66
1SV15ME066	14	5	19	14	5	19	14	5	19	1	1	1	1	1	9	9	9	9	9	45	24	29	15	24	15	0.71	0.66	0.44	0.71	0.44
1SV15ME067	12	2	14	12	2	14	12	2	14	1	1	1	1	1	6.8	6.8	6.8	6.8	6.8	34	19.8	21.8	9.8	19.8	9.8	0.58	0.50	0.29	0.58	0.29
1SV15ME070	12	5	17	12	5	17	12	5	17	1	1	1	1	1	8.4	8.4	8.4	8.4	8.4	42	21.4	26.4	14.4	21.4	14.4	0.63	0.60	0.42	0.63	0.42
1SV15ME072	14	4	18	14	4	18	14	4	18	1	1	1	1	1	10.6	10.6	10.6	10.6	10.6	53	25.6	29.6	15.6	25.6	15.6	0.75	0.67	0.46	0.75	0.46
1SV15ME073	12	6	18	12	6	18	12	6	18	1	1	1	1	1	8.2	8.2	8.2	8.2	8.2	41	21.2	27.2	15.2	21.2	15.2	0.62	0.62	0.45	0.62	0.45
1SV15ME074	12	6	18	12	6	18	12	6	18	1	1	1	1	1	8.6	8.6	8.6	8.6	8.6	43	21.6	27.6	15.6	21.6	15.6	0.64	0.63	0.46	0.64	0.46
1SV15ME075	12	8	20	12	8	20	12	8	20	1	1	1	1	1	6.8	6.8	6.8	6.8	6.8	34	19.8	27.8	15.8	19.8	15.8	0.58	0.63	0.46	0.58	0.46
1SV15ME076	12	6	18	12	6	18	12	6	18	1	1	1	1	1	11.4	11.4	11.4	11.4	11.4	57	24.4	30.4	18.4	24.4	18.4	0.72	0.69	0.54	0.72	0.54
1SV15ME077	14	2	16	14	2	16	14	2	16	1	1	1	1	1	8	8	8	8	8	40	23	25	11	23	11	0.68	0.57	0.32	0.68	0.32
1SV15ME079	15	0	15	15	0	15	15	0	15	1	1	1	1	1	10.8	10.8	10.8	10.8	10.8	54	26.8	26.8	11.8	26.8	11.8	0.79	0.60	0.35	0.77	0.33
1SV15ME082	12	3	15	12	3	15	12	3	15	1	1	1	1	1	8.2	8.2	8.2	8.2	8.2	41	21.2	24.2	12.2	21.2	12.2	0.62	0.55	0.36	0.62	0.36
1SV15ME083	1	12	13	1	12	13	1	12	13	1	1	1	1	1	9.6	9.6	9.6	9.6	9.6	48	11.6	23.6	22.6	11.6	22.6	0.34	0.54	0.66	0.34	0.66
1SV15ME087	12	3	15	12	3	15	12	3	15	1	1	1	1	1	10.2	10.2	10.2	10.2	10.2	51	23.2	26.2	14.2	23.2	14.2	0.68	0.60	0.42	0.68	0.42
1SV15ME400	12	2	14	12	2	14	12	2	14	1	1	1	1	1	6	6	6	6	6	30	19	21	9	19	9	0.56	0.48	0.26	0.56	0.26
1SV16ME402	12	4	16	12	4	16	12	4	16	1	1	1	1	1	8.4	8.4	8.4	8.4	8.4	42	21.4	25.4	13.4	21.4	13.4	0.63	0.58	0.39	0.63	0.39
1SV16ME403	12	5	17	12	5	17	12	5	17	1	1	1	1	1	6.8	6.8	6.8	6.8	6.8	34	19.8	24.8	12.8	19.8	12.8	0.58	0.56	0.38	0.58	0.38
1SV16ME404	12	6	18	12	6	18	12	6	18	1	1	1	1	1	11.8	11.8	11.8	11.8	11.8	59	24.8	30.8	18.8	24.8	18.8	0.73	0.70	0.55	0.73	0.55
1SV16ME405	12	4	16	12	4	16	12	4	16	1	1	1	1	1	6	6	6	6	6	30	19	23	11	19	11	0.56	0.52	0.32	0.56	0.32
1SV16ME407	14	2	16	14	2	16	14	2	16	1	1	1	1	1	8	8	8	8	8	40	23	25	11	23	11	0.68	0.57	0.32	0.68	0.32
1SV16ME408	12	3	15	12	3	15	12	3	15	1	1	1	1	1	6	6	6	6	6	30	19	22	10	19	10	0.56	0.50	0.29	0.56	0.29
1SV16ME409	14	3	17	14	3	17	14	3	17	1	1	1	1	1	10.8	10.8	10.8	10.8	10.8	54	25.8	28.8	14.8	25.8	14.8	0.76	0.65	0.44	0.76	0.44
1SV16ME410	12	5	17	12	5	17	12	5	17	1	1	1	1	1	9.4	9.4	9.4	9.4	9.4	47	22.4	27.4	15.4	22.4	15.4	0.66	0.62	0.45	0.66	0.45
1SV16ME412	1	15	16	1	15	16	1	15	16	1	1	1	1	1	8.8	8.8	8.8	8.8	8.8	44	10.8	25.8	24.8	10.8	24.8	0.32	0.59	0.73	0.32	0.73
1SV16ME413	12	5	17	12	5	17	12	5	17	1	1	1	1	1	5.6	5.6	5.6	5.6	5.6	28	18.6	23.6	11.6	18.6	11.6	0.55	0.54	0.34	0.55	0.34
1SV16ME416	12	2	14	12	2	14	12	2	14	1	1	1	1	1	9.4	9.4	9.4	9.4	9.4	47	22.4	24.4	12.4	22.4	12.4	0.66	0.55	0.36	0.66	0.36
1SV16ME417	14	3	17	14	3	17	14	3	17	1	1	1	1	1	7.8	7.8	7.8	7.8	7.8	39	22.8	25.8	11.8	22.8	11.8	0.67	0.59	0.35	0.67	0.35
1SV16ME418	15	0	15	15	0	15	15	0	15	1	1	1	1	1	10.8	10.8	10.8	10.8	10.8	54	26.8	26.8	11.8	26.8	11.8	0.79	0.61	0.35	0.79	0.35
1SV16ME419	12	2	14	12	2	14	12	2	14	1	1	1	1	1	7.6	7.6	7.6	7.6	7.6	38	20.6	22.6	10.6	20.6	10.6	0.61	0.51	0.31	0.61	0.31
1SV16ME420	14	0	14	14	0	14	14	0	14	1	1	1	1	1	10.4	10.4	10.4	10.4	10.4	52	25.4	25.4	11.4	25.4	11.4	0.75	0.58	0.34	0.75	0.34
1SV16ME421	15	1	16	15	1	16	15	1	16	1	1	1	1	1	10.2	10.2	10.2	10.2	10.2	51	26.2	27.2	12.2	26.2	12.2	0.77	0.62	0.36	0.77	0.36
1SV16ME423	12	2	14	12	2	14	12	2	14	1	1	1	1	1	11.8	11.8	11.8	11.8	11.8	59	24.8	26.8	14.8	24.8	14.8	0.73	0.61	0.44	0.73	0.44
1SV16ME424	12	7	19	12	7	19	12	7	19	1	1	1	1	1	11.2	11.2	11.2	11.2	11.2	56	24.2	31.2	19.2	24.2	19.2	0.71	0.71	0.56	0.71	0.56
1SV16ME425	11	6	17	11	6	17	11	6	17	1	1	1	1	1	11.8	11.8	11.8	11.8	11.8	59	23.8	29.8	18.8	23.8	18.8	0.70	0.68	0.55	0.70	0.55
TOTAL	816	300	1116	816	300	1116	816	300	1116	68	68	68	68	68	640.8	640.1	640.1	640.1	640.1	3203	1524.6	1824.1	1008.1	1524.1	1008.1	44.84	41.46	29.65	44.83	29.65
NO OF STUDENTS	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68
AVERAGE	12.75	4.6875	17.4375	12.75	4.6875	17.4375	12.75	4.6875	17.4375	1	1	1	1	1	10.00938	10.00156	10.00156	10.00156	10.00156	50.0469	23.8	28.5	15.8	23.8	15.8	70.06	64.78	46.33	70.04	46.33

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SHRIDEVI	**SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY** **SIRA ROAD, TUMKUR- 572 106.**

DEPARTMENT OF MECHANICAL ENGINEERING

SUBJECT	HEAT TRANSFER	SUBJECT CODE	15ME63

COURSE OUTCOME

CO1	Comprehend the modes of heat transfer and apply basic laws of heat transfer to formulate and solve steady state heat transfer problems
CO2	study and evaluate critical thickness of insulation, steady and variable thermal conductivity of fins, and heat transfer in finite, semi infinita and finite solids
CO3	explain the principles of radiation heat transfer and predict the temperature distribution using numerical approach for heat conduction problems
CO4	Interpret and compute forced, free convection heat transfer.
CO5	design heat exchangers using LMTD and NTU methods and explain the concept of condensation and boiling of liquids.

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: 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	RAVI KUMAR D S											
BRANCH	ME			ACADEMIC YEAR			2017-18					
COURSE	B.E	SEMESTER	VI	SECTION								
SUBJECT	HEAT TRANSFER			SUBJECT CODE	15ME63							
CO & PO MAPPING												
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	3	3									
CO2	3	3	3									
CO3	3	3	3									
CO4	3	3	3									
CO5	3	3	3									
AVERAGE	3	3	3									
OVERALL MAPPING OF SUBJECT												3.0

CO AND PO ATTAINMENT

	CO%	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	52.57	1.57	1.57	1.57									
CO2	60.87	1.82	1.82	1.82									
CO3	41.05	1.23	1.23	1.23									
CO4	62.65	1.87	1.87	1.87									
CO5	41.05	1.23	1.23	1.23									
AVERAGE	53.65	1.54	1.54	1.54									
FINAL ATTAINMENT LEVEL													1.54

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SIET., TUMAKURU.

Academic year	2017-18			SEM	VI		Total strength			68		Subject	Heat Transfer					Subject Code	15MEE3									
SEM VI	IA TEST 1(20M)			IA TEST 2(20M)			IA TEST 3(20M)			ASSIGNEMENT / QUIZ(10 M)					SEE MARKS(60)						Total Co ATTAINMENT					% of individual CO				
USN	CO1	CO2	TOTAL	CO2	CO3	TOTAL	CO4	CO5	TOTAL	CO1	CO2	CO3	CO4	CO5	CO1=12	CO2	CO3	CO4	CO5	TOTAL	CO1>34	CO2>44	CO3>34	CO4>34	CO5>34	CO1	CO2	CO3	CO4	CO5
1SV14ME011	11	3	14	11	3	14	11	3	14	1	1	1	1	1	4.8	4.8	4.8	4.8	4.8	24	16.8	19.8	8.8	16.8	8.8	0.49	0.45	0.26	0.49	0.26
1SV14ME016	12	4	16	12	4	16	12	4	16	1	1	1	1	1	1.8	1.8	1.8	1.8	1.8	9	14.8	18.8	6.8	14.8	6.8	0.44	0.43	0.20	0.44	0.20
1SV14ME018	12	2	14	12	2	14	12	2	14	1	1	1	1	1	5.6	5.6	5.6	5.6	5.6	28	18.6	20.6	8.6	18.6	8.6	0.55	0.47	0.25	0.55	0.25
1SV14ME026	12	5	17	12	5	17	12	5	17	1	1	1	1	1	5.6	5.6	5.6	5.6	5.6	28	18.6	23.6	11.6	18.6	11.6	0.55	0.54	0.34	0.55	0.34
1SV14ME034	12	4	16	12	4	16	12	4	16	1	1	1	1	1	3.6	3.6	3.6	3.6	3.6	18	16.6	20.6	8.6	16.6	8.6	0.49	0.47	0.25	0.49	0.25
1SV14ME035	12	6	18	12	6	18	12	6	18	1	1	1	1	1	9.6	9.6	9.6	9.6	9.6	48	22.6	28.6	16.6	22.6	16.6	0.66	0.65	0.49	0.66	0.49
1SV14ME064	12	7	19	12	7	19	12	7	19	1	1	1	1	1	4	4	4	4	4	20	17	24	12	17	12	0.50	0.55	0.35	0.50	0.35
1SV14ME083	12	6	18	12	6	18	12	6	18	1	1	1	1	1	6.2	6.2	6.2	6.2	6.2	31	19.2	25.2	11.2	19.2	13.2	0.56	0.57	0.39	0.56	0.39
1SV14ME084	12	3	15	12	3	15	12	3	15	1	1	1	1	1	6.2	6.2	6.2	6.2	6.2	31	19.2	22.2	10.2	19.2	10.2	0.56	0.50	0.30	0.56	0.30
1SV15ME001	11	6	17	11	6	17	11	6	17	1	1	1	1	1	5.8	5.8	5.8	5.8	5.8	29	17.8	23.8	12.8	17.8	12.8	0.52	0.54	0.38	0.52	0.38
1SV15ME003	14	6	20	14	6	20	14	6	20	1	1	1	1	1	11.4	11.4	11.4	11.4	11.4	57	26.4	32.4	18.4	26.4	18.4	0.78	0.74	0.54	0.78	0.54
1SV15ME007	15	2	17	15	2	17	15	2	17	1	1	1	1	1	8.6	8.6	8.6	8.6	8.6	43	24.6	26.6	11.6	24.6	11.6	0.72	0.60	0.34	0.72	0.34
1SV15ME008	15	2	17	15	2	17	15	2	17	1	1	1	1	1	10.2	10.2	10.2	10.2	10.2	51	26.2	28.2	13.2	26.2	13.2	0.77	0.64	0.39	0.77	0.39
1SV15ME010	14	2	16	14	2	16	14	2	16	1	1	1	1	1	7	7	7	7	7	35	22	24	10	22	10	0.65	0.55	0.29	0.65	0.29
1SV15ME011	15	3	18	15	3	18	15	3	18	1	1	1	1	1	8.4	8.4	8.4	8.4	8.4	42	24.4	27.4	12.4	24.4	12.4	0.72	0.62	0.36	0.72	0.36
1SV15ME017	15	4	19	15	4	19	15	4	19	1	1	1	1	1	9.2	9.2	9.2	9.2	9.2	46	25.2	29.2	14.2	25.2	14.2	0.74	0.66	0.42	0.74	0.42
1SV15ME018	15	3	18	15	3	18	15	3	18	1	1	1	1	1	10.2	10.2	10.2	10.2	10.2	51	26.2	29.2	14.2	26.2	14.2	0.77	0.66	0.42	0.77	0.42
1SV15ME019	12	6	18	12	6	18	12	6	18	1	1	1	1	1	9.6	9.6	9.6	9.6	9.6	48	22.6	28.6	16.6	22.6	16.6	0.66	0.65	0.49	0.66	0.49
1SV15ME023	1	17	18	1	17	18	1	17	18	1	1	1	1	1	9.4	9.4	9.4	9.4	9.4	47	11.4	28.4	27.4	11.4	27.4	0.34	0.65	0.81	0.34	0.81
1SV15ME025	15	5	20	15	5	20	15	5	20	1	1	1	1	1	9.8	9.8	9.8	9.8	9.8	49	25.8	30.8	15.8	25.8	15.8	0.76	0.70	0.46	0.76	0.46
1SV15ME027	12	4	16	12	4	16	12	4	16	1	1	1	1	1	8.4	8.4	8.4	8.4	8.4	42	21.4	25.4	13.4	21.4	13.4	0.63	0.58	0.39	0.63	0.39
1SV15ME028	14	4	18	14	4	18	14	4	18	1	1	1	1	1	8	8	8	8	8	40	23	27	13	23	13	0.68	0.61	0.38	0.68	0.38
1SV15ME032	12	7	19	12	7	19	12	7	19	1	1	1	1	1	5.6	5.6	5.6	5.6	5.6	28	18.6	25.6	13.6	18.6	13.6	0.55	0.58	0.40	0.55	0.40
1SV15ME034	11	4	15	11	4	15	11	4	15	1	1	1	1	1	6.8	6.8	6.8	6.8	6.8	34	18.8	22.8	11.8	18.8	11.8	0.55	0.52	0.35	0.55	0.35
1SV15ME039	12	5	17	12	5	17	12	5	17	1	1	1	1	1	8.4	8.4	8.4	8.4	8.4	42	21.4	26.4	14.4	21.4	14.4	0.63	0.60	0.42	0.63	0.42
1SV15ME042	12	4	16	12	4	16	12	4	16	1	1	1	1	1	6	6	6	6	6	30	19	25	11	19	11	0.56	0.52	0.32	0.56	0.32
1SV15ME044	12	7	19	12	7	19	12	7	19	1	1	1	1	1	7.2	7.2	7.2	7.2	7.2	36	20.2	27.2	15.2	20.2	15.2	0.59	0.62	0.45	0.59	0.45
1SV15ME045	14	3	17	14	3	17	14	3	17	1	1	1	1	1	7.2	7.2	7.2	7.2	7.2	36	22.2	25.2	11.2	22.2	11.2	0.65	0.57	0.33	0.65	0.33
1SV15ME048	12	3	15	12	3	15	12	3	15	1	1	1	1	1	7.6	7.6	7.6	7.6	7.6	38	20.6	23.6	11.6	20.6	11.6	0.61	0.54	0.34	0.61	0.34
1SV15ME049	15	1	16	15	1	16	15	1	16	1	1	1	1	1	8.8	8.8	8.8	8.8	8.8	44	24.8	25.8	10.8	24.8	10.8	0.73	0.59	0.32	0.73	0.32
1SV15ME051	12	6	18	12	6	18	12	6	18	1	1	1	1	1	6	6	6	6	6	30	19	25	13	19	13	0.56	0.57	0.38	0.56	0.38
1SV15ME056	12	5	17	12	5	17	12	5	17	1	1	1	1	1	7.4	7.4	7.4	7.4	7.4	37	20.4	25.4	13.4	20.4	13.4	0.60	0.58	0.39	0.60	0.39
1SV15ME058	11	6	17	11	6	17	11	6	17	1	1	1	1	1	3.6	3.6	3.6	3.6	3.6	18	15.6	21.6	10.6	15.6	10.6	0.46	0.49	0.31	0.46	0.31
1SV15ME059	12	7	19	12	7	19	12	7	19	1	1	1	1	1	8.4	8.4	8.4	8.4	8.4	42	21.4	28.4	16.4	21.4	16.4	0.63	0.65	0.48	0.63	0.48
1SV15ME062	15	4	19	15	4	19	15	4	19	1	1	1	1	1	11	11	11	11	11	55	27	31	16	27	16	0.79	0.70	0.47	0.79	0.47
1SV15ME066	14	3	17	14	3	17	14	3	17	1	1	1	1	1	10.8	10.8	10.8	10.8	10.8	54	25.8	28.8	14.8	25.8	14.8	0.76	0.65	0.44	0.76	0.44
1SV15ME067	12	2	14	12	2	14	12	2	14	1	1	1	1	1	4.4	4.4	4.4	4.4	4.4	22	17.4	19.4	7.4	17.4	7.4	0.51	0.44	0.22	0.51	0.22
1SV15ME070	14	2	16	14	2	16	14	2	16	1	1	1	1	1	8.8	8.8	8.8	8.8	8.8	44	23.8	25.8	11.8	23.8	11.8	0.70	0.59	0.35	0.70	0.35
1SV15ME072	12	7	19	12	7	19	12	7	19	1	1	1	1	1	9	9	9	9	9	45	22	29	17	22	17	0.65	0.66	0.50	0.65	0.50
1SV15ME073	14	5	19	14	5	19	14	5	19	1	1	1	1	1	8.2	8.2	8.2	8.2	8.2	41	23.2	28.2	14.2	23.2	14.2	0.68	0.64	0.42	0.68	0.42
1SV15ME074	14	6	20	14	6	20	14	6	20	1	1	1	1	1	7.4	7.4	7.4	7.4	7.4	37	22.4	28.4	14.4	22.4	14.4	0.66	0.65	0.42	0.66	0.42
1SV15ME075	15	3	18	15	3	18	15	3	18	1	1	1	1	1	7.4	7.4	7.4	7.4	7.4	37	23.4	26.4	11.4	23.4	11.4	0.69	0.60	0.34	0.69	0.34
1SV15ME076	12	8	20	12	8	20	12	8	20	1	1	1	1	1	7.4	7.4	7.4	7.4	7.4	37	20.4	28.4	16.4	20.4	16.4	0.60	0.65	0.48	0.60	0.48
1SV15ME077	14	4	18	14	4	18	14	4	18	1	1	1	1	1	4.4	4.4	4.4	4.4	4.4	22	19.4	23.4	9.4	19.4	9.4	0.57	0.53	0.28	0.57	0.28
1SV15ME079	12	5	17	12	5	17	12	5	17	1	1	1	1	1	8.2	8.2	8.2	8.2	8.2	41	21.2	26.2	14.2	21.2	14.2	0.62	0.60	0.42	0.62	0.42
1SV15ME082	12	7	19	12	7	19	12	7	19	1	1	1	1	1	2.8	2.8	2.8	2.8	2.8	14	15.8	22.8	10.8	15.8	10.8	0.46	0.52	0.32	0.46	0.32
1SV15ME083	12	6	18	12	6	18	12	6	18	1	1	1	1	1	7.2	7.2	7.2	7.2	7.2	36	20.2	26.2	14.2	20.2	14.2	0.59	0.60	0.42	0.59	0.42
1SV15ME087	14	1	15	14	1	15	14	1	15	1	1	1	1	1	0	0	0	0	0	0	15	16	2	15	2	0.44	0.38	0.06	0.44	0.06
1SV15ME400	15	0	15	15	0	15	15	0	15	1	1	1	1	1	6.2	6.2	6.2	6.2	6.2	31	22.2	22.2	7.2	22.2	7.2	0.65	0.50	0.21	0.65	0.21
1SV16ME402	1	13	14	1	13	14	1	13	14	1	1	1	1	1	7.2	7.2	7.2	7.2	7.2	36	9.2	22.2	21.2	9.2	21.2	0.27	0.50	0.62	0.27	0.62
1SV16ME403	2	15	17	2	15	17	2	15	17	1	1	1	1	1	6	6	6	6	6	30	9	24	22	9	22	0.26	0.55	0.65	0.26	0.65
1SV16ME404	12	7	19	12	7	19	12	7	19	1	1	1	1	1	8.4	8.4	8.4	8.4	8.4	42	21.4	28.4	16.4	21.4	16.4	0.63	0.65	0.48	0.63	0.48
1SV16ME405	12	6	18	12	6	18	12	6	18	1	1	1	1	1	6.4	6	6	6	6	32	19.4	25	13	19	13	0.57	0.57	0.38	0.56	0.38
1SV16ME407	12	6	18	12	6	18	12	6	18	1	1	1	1	1	6.4	6.4	6.4	6.4	6.4	32	19.4	25.4	13.4	19.4	13.4	0.57	0.58	0.39	0.57	0.39
1SV16ME408	14	2	16	14	2	16	14	2	16	1	1	1	1	1	6.2	6.2	6.2	6.2	6.2	31	21.2	23.2	9.2	21.2	9.2	0.62	0.53	0.27	0.62	0.27
1SV16ME409	12	8	20	12	8	20	12	8	20	1	1	1	1	1	7.8	7.8	7.8	7.8	7.8	39	20.8	28.8	16.8	20.8	16.8	0.61	0.65	0.49	0.61	0.49
1SV16ME410	15	1	16	15	1	16	15	1	16	1	1	1	1	1	7.2	7.2	7.2	7.2	7.2	36	23.2	24.2	9.2	23.2	9.2	0.68	0.55	0.27	0.68	0.27
1SV16ME412	12	4	16	12	4	16	12	4	16	1	1	1	1	1	7.6	7.6	7.6	7.6	7.6	38	20.6	24.6	12.6	20.6	12.6	0.61	0.56	0.37	0.61	0.37
1SV16ME413	14	3	17	14	3	17	14	3	17	1	1	1	1	1	5.6	5.6	5.6	5.6	5.6	28	20.6	23.6	9.6	20.6	9.6	0.61	0.54	0.28	0.61	0.28
1SV16ME416	1	15	16	1	15	16	1	15	16	1	1	1	1	1	8.2	8.2	8.2	8.2	8.2	41	10.2	25.2	24.2	10.2	24.2	0.30	0.57	0.71	0.30	0.71
1SV16ME417	12	6	18	12	6	18	12	6	18	1	1	1	1	1	0	0	0	0	0	0	13	19	7	13	7	0.38	0.43	0.21	0.39	0.21
1SV16ME418	12	7	19	12	7	19	12	7	19	1	1	1	1	1	7.4	7.4	7.4	7.4	7.4	37	20.4	27.4	15.4	20.4	15.4	0.60	0.62	0.45	0.60	0.45
1SV16ME419	1	17	18	1	17	18	1	17	18	1	1	1	1	1	7.8	7.8	7.8	7.8	7.8	39	9.8	24.8	25.8	9.8	25.8	0.29	0.61	0.76	0.29	0.76
1SV16ME420	12	1	13	12	1	13	12	1	13	1	1	1	1	1	2.6	2.6	2.6	2.6	2.6	13	15.6	16.6	4.6	15.6	4.6	0.46	0.38	0.14	0.46	0.14
1SV16ME421	15	2	17	15	2	17	15	2	17	1	1	1	1	1	7.4	7.4	7.4	7.4	7.4	37	23.4	25.4	10.4	23.4	10.4	0.69	0.58	0.31	0.69	0.31
1SV16ME423	12	4	16	12	4	16	12	4	16	1	1	1	1	1	8.8	8.8	8.8	8.8	8.8	44	21.8	25.8	13.8	21.8	13.8	0.64	0.59	0.41	0.64	0.41
1SV16ME424	12	4	16	12	4	16	12	4	16	1	1	1	1	1	7.8	7.8	7.8	7.8	7.8	39	20.8	24.8	12.8	20.8	12.8	0.61	0.56	0.38	0.61	0.38
1SV16ME425	15	5	20	15	5	20	15	5	20	1	1	1	1	1	6.2	6.2	6.2	6.2	6.2	31	22.2	27.2	12.2	22.2	12.2	0.65	0.62	0.36	0.65	0.36
TOTAL	821	351	1172	821	351	1172	821	351	1172	68	68	68	68	68	474.6	474.2	474.2	474.2	474.2	2373	1303.6	1714.2	893.2	1363.2	893.2	40.11	38.96	26.27	40.09	26.27
NO OF STUDENTS	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68
AVERAGE	12.83	5.48	18.31	12.83	5.48	18.31	12.83	5.48	18.31	1	1	1	1	1	7.42	7.41	7.41	7.41	7.41	37.06	21.3	26.8	14.0	21.3	14.0	62.67	60.87	41.05	62.65	41.05

PRINCIPAL
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Dept. of Mechanical
SIET, TUMKUR -5

SHRIDEVI	**SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY** **SIRA ROAD, TUMKUR- 572 106.**

DEPARTMENT OF MECHANICAL ENGINEERING

SUBJECT	DESIGN OF MACHINE ELEMENTS -II	SUBJECT CODE	15ME64

COURSE OUTCOME

CO1	Understand & Analyze the stresses in curved beams, cylinders, and cylinder heads
CO2	Decide flexible drives (belts, ropes, and chains) required for power transmission and springs.
CO3	Analyze and design different types of gears for static and dynamic loads and apply in real life application
CO4	Design clutches and brakes for static and dynamic loads
CO5	Carry out the design of journal bearing by choosing the lubricant and choice of ball and roller bearings

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: 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	B H VASUDEVAMURTHY											
BRANCH	ME		ACADEMIC YEAR	2017-18								
COURSE	B.E	SEMESTER	VI	SECTION								
SUBJECT	DESIGN OF MACHINE ELEMENTS -II			SUBJECT CODE	15ME64							
CO & PO MAPPING												
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	2				1						
CO2	2	3	2			1						1
CO3	3		3			2						1
CO4	3	3	3			2						1
CO5	3	3	2			2	1					1
AVERAGE	2.20	2.75	2.50			1.60	1					1
OVERALL MAPPING OF SUBJECT												1.84

CO AND PO ATTAINMENT

	CO%	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	54.56	1.63	1.09				0.54						
CO2	47.91	0.95	1.43	0.95			0.47						0.47
CO3	25.51	0.76		0.76			0.51						0.25
CO4	54.56	1.63	1.63	1.63			1.09						0.54
CO5	25.51	0.76	0.76	0.51			0.51						0.25
AVERAGE	41.61	1.14	1.22	0.96			0.62						0.37
FINAL ATTAINMENT LEVEL													0.86

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SIET, TUMAKURU.

Academic year	2017-18			SEM	VI		Total strength			68			Subject		Design of Machine Elements-II				Subject Code	15ME64								
SEM-VI	IA TEST 1 (20M)			IA TEST 2(20M)			IA TEST 3(20M)			ASSIGN			T / QUEZ(10 M)		SEE MARK(60)					Total Co			AIDMENT			% of individual CO			
USN	CO1	CO2	TOTAL	CO2	CO3	TOTAL	CO4	CO5	TOTAL	CO1	CO		CO3	CO4	CO5	CO1=12	CO2	CO3	CO4	CO5	TOTAL	CO1=24	CO2=24		CO4=24	CO5=24	CO1	CO2	CO3	CO4	CO5
1SV14ME011	11	3	14	11	3	14	11	3	14	1	1		1	1	1	12.8	12.8	12.8	12.8	12.8	64	24.8	27.8		16.8	24.8	16.8	0.73	0.63	0.49	0.73	0.49
1SV14ME016	12	1	13	12	1	13	12	1	13	1	1		1	1	1	4.2	4.2	4.2	4.2	4.2	21	17.2	18.2		6.2	17.2	6.2	0.51	0.41	0.18	0.51	0.18
1SV14ME018	12	3	15	12	3	15	12	3	15	1	1		1	1	1	5.6	5.6	5.6	5.6	5.6	28	18.6	21.6		9.6	18.6	9.6	0.55	0.49	0.28	0.55	0.28
1SV14ME026	12	4	16	12	4	16	12	4	16	1	1		1	1	1	5.6	5.6	5.6	5.6	5.6	28	18.6	22.6		10.6	18.6	10.6	0.55	0.51	0.31	0.55	0.31
1SV14ME034	12	0	12	12	0	12	12	0	12	1	1		1	1	1	5.6	5.6	5.6	5.6	5.6	28	18.6	18.6		6.6	18.6	6.6	0.55	0.42	0.19	0.55	0.19
1SV14ME055	12	3	15	12	3	15	12	3	15	1	1		1	1	1	3.4	3.4	3.4	3.4	3.4	17	16.4	19.4		7.4	16.4	7.4	0.68	0.68	0.22	0.48	0.22
1SV14ME064	12	0	12	12	0	12	12	0	12	1	1		1	1	1	5.6	5.6	5.6	5.6	5.6	28	18.6	18.6		6.6	18.6	6.6	0.55	0.42	0.19	0.55	0.19
1SV14ME083	12	1	13	12	1	13	12	1	13	1	1		1	1	1	5	5	5	5	5	25	18	19		7	18	7	0.53	0.43	0.21	0.53	0.21
1SV14ME084	12	2	14	12	2	14	12	2	14	1	1		1	1	1	4.2	4.2	4.2	4.2	4.2	21	17.2	19.2		7.2	17.2	7.2	0.51	0.44	0.21	0.51	0.21
1SV15ME001	11	1	12	11	1	12	11	1	12	1	1		1	1	1	5.8	5.8	5.8	5.8	5.8	29	17.8	18.8		7.8	17.8	7.8	0.52	0.43	0.23	0.52	0.23
1SV15ME003	14	1	15	14	1	15	14	1	15	1	1		1	1	1	2	2	2	2	2	10	17	18		4	17	4	0.50	0.41	0.12	0.50	0.12
1SV15ME007	15	3	18	15	3	18	15	3	18	1	1		1	1	1	6.6	6.6	6.6	6.6	6.6	33	22.6	25.6		10.6	22.6	10.6	0.66	0.58	0.31	0.66	0.31
1SV15ME008	11	3	14	11	3	14	11	3	14	1	1		1	1	1	5.6	5.6	5.6	5.6	5.6	28	17.6	20.6		9.6	17.6	9.6	0.52	0.47	0.26	0.52	0.28
1SV15ME010	14	0	14	14	0	14	14	0	14	1	1		1	1	1	5.6	5.6	5.6	5.6	5.6	28	20.6	20.6		6.6	20.6	6.6	0.61	0.47	0.19	0.61	0.19
1SV15ME011	12	0	12	12	0	12	12	0	12	1	1		1	1	1	1.6	1.6	1.6	1.6	1.6	8	14.6	14.6		2.6	14.6	2.6	0.43	0.33	0.08	0.43	0.09
1SV15ME017	15	1	16	15	1	16	15	1	16	1	1		1	1	1	0	0	0	0	0	0	16	17		2	16	2	0.47	0.39	0.06	0.47	0.08
1SV15ME018	11	3	14	11	3	14	11	3	14	1	1		1	1	1	7.8	7.8	7.8	7.8	7.8	39	19.8	22.8		11.8	19.8	11.8	0.58	0.53	0.35	0.58	0.35
1SV15ME019	12	0	12	12	0	12	12	0	12	1	1		1	1	1	2.8	2.8	2.8	2.8	2.8	14	15.8	15.8		3.8	15.8	3.8	0.46	0.36	0.11	0.46	0.11
1SV15ME023	1	15	16	1	15	16	1	15	16	1	1		1	1	1	3.6	3.6	3.6	3.6	3.6	18	5.6	20.6		19.6	5.6	19.6	0.16	0.47	0.58	0.16	0.58
1SV15ME025	15	1	16	15	1	16	15	1	16	1	1		1	1	1	5.6	5.6	5.6	5.6	5.6	28	21.6	22.6		7.6	21.6	7.6	0.64	0.51	0.22	0.64	0.22
1SV15ME027	12	1	13	12	1	13	12	1	13	1	1		1	1	1	5.6	5.6	5.6	5.6	5.6	28	18.6	19.6		7.6	18.6	7.6	0.55	0.45	0.22	0.55	0.22
1SV15ME028	11	2	13	11	2	13	11	2	13	1	1		1	1	1	2.6	2.6	2.6	2.6	2.6	13	14.6	16.6		5.6	14.6	5.6	0.43	0.38	0.16	0.43	0.16
1SV15ME032	12	0	12	12	0	12	12	0	12	1	1		1	1	1	3.4	3.4	3.4	3.4	3.4	17	16.4	16.4		4.4	16.4	4.4	0.48	0.37	0.13	0.48	0.13
1SV15ME034	11	1	12	11	1	12	11	1	12	1	1		1	1	1	2.2	2.2	2.2	2.2	2.2	11	14.2	15.2		4.2	14.2	4.2	0.42	0.35	0.13	0.42	0.12
1SV15ME039	12	0	12	12	0	12	12	0	12	1	1		1	1	1	5.6	5.6	5.6	5.6	5.6	28	18.6	18.6		6.6	18.6	6.6	0.55	0.42	0.19	0.55	0.19
1SV15ME042	12	0	12	12	0	12	12	0	12	1	1		1	1	1	3.2	3.2	3.2	3.2	3.2	16	16.2	16.2		4.2	16.2	4.2	0.48	0.37	0.13	0.48	0.13
1SV15ME044	12	1	13	12	1	13	12	1	13	1	1		1	1	1	5.6	5.6	5.6	5.6	5.6	28	18.6	19.6		7.6	18.6	7.6	0.55	0.45	0.22	0.55	0.22
1SV15ME045	11	1	12	11	1	12	11	1	12	1	1		1	1	1	7	7	7	7	7	35	19	20		9	19	9	0.56	0.45	0.26	0.56	0.26
1SV15ME048	12	0	12	12	0	12	12	0	12	1	1		1	1	1	5.6	5.6	5.6	5.6	5.6	28	18.6	18.6		6.6	18.6	6.6	0.55	0.42	0.19	0.55	0.19
1SV15ME049	11	1	12	11	1	12	11	1	12	1	1		1	1	1	5.8	5.8	5.8	5.8	5.8	29	17.8	18.8		7.8	17.8	7.8	0.52	0.43	0.23	0.52	0.23
1SV15ME051	12	0	12	12	0	12	12	0	12	1	1		1	1	1	5.6	5.6	5.6	5.6	5.6	28	18.6	18.6		6.6	18.6	6.6	0.55	0.42	0.19	0.55	0.19
1SV15ME056	12	4	16	12	4	16	12	4	16	1	1		1	1	1	3.6	3.6	3.6	3.6	3.6	18	16.6	20.6		8.6	16.6	8.6	0.49	0.47	0.25	0.49	0.25
1SV15ME058	11	1	12	11	1	12	11	1	12	1	1		1	1	1	7.8	7.8	7.8	7.8	7.8	39	19.8	20.8		9.8	19.8	9.8	0.58	0.47	0.29	0.58	0.29
1SV15ME059	12	0	12	12	0	12	12	0	12	1	1		1	1	1	5.6	5.6	5.6	5.6	5.6	28	18.6	18.6		6.6	18.6	6.6	0.55	0.42	0.19	0.55	0.19
1SV15ME062	15	0	15	15	0	15	15	0	15	1	1		1	1	1	6.2	6.2	6.2	6.2	6.2	31	22.2	22.2		7.2	22.2	7.2	0.65	0.50	0.21	0.65	0.21
1SV15ME066	14	1	15	14	1	15	14	1	15	1	1		1	1	1	8.8	8.8	8.8	8.8	8.8	44	23.8	24.8		10.8	23.8	10.8	0.70	0.56	0.32	0.70	0.32
1SV15ME067	12	3	15	12	3	15	12	3	15	1	1		1	1	1	7.8	7.8	7.8	7.8	7.8	39	20.8	23.8		11.8	20.8	11.8	0.61	0.54	0.35	0.61	0.35
1SV15ME070	14	2	16	14	2	16	14	2	16	1	1		1	1	1	5.6	5.6	5.6	5.6	5.6	28	20.6	22.6		8.6	20.6	8.6	0.61	0.51	0.25	0.61	0.25
1SV15ME072	12	5	17	12	5	17	12	5	17	1	1		1	1	1	7.6	7.6	7.6	7.6	7.6	38	20.6	25.6		13.6	20.6	13.6	0.61	0.58	0.40	0.61	0.40
1SV15ME073	14	3	17	14	3	17	14	3	17	1	1		1	1	1	3.4	3.4	3.4	3.4	3.4	17	18.4	21.4		7.4	18.4	7.4	0.54	0.49	0.23	0.54	0.22
1SV15ME074	14	3	17	14	3	17	14	3	17	1	1		1	1	1	7	7	7	7	7	35	22	25		11	22	11	0.65	0.57	0.32	0.65	0.32
1SV15ME075	15	0	15	15	0	15	15	0	15	1	1		1	1	1	1.6	1.6	1.6	1.6	1.6	8	17.6	17.6		2.6	17.6	2.6	0.52	0.40	0.08	0.52	0.08
1SV15ME076	12	4	16	12	4	16	12	4	16	1	1		1	1	1	4.2	4.2	4.2	4.2	4.2	21	17.2	21.2		9.2	17.2	9.2	0.51	0.48	0.27	0.51	0.27
1SV15ME077	14	0	14	14	0	14	14	0	14	1	1		1	1	1	3.6	3.6	3.6	3.6	3.6	18	18.6	18.6		4.6	18.6	4.6	0.55	0.42	0.14	0.55	0.14
1SV15ME079	12	4	16	12	4	16	12	4	16	1	1		1	1	1	5.6	5.6	5.6	5.6	5.6	28	18.6	22.6		10.6	18.6	10.6	0.55	0.51	0.31	0.55	0.31
1SV15ME082	12	1	13	12	1	13	12	1	13	1	1		1	1	1	0	0	0	0	0	0	13	14		2	13	2	0.38	0.32	0.06	0.38	0.06
1SV15ME083	12	6	18	12	6	18	12	6	18	1	1		1	1	1	5.6	5.6	5.6	5.6	5.6	28	18.6	24.6		12.6	18.6	12.6	0.55	0.56	0.37	0.55	0.37
1SV15ME087	11	2	13	11	2	13	11	2	13	1	1		1	1	1	1.6	1.6	1.6	1.6	1.6	8	13.6	15.6		4.6	13.6	4.6	0.40	0.35	0.14	0.40	0.14
1SV15ME400	12	0	12	12	0	12	12	0	12	1	1		1	1	1	4.2	4.2	4.2	4.2	4.2	21	17.2	17.2		5.2	17.2	5.2	0.51	0.39	0.15	0.51	0.15
1SV16ME402	1	11	12	1	11	12	1	11	12	1	1		1	1	1	4.8	4.8	4.8	4.8	4.8	24	6.8	17.8		16.8	6.8	16.8	0.20	0.40	0.49	0.20	0.49
1SV16ME403	2	10	12	2	10	12	2	10	12	1	1		1	1	1	3.6	3.6	3.6	3.6	3.6	18	6.6	16.6		14.6	6.6	14.6	0.19	0.38	0.43	0.19	0.43
1SV16ME404	12	0	12	12	0	12	12	0	12	1	1		1	1	1	6.2	6.2	6.2	6.2	6.2	31	19.2	19.2		7.2	19.2	7.2	0.56	0.44	0.21	0.56	0.21
1SV16ME405	12	1	13	12	1	13	12	1	13	1	1		1	1	1	2	2	2	2	2	10	15	18		4	15	4	0.44	0.36	0.12	0.44	0.13
1SV16ME407	12	1	13	12	1	13	12	1	13	1	1		1	1	1	3.2	3.2	3.2	3.2	3.2	16	16.2	17.2		5.2	16.2	5.2	0.48	0.39	0.15	0.48	0.15
1SV16ME408	14	0	14	14	0	14	14	0	14	1	1		1	1	1	0	0	0	0	0	0	15	15		1	15	1	0.44	0.34	0.03	0.44	0.03
1SV16ME409	12	2	14	12	2	14	12	2	14	1	1		1	1	1	5.6	5.6	5.6	5.6	5.6	28	18.6	20.6		8.6	18.6	8.6	0.55	0.47	0.25	0.55	0.25
1SV16ME410	15	2	17	15	2	17	15	2	17	1	1		1	1	1	7.6	7.6	7.6	7.6	7.6	38	23.6	25.6		10.6	23.6	10.6	0.69	0.58	0.31	0.69	0.31
1SV16ME412	12	5	17	12	5	17	12	5	17	1	1		1	1	1	5.6	5.6	5.6	5.6	5.6	28	18.6	23.6		11.6	18.6	11.6	0.55	0.54	0.34	0.55	0.34
1SV16ME413	14	2	16	14	2	16	14	2	16	1	1		1	1	1	3.6	3.6	3.6	3.6	3.6	18	18.6	20.6		6.6	18.6	6.6	0.55	0.47	0.19	0.55	0.19
1SV16ME416	1	12	13	1	12	13	1	12	13	1	1		1	1	1	7	7	7	7	7	35	9	21		20	9	20	0.26	0.48	0.59	0.26	0.59
1SV16ME417	12	3	15	12	3	15	12	3	15	1	1		1	1	1	3.8	3.8	3.8	3.8	3.8	19	16.8	19.8		7.8	16.8	7.8	0.49	0.45	0.23	0.49	0.23
1SV16ME418	12	3	15	12	3	15	12	3	15	1	1		1	1	1	6.2	6.2	6.2	6.2	6.2	31	19.2	22.2		10.2	19.2	10.2	0.56	0.50	0.30	0.56	0.30
1SV16ME419	1	12	13	1	12	13	1	12	13	1	1		1	1	1	3	3	3	3	3	15	5	17		18	5	18	0.15	0.39	0.47	0.15	0.47
1SV16ME420	12	0	12	12	0	12	12	0	12	1	1		1	1	1	0	0	0	0	0	0	13	13		1	13	1	0.38	0.30	0.03	0.38	0.03
1SV16ME421	15	0	15	15	0	15	15	0	15	1	1		1	1	1	4.2	4.2	4.2	4.2	4.2	21	20.2	20.2		5.2	20.2	5.2	0.59	0.46	0.15	0.59	0.15
1SV16ME423	12	2	14	12	2	14	12	2	14	1	1		1	1	1	8.2	8.2	8.2	8.2	8.2	41	21.2	23.2		11.2	21.2	11.2	0.62	0.53	0.33	0.62	0.33
1SV16ME424	12	4	16	12	4	16	12	4	16	1	1		1	1	1	4	4	4	4	4	20	17	21		9	17	9	0.50	0.48	0.26	0.50	0.26
1SV16ME425	15	1	16	15	1	16	15	1	16	1	1		1	1	1	5.6	5.6	5.6	5.6	5.6	28	21.6	22.6		7.6	21.6	7.6	0.64	0.51	0.21	0.64	0.22
TOTAL	794	162	956	794	162	956	794	162	956	68	68		68	68	68	325.2	325.2	325.2	325.2	325.2	1626	1187.2	1349.2		555.2	1187.2	555.2	34.92	30.66	16.33	34.92	16.33
NO OF STUDENTS	68	68	68	68	68	68	68	68	68	68	68		68	68	68	68	68	68	68	68	68	68	68		68	68	68	68	68	68	68	68
AVERAGE	12.41	2.53	14.94	12.4	2.53	14.94	12.41	2.53	14.9	1.1	1.1		1.1	1.1	1.1	5.08	5.08	5.08	5.08	5.08	25.41	18.6	21.1		8.7	18.6	8.7	54.56	47.91	25.51	54.56	25.51

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SHRIDEVI	**SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY** **SIRA ROAD, TUMKUR- 572 106.**

DEPARTMENT OF MECHANICAL ENGINEERING

SUBJECT	AUTOMOTIVE ENGINEERING	SUBJECT CODE	15ME655

COURSE OUTCOME

CO1	Apply the knowledge of engineering fundamental related to automobile engines to solve the complex engineering problems
CO2	Analyze the design of engine, transmission and controlling system to draw the conclusion on the basis of engineering sciences to address the performance parameters of the engines
CO3	Apply the knowledge of transmission, controlling, auxiliary systems and other support systems employed in automobile to find solution to complex engineering problems
CO4	To incorporate the contextual knowledge of standards and norms to address the safety and legal issues related to automobiles in ones professional engineering practice
CO5	demonstrate the knowledge of standards and norms towards automobile pollution and respective control system to address environment and sustainability issues

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: 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	SANTHOSH T U											
BRANCH	ME		ACADEMIC YEAR	2017-18								
COURSE	B.E	SEMESTER	VI	SECTION								
SUBJECT	AUTOMOTIVE ENGINEERING			SUBJECT CODE	15ME655							
CO & PO MAPPING												
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3											
CO2	1	2										
CO3	3	2										
CO4						2						
CO5						1	2					
AVERAGE	2.33	2				1.5	2					
OVERALL MAPPING OF SUBJECT												1.95

CO AND PO ATTAINMENT

	CO%	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	65.68	1.96											
CO2	63.39	0.63	1.26										
CO3	44.54	1.33	0.89										
CO4	65.68						1.31						
CO5	44.54						0.44	0.89					
AVERAGE	56.76	1.30	1.07				0.87	0.89					
FINAL ATTAINMENT LEVEL													1.03

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Academic year	2017-18			SEM /VI			Total strength			68		Subject	AUTOMOBILE ENGINEERING				Subject Code	15ME659								
SEM-VI	IA TEST 1(20M)			IA TEST 2(20M)			IA TEST 3(20M)			ASSIGNMENT / QUIZ(10 M)			SEE MARKS(60)					Total Cos ATTAINMENT					% of individual CO				
USN	CO1	CO2	TOTAL	CO2	CO3	TOTAL	CO4	CO5	TOTAL	CO1	CO2	CO4	CO5	CO1=12	CO3	CO4	CO5	TOTAL	CO	CO2=44	CO3=34	CO4=34	CO5=34	CO1	CO2	CO3	CO4	CO5
1SV14ME011	11	3	14	11	3	14	11	3	14	1	1	1	1	1	7	7	7	7	7	35	19	22	11	19	11	0.56	0.50	0.32	0.56	0.32
1SV14ME016	12	3	15	12	3	15	12	3	15	1	1	1	1	1	4.4	4.4	4.4	4.4	4.4	22	17.4	20.4	8.4	17.4	8.4	0.51	0.46	0.25	0.51	0.25
1SV14ME018	11	5	16	11	5	16	11	5	16	1	1	1	1	1	9.8	9.8	9.8	9.8	9.8	49	21.8	26.8	15.8	21.8	15.8	0.64	0.61	0.46	0.64	0.46
1SV14ME026	12	4	16	12	4	16	12	4	16	1	1	1	1	1	6.4	6.4	6.4	6.4	6.4	32	19.4	23.4	11.4	19.4	11.4	0.57	0.53	0.34	0.57	0.34
1SV14ME034	12	2	14	12	2	14	12	2	14	1	1	1	1	1	6	6	6	6	6	30	19	21	9	19	9	0.56	0.48	0.26	0.56	0.26
1SV14ME055	11	8	19	11	8	19	11	8	19	1	1	1	1	1	8.2	8.2	8.2	8.2	8.2	41	20.2	26.2	17.2	20.2	17.2	0.59	0.64	0.51	0.59	0.51
1SV14ME064	12	7	19	12	7	19	12	7	19	1	1	1	1	1	7.8	7.8	7.8	7.8	7.8	39	20.8	27.8	15.8	20.8	15.8	0.61	0.63	0.46	0.61	0.46
1SV14ME083	12	4	16	12	4	16	12	4	16	1	1	1	1	1	6.8	6.8	6.8	6.8	6.8	34	19.8	23.8	11.8	19.8	11.8	0.58	0.54	0.35	0.58	0.35
1SV14ME084	11	4	15	11	4	15	11	4	15	1	1	1	1	1	7.6	7.6	7.6	7.6	7.6	38	19.6	23.6	12.6	19.6	12.6	0.58	0.54	0.37	0.58	0.37
1SV15ME001	12	4	16	12	4	16	12	4	16	1	1	1	1	1	7.6	7.6	7.6	7.6	7.6	38	20.6	24.6	12.6	20.6	12.6	0.61	0.56	0.37	0.61	0.37
1SV15ME003	12	5	17	12	5	17	12	5	17	1	1	1	1	1	7.4	7.4	7.4	7.4	7.4	37	20.4	25.4	13.4	20.4	13.4	0.60	0.58	0.39	0.60	0.39
1SV15ME007	15	5	20	15	5	20	15	5	20	1	1	1	1	1	6.2	6.2	6.2	6.2	6.2	31	22.2	27.2	12.2	22.2	12.2	0.65	0.62	0.36	0.65	0.36
1SV15ME008	12	7	19	12	7	19	12	7	19	1	1	1	1	1	6.8	6.8	6.8	6.8	6.8	34	19.8	26.8	14.8	19.8	14.8	0.58	0.61	0.44	0.58	0.44
1SV15ME010	12	5	17	12	5	17	12	5	17	1	1	1	1	1	7.2	7.2	7.2	7.2	7.2	36	20.2	25.2	13.2	20.2	13.2	0.59	0.57	0.39	0.59	0.39
1SV15ME011	15	0	15	15	0	15	15	0	15	1	1	1	1	1	6.8	6.8	6.8	6.8	6.8	34	22.8	22.8	7.8	22.8	7.8	0.67	0.52	0.23	0.67	0.23
1SV15ME017	12	7	19	12	7	19	12	7	19	1	1	1	1	1	7	7	7	7	7	35	20	27	15	20	15	0.59	0.61	0.44	0.59	0.44
1SV15ME018	12	7	19	12	7	19	12	7	19	1	1	1	1	1	6	6	6	6	6	30	19	26	14	19	14	0.56	0.59	0.41	0.56	0.41
1SV15ME019	12	4	16	12	4	16	12	4	16	1	1	1	1	1	6.6	6.6	6.6	6.6	6.6	33	19.6	23.6	11.6	19.6	11.6	0.58	0.54	0.34	0.58	0.34
1SV15ME023	1	19	20	1	19	20	1	19	20	1	1	1	1	1	12.8	12.8	12.8	12.8	12.8	64	14.8	33.8	12.8	14.8	12.8	0.44	0.77	0.38	0.44	0.38
1SV15ME025	12	7	19	12	7	19	12	7	19	1	1	1	1	1	11.4	11.4	11.4	11.4	11.4	57	24.4	31.4	19.4	24.4	19.4	0.72	0.71	0.57	0.72	0.57
1SV15ME027	12	4	16	12	4	16	12	4	16	1	1	1	1	1	6.4	6.4	6.4	6.4	6.4	32	19.4	23.4	11.4	19.4	11.4	0.57	0.53	0.34	0.57	0.34
1SV15ME028	11	6	17	11	6	17	11	6	17	1	1	1	1	1	7.8	7.8	7.8	7.8	7.8	39	19.8	25.8	14.8	19.8	14.8	0.58	0.59	0.44	0.58	0.44
1SV15ME032	15	2	17	15	2	17	15	2	17	1	1	1	1	1	5.6	5.6	5.6	5.6	5.6	28	21.6	23.6	8.6	21.6	8.6	0.64	0.54	0.25	0.64	0.25
1SV15ME034	12	2	14	12	2	14	12	2	14	1	1	1	1	1	5.6	5.6	5.6	5.6	5.6	28	18.6	20.6	8.6	18.6	8.6	0.55	0.47	0.25	0.55	0.25
1SV15ME039	12	6	18	12	6	18	12	6	18	1	1	1	1	1	9.6	9.6	9.6	9.6	9.6	48	22.6	26.6	16.6	22.6	16.6	0.66	0.61	0.49	0.66	0.49
1SV15ME042	12	6	18	12	6	18	12	6	18	1	1	1	1	1	10.6	10.6	10.6	10.6	10.6	53	23.6	29.6	17.6	23.6	17.6	0.69	0.67	0.52	0.69	0.52
1SV15ME044	12	4	16	12	4	16	12	4	16	1	1	1	1	1	8.8	8.8	8.8	8.8	8.8	44	21.8	25.8	13.8	21.8	13.8	0.64	0.59	0.41	0.64	0.41
1SV15ME045	15	4	19	15	4	19	15	4	19	1	1	1	1	1	11	11	11	11	11	55	27	31	16	27	16	0.79	0.70	0.47	0.79	0.47
1SV15ME048	14	4	18	14	4	18	14	4	18	1	1	1	1	1	9.6	9.6	9.6	9.6	9.6	48	24.6	28.6	14.6	24.6	14.6	0.72	0.65	0.43	0.72	0.43
1SV15ME049	12	5	17	12	5	17	12	5	17	1	1	1	1	1	9	9	9	9	9	45	22	27	15	22	15	0.65	0.61	0.44	0.65	0.44
1SV15ME051	14	3	17	14	3	17	14	3	17	1	1	1	1	1	9	9	9	9	9	45	24	27	13	24	13	0.71	0.61	0.38	0.71	0.38
1SV15ME056	12	7	19	12	7	19	12	7	19	1	1	1	1	1	8.4	8.4	8.4	8.4	8.4	42	21.4	28.4	15.4	21.4	15.4	0.63	0.65	0.48	0.63	0.48
1SV15ME058	12	5	17	12	5	17	12	5	17	1	1	1	1	1	5.6	5.6	5.6	5.6	5.6	28	18.6	23.6	11.6	18.6	11.6	0.55	0.54	0.34	0.55	0.34
1SV15ME059	12	6	18	12	6	18	12	6	18	1	1	1	1	1	7.2	7.2	7.2	7.2	7.2	36	20.2	26.2	14.2	20.2	14.2	0.59	0.60	0.42	0.59	0.42
1SV15ME062	12	7	19	12	7	19	12	7	19	1	1	1	1	1	11.2	11.2	11.2	11.2	11.2	56	24.2	31.2	19.2	24.2	19.2	0.71	0.71	0.56	0.71	0.56
1SV15ME066	14	4	18	14	4	18	14	4	18	1	1	1	1	1	10.6	10.6	10.6	10.6	10.6	53	25.6	29.6	15.6	25.6	15.6	0.75	0.67	0.46	0.75	0.46
1SV15ME067	12	2	14	12	2	14	12	2	14	1	1	1	1	1	5.6	5.6	5.6	5.6	5.6	28	18.6	20.6	8.6	18.6	8.6	0.55	0.47	0.25	0.55	0.25
1SV15ME070	12	3	15	12	3	15	12	3	15	1	1	1	1	1	10	10	10	10	10	50	23	26	14	23	14	0.68	0.59	0.41	0.68	0.41
1SV15ME072	14	6	20	14	6	20	14	6	20	1	1	1	1	1	12	12	12	12	12	60	27	33	19	27	19	0.79	0.75	0.56	0.79	0.56
1SV15ME073	12	5	17	12	5	17	12	5	17	1	1	1	1	1	8.4	8.4	8.4	8.4	8.4	42	21.4	26.4	14.4	21.4	14.4	0.63	0.60	0.42	0.63	0.42
1SV15ME074	12	7	19	12	7	19	12	7	18	1	1	1	1	1	5.6	5.6	5.6	5.6	5.6	28	18.6	25.6	13.6	18.6	13.6	0.55	0.58	0.40	0.55	0.40
1SV15ME075	12	5	17	12	5	17	12	5	17	1	1	1	1	1	9	9	9	9	9	45	22	27	15	22	15	0.65	0.61	0.44	0.65	0.44
1SV15ME076	12	6	18	12	6	18	12	6	18	1	1	1	1	1	9.6	9.6	9.6	9.6	9.6	48	22.6	28.6	16.6	22.6	16.6	0.66	0.65	0.49	0.66	0.49
1SV15ME077	14	2	16	14	2	16	14	2	16	1	1	1	1	1	5.6	5.6	5.6	5.6	5.6	28	20.6	22.6	8.6	20.6	8.6	0.61	0.51	0.25	0.61	0.25
1SV15ME079	15	2	17	15	2	17	15	2	17	1	1	1	1	1	10.2	10.2	10.2	10.2	10.2	51	26.2	26.2	13.2	26.2	13.2	0.77	0.64	0.39	0.77	0.39
1SV15ME082	12	7	19	12	7	19	12	7	19	1	1	1	1	1	8.8	8.8	8.8	8.8	8.8	44	21.8	28.8	16.8	21.8	16.8	0.64	0.65	0.49	0.64	0.49
1SV15ME083	1	17	18	1	17	18	1	17	18	1	1	1	1	1	4.2	4.2	4.2	4.2	4.2	21	6.2	23.2	22.2	6.2	22.2	0.18	0.53	0.65	0.18	0.65
1SV15ME087	12	3	15	12	3	15	12	3	15	1	1	1	1	1	8.2	8.2	8.2	8.2	8.2	41	21.2	24.2	12.2	21.2	12.2	0.62	0.55	0.36	0.62	0.36
1SV15ME400	12	4	16	12	4	16	12	4	16	1	1	1	1	1	5.6	5.6	5.6	5.6	5.6	28	18.6	22.6	10.6	18.6	10.6	0.55	0.51	0.31	0.55	0.31
1SV16ME402	12	4	16	12	4	16	12	4	16	1	1	1	1	1	5.8	5.8	5.8	5.8	5.8	29	18.8	22.8	10.8	18.8	10.8	0.55	0.52	0.32	0.55	0.32
1SV16ME403	12	6	18	12	6	18	12	6	18	1	1	1	1	1	10	10	10	10	10	50	23	29	17	23	17	0.68	0.66	0.50	0.68	0.50
1SV16ME404	12	5	17	12	5	17	12	5	17	1	1	1	1	1	10.4	10.4	10.4	10.4	10.4	52	23.4	28.4	16.4	23.4	16.4	0.69	0.65	0.48	0.69	0.48
1SV16ME405	12	5	17	12	5	17	12	5	17	1	1	1	1	1	8.4	8.4	8.4	8.4	8.4	42	21.4	26.4	14.4	21.4	14.4	0.63	0.60	0.42	0.63	0.42
1SV16ME407	14	5	19	14	5	19	14	5	19	1	1	1	1	1	9	9	9	9	9	45	24	26	15	24	15	0.71	0.66	0.44	0.71	0.44
1SV16ME408	12	4	16	12	4	16	12	4	16	1	1	1	1	1	7.8	7.8	7.8	7.8	7.8	39	20.8	24.8	12.8	20.8	12.8	0.61	0.58	0.38	0.61	0.38
1SV16ME409	14	3	17	14	3	17	14	3	17	1	1	1	1	1	7.6	7.6	7.6	7.6	7.6	38	22.8	25.6	11.6	22.6	11.6	0.66	0.58	0.34	0.66	0.34
1SV16ME410	12	6	18	12	6	18	12	6	18	1	1	1	1	1	9.8	9.8	9.8	9.8	9.8	49	22.8	28.8	16.8	22.8	16.8	0.67	0.65	0.49	0.67	0.49
1SV16ME412	1	17	18	1	17	18	1	17	18	1	1	1	1	1	7.4	7.4	7.4	7.4	7.4	37	9.4	26.4	25.4	9.4	25.4	0.28	0.60	0.75	0.28	0.75
1SV16ME413	12	2	14	12	2	14	12	2	14	1	1	1	1	1	5.6	5.6	5.6	5.6	5.6	28	18.6	20.6	8.6	18.6	8.6	0.55	0.47	0.25	0.55	0.25
1SV16ME416	12	5	17	12	5	17	12	5	17	1	1	1	1	1	7.8	7.8	7.8	7.8	7.8	39	20.8	25.8	13.8	20.8	13.8	0.61	0.59	0.41	0.61	0.41
1SV16ME417	14	4	18	14	4	18	14	4	18	1	1	1	1	1	8.8	8.8	8.8	8.8	8.8	44	23.8	27.8	13.8	23.8	13.8	0.70	0.63	0.41	0.70	0.41
1SV16ME418	15	4	19	15	4	19	15	4	19	1	1	1	1	1	8.6	8.6	8.6	8.6	8.6	43	24.6	28.6	13.6	24.6	13.6	0.72	0.65	0.40	0.72	0.40
1SV16ME419	12	7	19	12	7	19	12	7	19	1	1	1	1	1	8.2	8.2	8.2	8.2	8.2	41	21.2	28.2	16.2	21.2	16.2	0.62	0.64	0.48	0.62	0.48
1SV16ME420	14	0	14	14	0	14	14	0	14	1	1	1	1	1	8.6	8.6	8.6	8.6	8.6	43	23.6	23.6	9.6	23.6	9.6	0.69	0.54	0.28	0.69	0.28
1SV16ME421	15	4	19	15	4	19	15	4	19	1	1	1	1	1	8	8	8	8	8	40	24	28	13	24	13	0.71	0.64	0.38	0.71	0.38
1SV16ME423	12	5	17	12	5	17	12	5	17	1	1	1	1	1	10	10	10	10	10	50	23	28	16	23	16	0.68	0.64	0.47	0.68	0.47
1SV16ME424	12	8	20	12	8	20	12	8	20	1	1	1	1	1	8	8	8	8	8	40	23	29	17	23	17	0.68	0.66	0.50	0.68	0.50
1SV16ME425	11	8	19	11	8	19	11	8	19	1	1	1	1	1	6.8	6.8	6.8	6.8	6.8	34	18.8	26.8	15.8	18.8	15.8	0.55	0.61	0.46	0.55	0.46
TOTAL	816	356	1172	816	356	1172	816	356	1172	68	68	68	68	68	545.2	545.2	545.2	545.2	545.2	2726	1429.2	1781.2	969.2	1429.2	969.2	42.04	40.57	28.51	42.04	28.51
NO OF STUDENTS	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68
AVERAGE	12	5.6	18.313	12.8	5.6	18.313	13	5.6	18.313	1.1	1.1	1.1	1.1	1.1	8.51875	8.51875	8.51875	8.51875	8.51875	42.59375	22.3	27.9	15.1	22.3	15.1	65.68	63.39	44.54	65.68	44.54

PRINCIPAL
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Dept. of Mechanical
S.I.E.T., TUMKUR -6

SHRIDEVI	**SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY** **SIRA ROAD, TUMKUR- 572 106.**

DEPARTMENT OF MECHANICAL ENGINEERING

SUBJECT	TOTAL QUALITY MANAGEMENT	SUBJECT CODE	15ME664

COURSE OUTCOME

CO1	Explain the various approaches of TQM
CO2	Infer the customer perception of quality
CO3	Analyze customer needs and perception to design feed back systems
CO4	Apply statistical tools for continuous improvement of systems
CO5	Apply the tools and technology for effective improvement of TQM

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.

O6 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.

H.O.D
Dept. of Mechanical
S.I.E.T., TUMKUR -6

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COLLEGE	SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY				
FACULTY NAME	MANTHA K M				
BRANCH	ME	ACADEMIC YEAR	2017-18		
COURSE	B.E	SEMESTER	VI	SECTION	
SUBJECT	TOTAL QUALITY MANAGEMENT		SUBJECT CODE	15ME664	

CO & PO MAPPING

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2											1
CO2	2	2									1	1
CO3	2	2										1
CO4	2										1	1
CO5	2	2									1	1
AVERAGE	2	2									1	1
OVERALL MAPPING OF SUBJECT												1.5

CO AND PO ATTAINMENT

	CO%	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	73.91	1.47											0.73
CO2	65.53	1.31	1.31									0.65	0.65
CO3	43.62	0.87	0.87									0.43	0.43
CO4	73.91	1.43										0.73	0.73
CO5	43.62	0.87	0.87									0.43	0.43
AVERAGE	60.11	1.19	1.01									0.56	0.59
FINAL ATTAINMENT LEVEL													0.83

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Academic year	2017-18			SEM	VI		Total strength			68		Subject	TOTAL QUALITY MANAGEMENT				Subject Code	15ME664									
# SEM:VI	IA TEST 1(20M)			IA TEST 2(20M)			IA TEST 3(20M)			ASSIGNEMENT / QUIZ(10 M)					SEE MARKS(60)						Total Cos ATTAINMENT					% of individual CO				
USN	CO1	CO2	TOTAL	CO2	CO3	TOTAL	CO4	CO5	TOTAL	CO1	CO2	CO3	CO4	CO5	CO1=12	CO2	CO3	CO4	CO5	TOTAL	CO1=34	CO2=44	CO3=34	CO4=34	CO5=34	CO1	CO2	CO3	CO4	CO5
1SV14ME013	11	5	16	11	5	16	11	5	16	1	1	1	1	1	8.4	8.4	8.4	8.4	8.4	42	20.4	25.4	14.4	20.4	14.4	0.60	0.58	0.42	0.60	0.42
1SV14ME016	12	3	15	12	3	15	12	3	15	1	1	1	1	1	7.4	7.4	7.4	7.4	7.4	37	20.4	23.4	11.4	20.4	11.4	0.60	0.53	0.34	0.60	0.34
1SV14ME018	11	5	16	11	5	16	11	5	16	1	1	1	1	1	9.8	9.8	9.8	9.8	9.8	49	21.8	26.8	15.8	21.8	15.8	0.64	0.61	0.46	0.64	0.46
1SV14ME026	12	2	14	12	2	14	12	2	14	1	1	1	1	1	8.8	8.8	8.8	8.8	8.8	44	21.8	23.8	11.8	21.8	11.8	0.64	0.54	0.35	0.64	0.35
1SV14ME034	12	2	14	12	2	14	12	2	14	1	1	1	1	1	8.6	8.6	8.6	8.6	8.6	43	21.6	23.6	11.6	21.6	11.6	0.64	0.54	0.34	0.64	0.34
1SV14ME055	15	0	15	15	0	15	15	0	15	1	1	1	1	1	8.4	8.4	8.4	8.4	8.4	42	24.4	24.4	9.4	24.4	9.4	0.72	0.55	0.28	0.72	0.28
1SV14ME064	15	4	19	15	4	19	15	4	19	1	1	1	1	1	8.6	8.6	8.6	8.6	8.6	43	24.6	28.6	13.6	24.6	13.6	0.72	0.65	0.40	0.72	0.40
1SV14ME083	12	1	13	12	1	13	12	1	13	1	1	1	1	1	8.2	8.2	8.2	8.2	8.2	41	21.2	22.2	10.2	21.2	10.2	0.62	0.50	0.30	0.62	0.30
1SV14ME084	12	0	12	12	0	12	12	0	12	1	1	1	1	1	9.4	9.4	9.4	9.4	9.4	47	22.4	22.4	10.4	22.4	10.4	0.66	0.51	0.31	0.66	0.31
1SV15ME001	11	4	15	11	4	15	11	4	15	1	1	1	1	1	8.8	8.8	8.8	8.8	8.8	44	20.8	24.8	13.8	20.8	13.8	0.61	0.56	0.41	0.61	0.41
1SV15ME003	12	6	18	12	6	18	12	6	18	1	1	1	1	1	7.8	7.8	7.8	7.8	7.8	39	20.8	26.8	14.8	20.8	14.8	0.61	0.61	0.44	0.61	0.44
1SV15ME007	15	5	20	15	5	20	15	5	20	1	1	1	1	1	11.6	11.6	11.6	11.6	11.6	58	27.6	32.6	17.6	27.6	17.6	0.81	0.74	0.52	0.81	0.52
1SV15ME008	15	3	18	15	3	18	15	3	18	1	1	1	1	1	10	10	10	10	10	50	26	29	14	26	14	0.76	0.66	0.41	0.76	0.41
1SV15ME010	12	5	17	12	5	17	12	5	17	1	1	1	1	1	10	10	10	10	10	50	23	28	16	23	16	0.68	0.64	0.47	0.68	0.47
1SV15ME011	11	5	16	11	5	16	11	5	16	1	1	1	1	1	10.8	10.8	10.8	10.8	10.8	54	22.8	27.8	16.8	22.8	16.8	0.67	0.63	0.49	0.67	0.49
1SV15ME017	15	1	16	15	1	16	15	1	16	1	1	1	1	1	7.4	7.4	7.4	7.4	7.4	37	23.4	24.4	9.4	23.4	9.4	0.69	0.55	0.28	0.69	0.28
1SV15ME018	15	3	18	15	3	18	15	3	18	1	1	1	1	1	8.4	8.4	8.4	8.4	8.4	42	24.4	27.4	12.4	24.4	12.4	0.72	0.62	0.36	0.72	0.36
1SV15ME019	12	2	14	12	2	14	12	2	14	1	1	1	1	1	7.4	7.4	7.4	7.4	7.4	37	20.4	22.4	10.4	20.4	10.4	0.60	0.51	0.31	0.60	0.31
1SV15ME023	12	7	19	12	7	19	12	7	19	1	1	1	1	1	11.6	11.6	11.6	11.6	11.6	58	24.6	31.6	19.6	24.6	19.6	0.72	0.72	0.58	0.72	0.58
1SV15ME025	15	5	20	15	5	20	15	5	20	1	1	1	1	1	12.2	12.2	12.2	12.2	12.2	61	28.2	33.2	18.2	28.2	18.2	0.83	0.75	0.54	0.83	0.54
1SV15ME027	12	7	19	12	7	19	12	7	19	1	1	1	1	1	11.2	11.2	11.2	11.2	11.2	56	24.2	31.2	19.2	24.2	19.2	0.71	0.71	0.56	0.71	0.56
1SV15ME028	15	2	17	15	2	17	15	2	17	1	1	1	1	1	14.2	14.2	14.2	14.2	14.2	71	30.2	32.2	17.2	30.2	17.2	0.89	0.73	0.51	0.89	0.51
1SV15ME032	11	6	17	11	6	17	11	6	17	1	1	1	1	1	4.6	4.6	4.6	4.6	4.6	23	16.6	22.6	11.6	16.6	11.6	0.49	0.51	0.34	0.49	0.34
1SV15ME034	12	3	15	12	3	15	12	3	15	1	1	1	1	1	7.4	7.4	7.4	7.4	7.4	37	20.4	23.4	11.4	20.4	11.4	0.60	0.53	0.34	0.60	0.34
1SV15ME039	12	7	19	12	7	19	12	7	19	1	1	1	1	1	9.8	9.8	9.8	9.8	9.8	49	23.8	29.8	17.8	23.8	17.8	0.67	0.68	0.52	0.67	0.52
1SV15ME042	15	0	15	15	0	15	15	0	15	1	1	1	1	1	7.6	7.6	7.6	7.6	7.6	38	23.6	23.6	8.6	23.6	8.6	0.69	0.54	0.25	0.69	0.25
1SV15ME044	15	3	18	15	3	18	15	3	18	1	1	1	1	1	10.8	10.8	10.8	10.8	10.8	54	26.8	29.8	14.8	26.8	14.8	0.79	0.68	0.44	0.79	0.44
1SV15ME045	11	3	14	11	3	14	11	3	14	1	1	1	1	1	10.4	10.4	10.4	10.4	10.4	52	22.4	25.4	14.4	22.4	14.4	0.66	0.58	0.42	0.66	0.42
1SV15ME048	12	8	20	12	8	20	12	8	20	1	1	1	1	1	12.4	12.4	12.4	12.4	12.4	62	25.4	33.4	21.4	25.4	21.4	0.75	0.76	0.63	0.75	0.63
1SV15ME049	12	5	17	12	5	17	12	5	17	1	1	1	1	1	12.2	12.2	12.2	12.2	12.2	61	25.2	30.2	18.2	25.2	18.2	0.74	0.69	0.54	0.74	0.54
1SV15ME051	15	2	17	15	2	17	15	2	17	1	1	1	1	1	10.6	10.6	10.6	10.6	10.6	53	26.6	28.6	13.6	26.6	13.6	0.78	0.65	0.40	0.78	0.40
1SV15ME056	15	1	16	15	1	16	15	1	16	1	1	1	1	1	9.6	9.6	9.6	9.6	9.6	48	25.6	26.6	11.6	25.6	11.6	0.75	0.60	0.34	0.75	0.34
1SV15ME058	12	5	17	12	5	17	12	5	17	1	1	1	1	1	8.4	8.4	8.4	8.4	8.4	42	21.4	26.4	14.4	21.4	14.4	0.63	0.60	0.42	0.63	0.42
1SV15ME059	14	6	20	14	6	20	14	6	20	1	1	1	1	1	7.4	7.4	7.4	7.4	7.4	37	22.4	28.4	14.4	22.4	14.4	0.66	0.65	0.42	0.66	0.42
1SV15ME062	15	1	16	15	1	16	15	1	16	1	1	1	1	1	11.8	11.8	11.8	11.8	11.8	59	27.8	28.8	11.8	27.8	13.8	0.82	0.65	0.41	0.82	0.41
1SV15ME066	11	2	13	11	2	13	11	2	13	1	1	1	1	1	8.4	8.4	8.4	8.4	8.4	42	20.4	22.4	11.4	20.4	11.4	0.60	0.51	0.34	0.60	0.34
1SV15ME067	12	0	12	12	0	12	12	0	12	1	1	1	1	1	5.6	5.6	5.6	5.6	5.6	28	18.6	18.6	6.6	18.6	6.6	0.55	0.42	0.19	0.55	0.19
1SV15ME070	11	4	15	11	4	15	11	4	15	1	1	1	1	1	10	10	10	10	10	50	22	26	15	22	15	0.65	0.59	0.44	0.65	0.44
1SV15ME072	12	7	19	12	7	19	12	7	19	1	1	1	1	1	9.6	9.6	9.6	9.6	9.6	48	22.6	29.6	17.6	22.6	17.6	0.68	0.67	0.52	0.68	0.52
1SV15ME073	15	3	18	15	3	18	15	3	18	1	1	1	1	1	10.8	10.8	10.8	10.8	10.8	54	26.8	29.8	14.8	26.8	14.8	0.79	0.68	0.44	0.79	0.44
1SV15ME074	15	5	20	15	5	20	15	5	20	1	1	1	1	1	8.8	8.8	8.8	8.8	8.8	44	24.8	29.8	14.8	24.8	14.8	0.73	0.68	0.44	0.73	0.44
1SV15ME075	12	8	20	12	8	20	12	8	20	1	1	1	1	1	9.8	9.8	9.8	9.8	9.8	49	22.8	30.8	18.8	22.8	18.8	0.67	0.70	0.55	0.67	0.55
1SV15ME076	12	8	20	12	8	20	12	8	20	1	1	1	1	1	11.4	11.4	11.4	11.4	11.4	57	24.4	32.4	20.4	24.4	20.4	0.72	0.74	0.60	0.72	0.60
1SV15ME077	15	2	17	15	2	17	15	2	17	1	1	1	1	1	8.2	8.2	8.2	8.2	8.2	41	24.2	26.2	11.2	24.2	11.2	0.71	0.60	0.33	0.71	0.33
1SV15ME079	15	3	18	15	3	18	15	3	18	1	1	1	1	1	10.8	10.8	10.8	10.8	10.8	54	26.8	29.8	14.8	26.8	14.8	0.79	0.68	0.44	0.79	0.44
1SV15ME082	12	6	18	12	6	18	12	6	18	1	1	1	1	1	10.6	10.6	10.6	10.6	10.6	53	23.6	29.6	17.6	23.6	17.6	0.69	0.67	0.52	0.69	0.52
1SV15ME083	12	5	17	12	5	17	12	5	17	1	1	1	1	1	11.8	11.8	11.8	11.8	11.8	59	24.8	29.8	17.8	24.8	17.8	0.73	0.68	0.52	0.73	0.52
1SV15ME087	11	3	14	11	3	14	11	3	14	1	1	1	1	1	8.6	8.6	8.6	8.6	8.6	43	20.6	23.6	12.6	20.6	12.6	0.61	0.54	0.37	0.61	0.37
1SV15ME400	12	1	13	12	1	13	12	1	13	1	1	1	1	1	6	6	6	6	6	30	19	20	8	19	8	0.56	0.45	0.24	0.56	0.24
1SV16ME402	15	2	17	15	2	17	15	2	17	1	1	1	1	1	9.4	9.4	9.4	9.4	9.4	47	25.4	27.4	12.4	25.4	12.4	0.75	0.62	0.36	0.75	0.36
1SV16ME403	12	7	19	12	7	19	12	7	19	1	1	1	1	1	7.6	7.6	7.6	7.6	7.6	38	20.6	27.6	15.6	20.6	15.6	0.61	0.63	0.46	0.61	0.46
1SV16ME404	12	6	18	12	6	18	12	6	18	1	1	1	1	1	10.4	10.4	10.4	10.4	10.4	52	23.4	29.4	17.4	23.4	17.4	0.69	0.67	0.51	0.69	0.51
1SV16ME405	15	1	16	15	1	16	15	1	16	1	1	1	1	1	8.6	8.6	8.6	8.6	8.6	43	24.6	25.6	10.6	24.6	10.6	0.72	0.58	0.31	0.72	0.31
1SV16ME407	15	3	18	15	3	18	15	3	18	1	1	1	1	1	6.6	6.6	6.6	6.6	6.6	33	22.6	25.6	10.6	22.6	10.6	0.66	0.58	0.31	0.66	0.31
1SV16ME408	12	2	14	12	2	14	12	2	14	1	1	1	1	1	9	9	9	9	9	45	22	24	12	22	12	0.65	0.55	0.35	0.65	0.35
1SV16ME409	12	7	19	12	7	19	12	7	19	1	1	1	1	1	12.6	12.6	12.6	12.6	12.6	63	25.6	32.6	20.6	25.6	20.6	0.75	0.74	0.61	0.75	0.61
1SV16ME410	15	1	16	15	1	16	15	1	16	1	1	1	1	1	6	6	6	6	6	30	22	23	8	22	8	0.65	0.52	0.24	0.65	0.24
1SV16ME412	15	2	17	15	2	17	15	2	17	1	1	1	1	1	10.4	10.4	10.4	10.4	10.4	52	26.4	28.4	13.4	26.4	13.4	0.78	0.65	0.39	0.78	0.39
1SV16ME413	15	4	19	15	4	19	15	4	19	1	1	1	1	1	12.2	12.2	12.2	12.2	12.2	61	28.2	32.2	17.2	28.2	17.2	0.83	0.73	0.51	0.83	0.51
1SV16ME416	12	3	15	12	3	15	12	3	15	1	1	1	1	1	10	10	10	10	10	50	23	26	14	23	14	0.68	0.59	0.41	0.68	0.41
1SV16ME417	11	3	14	11	3	14	11	3	14	1	1	1	1	1	12	12	12	12	12	60	24	27	10	24	16	0.71	0.61	0.47	0.71	0.47
1SV16ME418	15	3	18	15	3	18	15	3	18	1	1	1	1	1	9.2	9.2	9.2	9.2	9.2	46	25.2	28.2	13.2	25.2	13.2	0.74	0.64	0.39	0.74	0.39
1SV16ME419	15	3	18	15	3	18	15	3	18	1	1	1	1	1	9.6	9.6	9.6	9.6	9.6	48	25.6	28.6	13.6	25.6	13.6	0.75	0.65	0.40	0.75	0.40
1SV16ME420	14	1	15	14	1	15	14	1	15	1	1	1	1	1	10	10	10	10	10	50	25	26	12	25	12	0.74	0.59	0.35	0.74	0.35
1SV16ME421	14	4	18	14	4	18	14	4	18	1	1	1	1	1	8.6	8.6	8.6	8.6	8.6	43	23.6	27.6	13.6	23.6	13.6	0.69	0.63	0.40	0.69	0.40
1SV16ME423	14	0	14	14	0	14	14	0	14	1	1	1	1	1	8.6	8.6	8.6	8.6	8.6	43	23.6	23.6	9.6	23.6	9.6	0.69	0.54	0.28	0.69	0.28
1SV16ME424	15	0	15	15	0	15	15	0	15	1	1	1	1	1	11.2	11.2	11.2	11.2	11.2	56	27.2	27.2	12.2	27.2	12.2	0.80	0.62	0.36	0.80	0.36
1SV16ME425	16	1	17	16	1	17	16	1	17	1	1	1	1	1	9.8	9.8	9.8	9.8	9.8	49	26.8	27.8	11.8	26.8	11.8	0.79	0.63	0.35	0.79	0.35
TOTAL	896	237	1133	896	237	1133	896	237	1133	68	68	68	68	68	644.2	644.2	644.2	644.2	644.2	7721	1608.2	1845.2	949.2	1608.2	949.2	47.30	41.94	27.92	47.30	27.92
NO OF STUDENTS	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68
AVERAGE	14	3.703125	17.70313	14	3.703125	17.70313	14	3.703125	17.70313	1.1	1.1	1.1	1.1	1.1	10.06563	10.06563	10.06563	10.06563	10.06563	120.6	25.1	28.8	14.8	25.1	14.8	73.91	65.53	43.62	73.91	43.62

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SHRIDEVI	**SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY** **SIRA ROAD, TUMKUR- 572 106.**

DEPARTMENT OF MECHANICAL ENGINEERING

SUBJECT	OPERATION MANAGEMENT	SUBJECT CODE	10ME81

COURSE OUTCOME

CO1	Understand the fundamental basis and nature of operation management techniques for the manufacturing Industry and also to assess a range of strategies for improving the efficiency and effectiveness of organizational operations
CO2	Analyze the appropriateness and applicability of a range of operations management systems/models in decision making and forecasting techniques.
CO3	Evaluate various facility alternatives and their capacity decisions and sequencing techniques in operations management environment.
CO4	Summarize Aggregate Planning & Master Scheduling methods by graphical, charting techniques and mathematical techniques as applied to product and process industries.
CO5	Assess the operational issues between Industry, vendor and customer by using Material Requirement Planning (MRP), Purchasing and Supply Chain Management (SCM).

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: 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	PRASHANTH S											
BRANCH	ME			ACADEMIC YEAR			2017-18					
COURSE	B.E	SEMESTER	VIII	SECTION								
SUBJECT	OPERATION MANAGEMENT					SUBJECT CODE	10ME81					
CO & PO MAPPING												
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	3										1
CO2	3	3	2									1
CO3	3	3										1
CO4	3	3										1
CO5	3	3										1
AVERAGE	3	3										1
OVERALL MAPPING OF SUBJECT												2.33

CO AND PO ATTAINMENT

	CO%	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	80.08	2.40	2.40										0.80
CO2	84.54	2.53	2.53										0.84
CO3	67.45	2.02	2.02										0.67
CO4	80.08	2.40	2.40										0.80
CO5	67.45	2.02	2.02										0.67
AVERAGE	75.92	2.27	2.27										0.75
FINAL ATTAINMENT LEVEL													1.76

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SIET., TUMAKURU.

Academic year	2017-18			SEM	VIII		Total strength	77		Subject	OPERATION MANAGEMENT			Subject Code	10ME81												
Name Of	IA TEST 1(30M)			IA TEST 2(30M)			IA TEST 3(30M)			ASSIGNMENT / QUIZ(10 M)				SEE MARKS(100)						Total Co ATTAINMENT					% of individual CO				
USN	CO1	CO2	TOTAL	CO1	CO2	TOTAL	CO1	CO2	TOTAL	CO1	CO2	CO3	CO4	CO5	CO1=1a+2a+3a	CO2=1b+2b+3b	CO3=4	CO4=4a	CO5=4b	CO1	CO2	CO3	CO4	CO5
1SV13ME021	11	11	22	11	11	22	11	11	22	1	1	1	1	1	9	9	9	9	9	45	21	32	21	21	21	0.62	0.73	0.62	0.62	0.62
1SV13ME046	12	6	18	12	6	18	12	6	18	1	1	1	1	1	5.8	5.8	5.8	5.8	5.8	29	18.8	24.8	12.8	12.8	12.8	0.55	0.56	0.38	0.55	0.38
1SV12ME077	12	9	21	12	3	15	12	8	20	1	1	1	1	1	4.6	4.6	4.6	4.6	4.6	23	17.6	20.6	8.6	17.6	8.6	0.52	0.47	0.25	0.53	0.25
1SV13ME018	12	3	15	12	3	15	12	8	20	1	1	1	1	1	9	9	9	9	9	45	22	25	10	22	10	0.65	0.57	0.30	0.65	0.30
1SV13ME043	11	3	20	12	3	15	12	8	20	1	1	1	1	1	11	11	11	11	11	55	24	27	10	24	10	0.71	0.61	0.44	0.71	0.44
1SV13ME069	1	16	17	1	16	17	1	16	17	1	1	1	1	1	7.4	7.4	7.4	7.4	7.4	37	8.4	23.4	24.4	8.4	24.4	0.18	0.58	0.73	0.26	0.73
1SV13ME070	11	4	15	11	4	15	11	4	15	1	1	1	1	1	8.2	8.2	8.2	8.2	8.2	41	20.2	24.2	13.2	20.2	13.2	0.59	0.61	0.39	0.59	0.39
1SV13ME0012	12	8	20	12	8	20	12	8	20	1	1	1	1	1	13.2	13.2	13.2	13.2	13.2	61	25.2	33.2	21.2	25.2	21.2	0.74	0.75	0.62	0.74	0.62
1SV14ME001	11	11	22	11	11	22	11	11	22	1	1	1	1	1	11.8	11.8	11.8	11.8	11.8	59	23.8	34.8	23.8	23.8	23.8	0.70	0.79	0.70	0.70	0.70
1SV14ME005	12	6	18	12	6	18	12	6	18	1	1	1	1	1	9.4	9.4	9.4	9.4	9.4	47	22.4	28.4	16.4	22.4	16.4	0.66	0.63	0.48	0.66	0.48
1SV14ME007	12	7	19	12	7	19	12	7	19	1	1	1	1	1	11.4	11.4	11.4	11.4	11.4	57	24.4	31.4	19.4	24.4	19.4	0.72	0.71	0.57	0.71	0.57
1SV14ME009	13	9	22	12	9	21	12	9	21	1	1	1	1	1	11.4	11.4	11.4	11.4	11.4	57	24.4	33.4	21.4	24.4	21.4	0.72	0.76	0.63	0.72	0.63
1SV14ME012	12	11	23	12	11	23	12	11	23	1	1	1	1	1	14.4	14.4	14.4	14.4	14.4	72	27.4	36.4	26.4	27.4	26.4	0.86	0.87	0.79	0.81	0.79
1SV14ME014	12	10	22	12	10	22	12	10	22	1	1	1	1	1	14	14	14	14	14	70	27	37	25	27	25	0.79	0.84	0.74	0.79	0.74
1SV14ME015	11	13	24	11	13	24	11	13	24	1	1	1	1	1	8.2	8.2	8.2	8.2	8.2	41	20.2	31.2	22.2	20.2	22.2	0.59	0.75	0.65	0.59	0.65
1SV14ME019	12	7	19	12	7	19	12	7	19	1	1	1	1	2	11	11	11	11	11	55	24	31	19	24	19	0.71	0.70	0.56	0.71	0.56
1SV14ME020	12	8	20	12	8	20	12	8	20	1	1	1	1	1	11.4	11.4	11.4	11.4	11.4	57	24.4	31.4	23.4	24.4	23.4	0.72	0.74	0.68	0.72	0.68
1SV14ME022	15	0	15	15	0	15	15	0	15	1	1	1	1	1	11.8	11.8	11.8	11.8	11.8	59	27.8	27.8	12.8	27.8	12.8	0.81	0.63	0.37	0.81	0.37
1SV14ME024	11	9	20	11	9	20	11	9	20	1	1	1	1	1	8.6	8.6	8.6	8.6	8.6	43	20.6	29.6	18.6	20.6	18.6	0.61	0.67	0.55	0.61	0.55
1SV14ME027	12	10	22	12	10	22	12	10	22	1	1	1	1	1	12	12	12	12	12	60	25	35	23	25	23	0.74	0.80	0.68	0.74	0.68
1SV14ME043	12	11	23	12	11	23	12	11	23	1	1	1	1	1	10.4	10.4	10.4	10.4	10.4	52	23.4	34.4	22.4	23.4	22.4	0.68	0.78	0.68	0.69	0.68
1SV14ME044	12	8	20	12	8	20	12	8	20	1	1	1	1	1	7.4	7.4	7.4	7.4	7.4	37	20.4	28.4	16.4	20.4	16.4	0.60	0.65	0.48	0.60	0.48
1SV14ME045	12	8	20	12	8	20	12	8	20	1	1	1	1	1	8.8	8.8	8.8	8.8	8.8	44	21.8	29.8	17.8	21.8	17.8	0.64	0.68	0.52	0.64	0.52
1SV14ME046	12	11	23	12	11	23	12	11	23	1	1	1	1	1	11	11	11	11	11	55	24	35	23	24	23	0.71	0.80	0.68	0.71	0.68
1SV14ME049	12	10	22	12	10	22	12	10	22	1	1	1	1	1	11	11	11	11	11	55	24	34	22	24	22	0.71	0.77	0.65	0.71	0.65
1SV14ME052	12	6	18	12	6	18	12	6	18	1	1	1	1	1	9	9	9	9	9	45	22	28	16	22	16	0.65	0.64	0.47	0.65	0.47
1SV14ME053	12	10	22	12	10	22	12	10	22	1	1	1	1	1	12	12	12	12	12	60	25	35	23	25	23	0.74	0.80	0.68	0.74	0.68
1SV14ME054	11	7	18	11	7	18	11	7	18	1	1	1	1	1	7.8	7.8	7.8	7.8	7.8	39	18.8	26.8	15.8	18.8	15.8	0.56	0.61	0.46	0.56	0.46
1SV14ME057	12	12	24	12	12	24	12	12	24	1	1	1	1	1	10.6	10.6	10.6	10.6	10.6	53	23.6	33.6	23.6	23.6	23.6	0.69	0.81	0.69	0.69	0.69
1SV14ME058	14	7	21	14	7	21	14	7	21	1	1	1	1	1	10.2	10.2	10.2	10.2	10.2	51	25.2	32.2	18.2	25.2	18.2	0.74	0.73	0.54	0.74	0.54
1SV14ME059	13	8	21	13	8	21	13	8	21	1	1	1	1	1	10.8	10.8	10.8	10.8	10.8	54	23.8	26.8	14.8	23.8	14.8	0.70	0.61	0.44	0.70	0.44
1SV14ME061	12	8	20	12	8	20	12	8	20	1	1	1	1	1	7	7	7	7	7	35	20	28	16	20	16	0.59	0.64	0.47	0.59	0.47
1SV14ME063	11	7	18	11	7	18	11	7	18	1	1	1	1	1	7	7	7	7	7	35	19	26	15	19	15	0.56	0.59	0.44	0.56	0.44
1SV14ME068	12	5	17	12	5	17	12	5	17	1	1	1	1	1	5	5	5	5	5	25	18	23	11	18	11	0.53	0.52	0.32	0.53	0.32
1SV14ME070	12	9	21	12	9	21	12	9	21	1	1	1	1	1	7	7	7	7	7	35	20	29	17	20	17	0.59	0.66	0.50	0.59	0.50
1SV14ME072	11	6	17	11	6	17	11	6	17	1	1	1	1	1	12.4	12.4	12.4	12.4	12.4	62	24.4	30.4	19.4	24.4	19.4	0.72	0.69	0.57	0.72	0.57
1SV14ME076	12	10	22	12	10	22	12	10	22	1	1	1	1	1	10.4	10.4	10.4	10.4	10.4	52	23.4	33.4	21.4	23.4	21.4	0.69	0.76	0.62	0.69	0.62
1SV14ME078	12	3	15	12	3	15	12	3	15	1	1	1	1	1	8	8	8	8	8	40	21	24	12	21	12	0.62	0.55	0.35	0.62	0.35
1SV14ME079	11	8	19	11	8	19	11	8	19	1	1	1	1	1	19.2	19.21	19.2	19.2	19.21	96	29.2	39.21	23.21	29.21	23.21	0.74	0.75	0.65	0.74	0.65
1SV14ME080	14	7	21	14	7	21	14	7	21	1	1	1	1	1	19.2	19.2	19.2	19.2	19.2	96	28.2	40.2	21.2	28.2	21.2	0.83	0.80	0.62	0.83	0.62
1SV14ME082	15	8	23	15	8	23	15	8	23	1	1	1	1	1	11.8	11.8	11.8	11.8	11.8	59	28.8	38.8	21.8	28.8	21.8	0.85	0.84	0.64	0.85	0.64
1SV14ME087	12	7	19	12	7	19	12	7	19	1	1	1	1	1	5.2	5.2	5.2	5.2	5.2	26	18.2	25.2	13.2	18.2	13.2	0.54	0.57	0.39	0.54	0.39
1SV14ME089	14	5	19	14	5	19	14	5	19	1	1	1	1	1	8.8	8.8	8.8	8.8	8.8	44	23.8	28.8	14.8	23.8	14.8	0.70	0.65	0.44	0.70	0.44
1SV14ME090	12	10	22	12	10	22	12	10	22	1	1	1	1	1	8.2	8.2	8.2	8.2	8.2	41	21.2	31.2	18.2	21.2	18.2	0.62	0.71	0.55	0.62	0.55
1SV14ME091	14	11	25	14	11	25	14	11	25	1	1	1	1	1	12.4	12.4	12.4	12.4	12.4	62	27.4	38.4	24.4	27.4	24.4	0.81	0.87	0.72	0.81	0.72
1SV14ME096	12	12	24	12	12	24	12	12	24	1	1	1	1	1	12.2	12.2	12.2	12.2	12.2	61	25.2	37.2	25.2	25.2	25.2	0.74	0.85	0.74	0.74	0.74
1SV14ME401	14	8	22	14	8	22	14	8	22	1	1	1	1	1	7.6	7.6	7.6	7.6	7.6	38	22.6	30.6	18.6	22.6	18.6	0.66	0.70	0.49	0.66	0.49
1SV14ME410	12	7	19	12	7	19	12	7	19	1	1	1	1	1	7.8	7.8	7.8	7.8	7.8	39	20.8	27.8	15.8	20.8	15.8	0.61	0.63	0.46	0.61	0.46
1SV14ME411	12	6	18	12	6	18	12	6	18	1	1	1	1	1	10	10	10	10	10	50	23	29	17	23	17	0.68	0.68	0.50	0.68	0.50
1SV14ME412	1	18	19	1	18	19	1	18	19	1	1	1	1	1	5.6	5.6	5.6	5.6	5.6	28	7.6	25.6	24.6	7.6	24.6	0.22	0.58	0.72	0.22	0.72
1SV14ME414	12	8	20	12	8	20	12	8	20	1	1	1	1	1	8.4	8.4	8.4	8.4	8.4	42	21.4	29.4	17.4	21.4	17.4	0.63	0.67	0.51	0.63	0.51
1SV15ME400	11	10	21	11	10	21	11	10	21	1	1	1	1	1	10.4	10.4	10.4	10.4	10.4	52	22.4	31.4	21.4	22.4	21.4	0.66	0.74	0.63	0.66	0.63
1SV15ME402	12	10	22	12	10	22	12	10	22	1	1	1	1	1	11.8	11.8	11.8	11.8	11.8	59	24.8	34.8	22.8	24.8	22.8	0.72	0.79	0.68	0.72	0.68
1SV15ME403	13	9	22	13	9	22	13	9	22	1	1	1	1	1	9.6	9.6	9.6	9.6	9.6	48	23.6	31.6	19.6	23.6	19.6	0.68	0.72	0.58	0.68	0.58
1SV15ME404	14	7	21	14	7	21	14	7	21	1	1	1	1	1	10.4	10.4	10.4	10.4	10.4	52	25.4	32.4	18.4	25.4	18.4	0.75	0.74	0.54	0.75	0.54
1SV15ME405	12	5	17	12	5	17	12	5	17	1	1	1	1	1	14.6	14.6	14.6	14.6	14.6	73	27.6	32.6	22.6	27.6	20.6	0.82	0.74	0.61	0.81	0.61
1SV15ME406	14	6	20	14	6	20	14	6	20	1	1	1	1	1	8.4	8.4	8.4	8.4	8.4	42	23.4	29.4	15.4	23.4	15.4	0.69	0.67	0.45	0.69	0.45
1SV15ME407	12	13	25	12	13	25	12	13	25	1	1	1	1	1	12.4	12.4	12.4	12.4	12.4	62	25.4	38.4	26.4	25.4	26.4	0.75	0.87	0.78	0.75	0.78
1SV15ME408	14	8	22	14	8	22	14	8	22	1	1	1	1	1	7.2	7.2	7.2	7.2	7.2	36	22.2	30.2	16.2	22.2	16.2	0.65	0.69	0.48	0.65	0.48
1SV15ME409	2	19	21	2	19	21	2	19	21	1	1	2	1	1	12.6	12.6	12.6	12.6	12.6	63	15.6	34.6	32.6	15.6	32.6	0.46	0.79	0.96	0.46	0.96
1SV15ME411	12	9	21	12	9	21	12	9	21	1	1	1	1	1	9.8	9.8	9.8	9.8	9.8	49	22.8	31.8	19.8	22.8	19.8	0.67	0.72	0.58	0.67	0.58
1SV15ME412	14	7	21	14	7	21	14	7	21	1	1	1	1	1	9.2	9.2	9.2	9.2	9.2	46	24.2	31.2	17.2	24.2	17.2	0.71	0.71	0.51	0.71	0.51
1SV15ME413	12	8	20	12	8	20	12	8	20	1	1	1	1	1	14.2	14.2	14.2	14.2	14.2	71	27.2	35.2	23.2	27.2	23.2	0.80	0.80	0.68	0.80	0.68
1SV15ME415	14	9	23	14	9	23	14	9	23	1	1	1	1	1	12.8	12.8	12.8	12.8	12.8	64	27.8	36.8	22.8	27.8	22.8	0.82	0.84	0.67	0.82	0.67
1SV15ME416	12	8	20	12	8	20	12	8	20	1	1	1	1	1	7	7	7	7	7	35	20	28	16	20	16	0.59	0.64	0.47	0.59	0.47
1SV15ME417	12	11	23	12	11	23	12	11	23	1	1	1	1	1	8.4	8.4	8.4	8.4	8.4	42	22.4	33.4	21.4	22.4	21.4	0.66	0.76	0.63	0.66	0.63
1SV15ME418	12	10	22	12	10	22	12	10	22	1	1	1	1	1	11.2	11.2	11.2	11.2	11.2	56	24.2	34.2	22.2	24.2	22.2	0.71	0.78	0.65	0.71	0.65
1SV15ME421	12	12	24	12	12	24	12	12	24	1	1	1	1	1	11.6	11.6	11.6	11.6	11.6	58	24.6	36.6	24.6	24.6	24.6	0.72	0.85	0.72	0.72	0.72
1SV15ME422	11	9	20	11	9	20	11	9	20	1	1	1	1	1	9.8	9.8	9.8	9.8	9.8	49	21.8	30.8	19.8	21.8	19.8	0.64	0.70	0.58	0.64	0.58
1SV15ME423	12	10	22	12	10	22	12	10	22	1	1	1	1	1	9.8	9.8	9.8	9.8	9.8	49	16.8	26.8	14.8	16.8	14.8	0.49	0.61	0.44	0.49	0.44
1SV15ME424	14	10	24	14	10	24	14	10	24	1	1	1	1	1	11.6	11.6	11.6	11.6	11.6	58	26.6	36.6	22.6	26.6	22.6	0.78	0.83	0.68	0.78	0.68
1SV15ME425	12	7	19	12	7	19	12	7	19	1	1	1	1	1	7	7	7	7	7	35	20	27	15	20	15	0.59	0.61	0.44	0.59	0.44
1SV15ME427	15	9	24	15	9	24	15	9	24	1	1	1	1	1	12.8	12.8	12.8	12.8	12.8	64	28.8	37.8	22.8	28.8	22.8	0.85	0.86	0.67	0.85	0.67
1SV15ME428	12	6	18	12	6	18	12	6	18	1	1	1	1	1	7	7	7	7	7	35	20	26	14	20	14	0.59	0.59	0.41	0.59	0.41
1SV15ME429	14	5	19	14	5	19	14	5	19	1	1	1	1	1	8	8	8	8	8	40	23	28	14	23	14	0.68	0.64	0.41	0.68	0.41
1SV15ME430	11	4	15	11	4	15	11	4	15	1	1	1	1	1	8.4	8.4	8.4	8.4	8.4	42	20.4	24.4	13.4	20.4	13.4	0.60	0.55	0.39	0.60	0.39
1SV15ME431	12	6	18	12	6	18	12	6	18	1	1	1	1	1	8.2	8.2	8.2	8.2	8.2	41	21.2	27.2	15.2	21.2	15.2	0.62	0.62	0.45	0.62	0.45
TOTAL	913	838	1551	913	838	1551	913	838	1551	77	77	77	77	77	752.6	752.6	757	753	752.6	3763	1742.8	2380.8	1667.8	1742.8	1667.81	51.25	54.12	48.17	51.25	48.17
NO OF AVERAGE	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77
AVERAGE	14.8	9.87	24.234	14.8	9.87	24.234	14.8	10	24.28	1.2	1.2	1.2	1.2	1.2	11.7594	11.79	11.6	11.8	11.79	58.8	27.2	37.2	33.0	27.2	37.8	80.08	84.54	67.48	80.08	67.45

H.O.D
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DEPARTMENT OF MECHANICAL ENGINEERING

SUBJECT	CONTROL ENGINEERING	SUBJECT CODE	10ME82

COURSE OUTCOME

CO1	Identify the control system and its types , control actions
CO2	Construct the system governing equations for physical models(Electrical, Thermal, Mechanical, ElectroMechanical
CO3	Analyze the gain of the system using block diagram and signal flow graph
CO4	Evaluate the stability of Control system in complex domain and frequency domain
CO5	Employ state equations to study the Bode's plot

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

H.O.D
Dept. of Mechanical
SIET, TUMKUR -6

PRINCIPAL
SIET, TUMAKURU.

COLLEGE	SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY				
FACULTY NAME	RAMESH H				
BRANCH	ME	ACADEMIC YEAR	2017-18		
COURSE	B.E	SEMESTER	VIII	SECTION	
SUBJECT	CONTROL ENGINEERING		SUBJECT CODE	10ME82	

CO & PO MAPPING

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2											1
CO2	2	2	1									
CO3	2	2										
CO4	2	2	1									1
CO5	1	2	1									1
AVERAGE	1.8	1.6	0.6									1
OVERALL MAPPING OF SUBJECT												1.25

CO AND PO ATTAINMENT

	CO%	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	86.36	1.72											0.86
CO2	91.73	1.83	1.83	0.91									
CO3	76.76	1.53	1.53										
CO4	86.36	1.72	1.72	0.86									0.76
CO5	76.76	0.76	1.53	0.76									0.76
AVERAGE	83.59	1.51	1.65	0.84									0.79
FINAL ATTAINMENT LEVEL													1.19

H.O.D
Dept. of Mechanical
S.I.E.T., TUMKUR -6

PRINCIPAL
SIET., TUMAKURU.

Academic year	2017-18			SEM /VIII			Total strength			77		Subject	CONTROL ENGINEERING					Subject Code	10MEE82									
SEM-VIII	IA TEST 1(MM)			IA TEST 2(MM)			IA TEST 3(MM)			ASSIGNEMENT / QUIZ(10			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	TOTAL	CO1=34	CO2=44	CO3=34	CO4=34	CO5=34	CO1	CO2	CO3	CO4	CO5
1SV13ME021	11	12	23	11	12	23	11	12	23	1	1	1	1	1	15	13	13	13	13	65	25	37	26	25	26	0.74	0.84	0.76	0.74	0.76
1SV13ME046	12	7	19	12	7	19	12	7	19	1	1	1	1	1	7.2	7.2	7.2	7.2	7.2	36	20.2	27.2	15.2	20.2	15.2	0.59	0.62	0.45	0.59	0.45
1SV13ME077	12	7	19	12	7	19	12	7	19	1	1	1	1	1	10.4	10.4	10.4	10.4	10.4	52	23.4	30.4	18.4	23.4	18.4	0.69	0.69	0.54	0.69	0.54
1SV13ME118	12	5	17	12	5	17	12	5	17	1	1	1	1	1	12	12	12	12	12	60	25	32	18	25	18	0.74	0.68	0.53	0.74	0.53
1SV13ME043	12	3	15	12	3	15	12	3	15	1	1	1	1	1	7	7	7	7	7	35	20	29	11	20	11	0.59	0.52	0.32	0.59	0.32
1SV13ME049	1	16	17	1	16	17	1	16	17	1	1	1	1	1	9.8	9.8	9.8	9.8	9.8	49	11.8	27.8	26.8	11.8	26.8	0.35	0.63	0.79	0.35	0.79
1SV13ME070	11	4	15	11	4	15	11	4	15	1	1	1	1	1	7.6	7.6	7.6	7.6	7.6	38	19.6	23.6	12.6	19.6	12.6	0.58	0.54	0.37	0.58	0.37
1SV13ME112	12	9	21	12	9	21	12	9	21	1	1	1	1	1	12.6	12.6	12.6	12.6	12.6	63	25.6	34.6	22.6	25.6	22.6	0.75	0.79	0.66	0.75	0.66
1SV14ME001	11	12	23	11	12	23	11	12	23	1	1	1	1	1	14.6	14.6	14.6	14.6	14.6	73	26.6	39.6	27.6	26.6	27.6	0.78	0.88	0.81	0.78	0.81
1SV14ME005	11	10	21	12	10	22	12	10	22	1	1	1	1	1	14.4	14.4	14.4	14.4	14.4	72	27.4	37.4	25.4	27.4	25.4	0.81	0.85	0.75	0.81	0.75
1SV14ME007	12	7	19	12	7	19	12	7	19	1	1	1	1	1	13.6	13.6	13.6	13.6	13.6	68	28.6	35.6	23.6	28.6	23.6	0.84	0.81	0.69	0.84	0.69
1SV14ME009	12	6	18	12	6	18	12	6	18	1	1	1	1	1	12.8	12.8	12.8	12.8	12.8	64	25.8	31.8	19.8	25.8	19.8	0.76	0.72	0.58	0.76	0.58
1SV14ME012	12	10	22	12	10	22	12	10	22	1	1	1	1	1	17.8	17.8	17.8	17.8	17.8	89	30.8	40.8	28.8	30.8	28.8	0.91	0.93	0.85	0.91	0.85
1SV14ME014	12	12	24	12	12	24	12	12	24	1	1	1	1	1	15.8	15.8	15.8	15.8	15.8	79	28.8	40.8	28.8	28.8	28.8	0.85	0.93	0.85	0.85	0.85
1SV14ME015	11	10	21	11	10	21	11	10	21	1	1	1	1	1	11.8	11.8	11.8	11.8	11.8	59	23.8	33.8	22.8	23.8	22.8	0.70	0.77	0.67	0.70	0.67
1SV14ME019	12	9	21	12	9	21	12	9	21	1	1	1	1	1	15.8	15.8	15.8	15.8	15.8	79	28.8	37.8	25.8	28.8	25.8	0.85	0.86	0.76	0.85	0.76
1SV14ME020	12	8	20	12	8	20	12	8	20	1	1	1	1	1	14.8	14.8	14.8	14.8	14.8	74	27.8	35.8	23.8	27.8	23.8	0.82	0.81	0.70	0.82	0.70
1SV14ME022	15	5	20	15	5	20	15	5	20	1	1	1	1	1	15.6	15.6	15.6	15.6	15.6	78	31.6	36.6	21.6	31.6	21.6	0.93	0.83	0.64	0.93	0.64
1SV14ME024	11	8	19	11	8	19	11	8	19	1	1	1	1	1	8.6	8.6	8.6	8.6	8.6	43	20.6	28.6	17.6	20.6	17.6	0.61	0.65	0.52	0.61	0.52
1SV14ME027	12	11	23	12	11	23	12	11	23	1	1	1	1	1	16	16	16	16	16	80	29	40	28	29	28	0.85	0.91	0.82	0.85	0.82
1SV14ME043	12	12	24	12	12	24	12	12	24	1	1	1	1	1	12.6	12.6	12.6	12.6	12.6	63	25.6	37.6	25.6	25.6	25.6	0.75	0.85	0.75	0.75	0.75
1SV14ME044	12	8	20	12	8	20	12	8	20	1	1	1	1	1	14.2	14.2	14.2	14.2	14.2	71	27.2	35.2	23.2	27.2	23.2	0.80	0.80	0.68	0.80	0.68
1SV14ME045	12	11	23	12	11	23	12	11	23	1	1	1	1	1	14.8	14.8	14.8	14.8	14.8	74	27.8	38.8	26.8	27.8	26.8	0.82	0.88	0.79	0.82	0.79
1SV14ME046	12	10	22	12	10	22	12	10	22	1	1	1	1	1	14.2	14.2	14.2	14.2	14.2	71	27.2	37.2	25.2	27.2	25.2	0.80	0.85	0.74	0.80	0.74
1SV14ME049	12	12	24	12	12	24	12	12	24	1	1	1	1	1	14.2	14.2	14.2	14.2	14.2	71	27.2	39.2	27.2	27.2	27.2	0.80	0.89	0.80	0.80	0.80
1SV14ME052	12	7	19	12	7	19	12	7	19	1	1	1	1	1	15	15	15	15	15	75	28	35	23	28	23	0.82	0.80	0.68	0.82	0.68
1SV14ME053	12	10	22	12	10	22	12	10	22	1	1	1	1	1	15.4	15.4	15.4	15.4	15.4	77	28.4	38.4	26.4	28.4	26.4	0.84	0.87	0.78	0.84	0.78
1SV14ME054	11	9	20	11	9	20	11	9	20	1	1	1	1	1	10	10	10	10	10	50	23	31	20	22	20	0.65	0.70	0.59	0.65	0.59
1SV14ME057	12	11	23	12	11	23	12	11	23	1	1	1	1	1	12	12	12	12	12	60	25	36	24	25	24	0.74	0.82	0.71	0.74	0.71
1SV14ME058	14	7	21	14	7	21	14	7	21	1	1	1	1	1	12.6	12.6	12.6	12.6	12.6	63	27.6	34.6	20.6	27.6	20.6	0.81	0.79	0.61	0.81	0.61
1SV14ME059	12	9	21	12	9	21	12	9	21	1	1	1	1	1	13	13	13	13	13	65	28	35	23	28	23	0.76	0.80	0.68	0.76	0.68
1SV14ME061	12	11	23	12	11	23	12	11	23	1	1	1	1	1	12.2	12.2	12.2	12.2	12.2	61	25.2	36.2	24.2	25.2	24.2	0.74	0.82	0.71	0.74	0.71
1SV14ME063	11	7	18	11	7	18	11	7	18	1	1	1	1	1	7.6	7.6	7.6	7.6	7.6	38	19.6	26.6	15.6	19.6	15.6	0.58	0.61	0.46	0.58	0.46
1SV14ME068	12	8	20	12	8	20	12	8	20	1	1	1	1	1	8.8	8.8	8.8	8.8	8.8	44	21.8	29.8	17.8	21.8	17.8	0.64	0.67	0.52	0.64	0.52
1SV14ME070	12	8	20	12	8	20	12	8	20	1	1	1	1	1	8.8	8.8	8.8	8.8	8.8	44	21.8	29.8	17.8	21.8	17.8	0.64	0.68	0.52	0.64	0.52
1SV14ME072	11	6	17	11	6	17	11	6	17	1	1	1	1	1	13.8	13.8	13.8	13.8	13.8	69	25.8	31.8	20.8	25.8	20.8	0.76	0.72	0.61	0.76	0.61
1SV14ME076	12	7	19	12	7	19	12	7	19	1	1	1	1	1	16.4	16.4	16.4	16.4	16.4	82	29.4	36.4	24.4	29.4	24.4	0.86	0.83	0.72	0.86	0.72
1SV14ME078	12	9	21	12	9	21	12	9	21	1	1	1	1	1	13.2	13.2	13.2	13.2	13.2	66	26.2	35.2	23.2	26.2	23.2	0.77	0.80	0.68	0.77	0.68
1SV14ME079	11	8	19	11	8	19	11	8	19	1	1	1	1	1	9.2	9.2	9.2	9.2	9.2	46	21.2	29.2	18.2	21.2	18.2	0.62	0.66	0.54	0.62	0.54
1SV14ME080	14	9	23	14	9	23	14	9	23	1	1	1	1	1	13.8	13.8	13.8	13.8	13.8	69	28.8	37.8	23.8	28.8	23.8	0.85	0.86	0.70	0.85	0.70
1SV14ME082	15	3	18	15	3	18	15	3	18	1	1	1	1	1	12.4	12.4	12.4	12.4	12.4	62	28.4	31.4	16.4	28.4	16.4	0.84	0.71	0.48	0.84	0.48
1SV14ME087	12	12	24	12	12	24	12	12	24	1	1	1	1	1	11.2	11.2	11.2	11.2	11.2	56	24.2	35.2	24.2	24.2	24.2	0.71	0.82	0.71	0.71	0.71
1SV14ME089	14	9	23	14	9	23	14	9	23	1	1	1	1	1	7.2	7.2	7.2	7.2	7.2	36	22.2	31.2	17.2	22.2	17.2	0.65	0.71	0.51	0.65	0.51
1SV14ME090	12	9	21	12	9	21	12	9	21	1	1	1	1	1	9.8	9.8	9.8	9.8	9.8	49	22.8	31.8	19.8	22.8	19.8	0.66	0.72	0.58	0.66	0.58
1SV14ME091	14	10	24	14	10	24	14	10	24	1	1	1	1	1	13.6	13.6	13.6	13.6	13.6	68	28.6	38.6	24.6	28.6	24.6	0.84	0.88	0.72	0.84	0.72
1SV14ME094	12	10	22	12	10	22	12	10	22	1	1	1	1	1	15.8	15.8	15.8	15.8	15.8	79	28.8	38.8	26.8	28.8	26.8	0.85	0.88	0.79	0.85	0.79
1SV14ME401	14	5	19	14	5	19	14	5	19	1	1	1	1	1	9.6	9.6	9.6	9.6	9.6	48	24.6	29.6	15.6	24.6	15.6	0.72	0.67	0.46	0.72	0.46
1SV14ME410	12	9	21	12	9	21	12	9	21	1	1	1	1	1	7.4	7.4	7.4	7.4	7.4	37	20.4	29.4	17.4	20.4	17.4	0.60	0.67	0.51	0.60	0.51
1SV14ME411	12	9	21	12	9	21	12	9	21	1	1	1	1	1	8	8	8	8	8	40	21	30	18	21	18	0.62	0.68	0.53	0.62	0.53
1SV14ME412	1	18	19	1	18	19	1	18	19	1	1	1	1	1	5	5	5	5	5	25	7	25	14	7	14	0.21	0.57	0.71	0.21	0.71
1SV14ME414	12	8	20	12	8	20	12	8	20	1	1	1	1	1	7.4	7.4	7.4	7.4	7.4	37	20.4	28.4	16.4	20.4	16.4	0.60	0.65	0.48	0.60	0.48
1SV15ME400	11	9	20	11	9	20	11	9	20	1	1	1	1	1	11.8	11.8	11.8	11.8	11.8	59	23.8	32.8	21.8	23.8	21.8	0.69	0.74	0.64	0.69	0.64
1SV15ME402	12	12	24	12	12	24	12	12	24	1	1	1	1	1	8.6	8.6	8.6	8.6	8.6	43	21.6	33.6	21.6	21.6	21.6	0.64	0.76	0.64	0.64	0.64
1SV15ME403	12	12	24	12	12	24	12	12	24	1	1	1	1	1	10.2	10.2	10.2	10.2	10.2	51	23.2	35.2	23.2	23.2	23.2	0.68	0.80	0.68	0.68	0.68
1SV15ME404	14	10	24	14	10	24	14	10	24	1	1	1	1	1	13.2	13.2	13.2	13.2	13.2	66	28.2	38.2	24.2	28.2	24.2	0.83	0.87	0.71	0.83	0.71
1SV15ME405	12	5	17	12	5	17	12	5	17	1	1	1	1	1	7.6	7.6	7.6	7.6	7.6	38	20.6	25.6	13.6	20.6	13.6	0.61	0.58	0.40	0.61	0.40
1SV15ME406	14	8	22	14	8	22	14	8	22	1	1	1	1	1	8.2	8.2	8.2	8.2	8.2	41	23.2	31.2	17.2	23.2	17.2	0.68	0.71	0.51	0.68	0.51
1SV15ME407	12	12	24	12	12	24	12	12	24	1	1	1	1	1	14.4	14.4	14.4	14.4	14.4	72	27.4	39.4	27.4	27.4	27.4	0.81	0.90	0.81	0.81	0.81
1SV15ME408	14	10	24	14	10	24	14	10	24	1	1	1	1	1	14.4	14.4	14.4	14.4	14.4	72	29.4	39.4	25.4	29.4	25.4	0.86	0.90	0.75	0.86	0.75
1SV15ME409	2	22	24	2	22	24	2	22	24	1	1	1	1	1	10.8	10.8	10.8	10.8	10.8	54	13.8	35.8	33.8	13.8	33.8	0.41	0.81	0.99	0.41	0.99
1SV15ME411	12	12	24	12	12	24	12	12	24	1	1	1	1	1	9.6	9.6	9.6	9.6	9.6	48	22.6	34.6	22.6	22.6	22.6	0.66	0.79	0.66	0.66	0.66
1SV15ME412	14	10	24	14	10	24	14	10	24	1	1	1	1	1	5.2	5.2	5.2	5.2	5.2	26	20.2	30.2	16.2	20.2	16.2	0.59	0.69	0.48	0.59	0.48
1SV15ME413	12	10	22	12	10	22	12	10	22	1	1	1	1	1	9.8	9.8	9.8	9.8	9.8	49	22.8	32.8	20.8	22.8	20.8	0.67	0.75	0.61	0.67	0.61
1SV15ME415	14	9	23	14	9	23	14	9	23	1	1	1	1	1	16.4	16.4	16.4	16.4	16.4	82	31.4	40.4	26.4	31.4	26.4	0.92	0.92	0.78	0.92	0.78
1SV15ME416	12	11	23	12	11	23	12	11	23	1	1	1	1	1	12.8	12.8	12.8	12.8	12.8	64	25.8	36.8	24.8	25.8	24.8	0.76	0.84	0.73	0.76	0.73
1SV15ME417	12	11	23	12	11	23	12	11	23	1	1	1	1	1	10.2	10.2	10.2	10.2	10.2	51	23.2	34.2	22.2	23.2	22.2	0.68	0.78	0.65	0.68	0.65
1SV15ME418	12	11	23	12	11	23	12	11	23	1	1	1	1	1	9.4	9.4	9.4	9.4	9.4	47	22.4	33.4	21.4	22.4	21.4	0.66	0.76	0.63	0.66	0.63
1SV15ME421	12	13	25	12	13	25	12	13	25	1	1	1	1	1	15.2	15.2	15.2	15.2	15.2	76	28.2	41.2	29.2	28.2	29.2	0.83	0.94	0.86	0.83	0.86
1SV15ME422	11	10	21	11	10	21	11	10	21	1	1	1	1	1	9.4	9.4	9.4	9.4	9.4	47	21.4	31.4	20.4	21.4	20.4	0.63	0.71	0.60	0.63	0.60
1SV15ME423	12	8	20	12	8	20	12	8	20	1	1	1	1	1	4.6	4.6	4.6	4.6	4.6	23	17.6	25.6	13.6	17.6	13.6	0.52	0.58	0.40	0.52	0.40
1SV15ME424	14	10	24	14	10	24	14	10	24	1	1	1	1	1	13.2	13.2	13.2	13.2	13.2	66	28.2	38.2	24.2	28.2	24.2	0.83	0.87	0.71	0.83	0.71
1SV15ME425	12	5	17	12	5	17	12	5	17	1	1	1	1	1	7	7	7	7	7	35	20	25	13	20	13	0.59	0.57	0.38	0.59	0.38
1SV15ME427	15	8	23	15	8	23	15	8	23	1	1	1	1	1	15.8	15.8	15.8	15.8	15.8	79	31.8	39.8	26.8	31.8	26.8	0.94	0.90	0.79	0.94	0.79
1SV15ME428	12	5	17	12	5	17	12	5	17	1	1	1	1	1	10.2	10.2	10.2	10.2	10.2	51	23.2	28.2	16.2	23.2	16.2	0.68	0.64	0.48	0.68	0.48
1SV15ME429	14	3	17	14	3	17	14	3	17	1	1	1	1	1	10.6	10.6	10.6	10.6	10.6	53	25.6	28.6	14.6	25.6	14.6	0.75	0.65	0.43	0.75	0.43
1SV15ME430	11	9	20	11	9	20	11	9	20	1	1	1	1	1	10	10	10	10	10	50	22	31	20	22	20	0.65	0.70	0.59	0.65	0.59
1SV15ME431	12	7	19	12	7	19	12	7	19	1	1	1	1	1	8.8	8.8	8.8	8.8	8.8	44	21.8	28.8	16.8	21.8	17.8	0.64	0.65	0.49	0.64	0.49
TOTAL	913	704	1617	913	704	1617	913	704	1617	77	77	77	77	77	889.2	889.2	889.2	889.2	889.2	4446	1870.2	2583.2	1670.2	1879.2	1879.2	55.27	58.71	49.12	55.27	49.12
NO OF AVERAGE	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77
AVERAGE	14.3	11	25.27	14.3	11	25.266	14.3	11	25.27	1.2	1.2	1.2	1.2	1.2	13.89	13.894	13.89375	13.89	13.89	69.47	29.4	40.4	26.1	29.4	29.1	86.36	91.73	76.76	86.36	76.76

H.O.D
Dept. of Mechanical
S.I.E.T., TUMKUR -6

PRINCIPAL
SIET., TUMKUR

SHRIDEVI	**SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY** **SIRA ROAD, TUMKUR- 572 106.**

DEPARTMENT OF MECHANICAL ENGINEERING

SUBJECT	POWER PLANT ENGINEERING	SUBJECT CODE	10ME833

COURSE OUTCOME

CO1	Know about the different energy sources and power generation.
CO2	Understand the concept of hydrology and details about the hydroelectric power plant.
CO3	Ability to analyze steam cycle and learn about different handling systems used in steam power generators.
CO4	Understand the environmental norms and standards in thermal power generation.
CO5	Learn about combined cycles for power generation and diesel engine power plants.

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: 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	D S RAVIKUMAR				
BRANCH	ME	ACADEMIC YEAR	2017-18		
COURSE	B.E	SEMESTER	VIII	SECTION	
SUBJECT	POWER PLANT ENGINEERING		SUBJECT CODE	10ME833	

CO & PO MAPPING

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2	3										
CO2	3	3										
CO3	2	3										
CO4	2	3										
CO5	2	3										
AVERAGE	2.2	3										
											OVERALL MAPPING OF SUBJECT	2.6

CO AND PO ATTAINMENT

	CO%	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	85.35	1.70	2.56										
CO2	97.56	2.92	2.92										
CO3	84.29	1.68	2.52										
CO4	85.35	1.70	2.56										
CO5	84.29	1.68	2.52										
AVERAGE	87.36	1.93	2.61										
												FINAL ATTAINMENT LEVEL	2.27

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SIET., TUMAKURU.

Academic year	2017-18			SEM	VIII		Total strength			TT			Subject	POWER PLANT ENGINEERING					Subject Code	10ME833								
MSM/VIII	IA TEST 1(MM)			IA TEST 2(MM)			IA TEST 3(MM)			ASSIGNMENT / QUIZ(10 M)					SEE MARKS(60)						Total Cos ATTAINMENT				% of individual CO				
USN	CO1	CO2	TOTAL	CO1	CO2	TOTAL	CO1	CO2	TOTAL	CO1	CO2	CO3	CO4	CO5	CO1+CO2	CO3	CO4	CO5	TOTAL	CO1=>64	CO2=>64	CO3=>64	CO4=>64	CO5=>64	CO1	CO2	CO3	CO4	CO5
1SV13ME031	11	13	24	11	13	24	11	13	24	1	1	1	1	1	9.6	9.6	9.6	9.6	9.6	47	21.6	55.6	23.4	21.4	23.4	0.60	0.78	0.68	0.63	0.69
1SV13ME046	12	6	18	12	6	18	12	6	18	1	1	1	1	1	9.6	9.6	9.6	9.6	9.6	48	22.6	38.6	16.6	23.6	16.6	0.66	0.65	0.49	0.66	0.49
1SV13ME073	11	7	18	12	7	19	12	7	19	1	1	2	1	1	7.2	7.2	7.2	7.2	7.2	36	20.2	27.2	13.2	20.2	13.2	0.59	0.62	0.45	0.59	0.49
1SV13ME018	12	8	20	12	8	20	12	8	20	1	1	1	1	1	10.4	10.4	10.4	10.4	10.4	52	23.4	31.4	18.4	23.4	23.4	0.68	0.71	0.57	0.68	0.57
1SV13ME043	13	7	20	12	7	19	12	7	19	1	1	1	1	1	8.4	8.4	8.4	8.4	8.4	42	21.4	28.4	16.4	21.4	16.4	0.63	0.65	0.49	0.63	0.49
1SV13ME049	1	21	22	1	21	22	1	21	22	1	1	1	1	1	11.8	11.8	11.8	11.8	11.8	59	13.8	34.8	33.8	13.8	33.8	0.41	0.79	0.99	0.41	0.99
1SV13ME070	11	10	21	11	10	21	11	10	21	1	1	1	1	1	9.4	9.4	9.4	9.4	9.4	47	23.4	31.4	20.4	21.4	20.4	0.68	0.71	0.60	0.63	0.60
1SV13ME0113	12	5	17	12	5	17	12	5	17	1	1	1	1	1	9.6	9.6	9.6	9.6	9.6	48	22.6	27.6	13.6	23.6	13.6	0.66	0.63	0.46	0.66	0.46
1SV14ME001	11	14	25	11	14	25	11	14	25	1	1	1	1	1	14.2	14.2	14.2	14.2	14.2	71	26.2	40.2	26.2	26.2	26.2	0.77	0.91	0.66	0.77	0.66
1SV14ME007	12	6	18	12	6	18	12	6	18	1	1	1	1	1	12	12	12	12	12	60	25	51	19	25	19	0.74	0.70	0.50	0.74	0.50
1SV14ME009	12	13	25	12	13	25	12	13	25	1	1	1	1	1	13.8	13.8	13.8	13.8	13.8	69	25.8	39.8	26.8	25.8	26.8	0.75	0.89	0.70	0.75	0.70
1SV14ME013	12	13	25	12	13	25	12	13	25	1	1	1	1	1	12.4	12.4	12.4	12.4	12.4	62	25.4	38.8	25.4	25.4	26.4	0.75	0.87	0.70	0.71	0.70
1SV14ME018	12	13	25	12	13	25	12	13	25	1	1	1	1	1	13	13	13	13	13	65	28	39	27	26	27	0.78	0.89	0.79	0.76	0.79
1SV14ME015	11	14	25	11	14	25	11	14	25	1	1	1	1	1	13.6	13.6	13.6	13.6	13.6	68	26.6	39.6	27.6	26.6	27.6	0.78	0.90	0.81	0.78	0.81
1SV14ME019	12	10	22	12	10	22	12	10	22	1	1	1	1	1	11.4	11.4	11.4	11.4	11.4	57	23.4	37.4	26.4	23.4	26.4	0.69	0.85	0.78	0.69	0.78
1SV14ME020	12	10	22	12	10	22	12	10	22	1	1	1	1	1	11.8	11.8	11.8	11.8	11.8	59	24.8	34.8	22.8	24.8	22.8	0.73	0.79	0.67	0.73	0.67
1SV14ME022	13	8	21	13	8	21	13	8	21	1	1	1	1	1	11.8	11.8	11.8	11.8	11.8	59	24.8	34.8	22.8	24.8	22.8	0.73	0.79	0.67	0.73	0.67
1SV14ME024	11	11	22	11	11	22	11	11	22	1	1	1	1	1	10.6	10.6	10.6	10.6	10.6	53	26.6	31.6	17.6	26.6	17.6	0.78	0.74	0.53	0.78	0.53
1SV14ME027	12	11	23	12	11	23	12	11	23	1	1	1	1	1	11.6	11.6	11.6	11.6	11.6	58	23.6	34.6	23.6	23.6	23.6	0.69	0.79	0.69	0.69	0.69
1SV14ME043	12	12	24	12	12	24	12	12	24	1	1	1	1	1	11.2	11.2	11.2	11.2	11.2	56	24.2	37.2	25.2	24.2	25.2	0.71	0.85	0.74	0.71	0.74
1SV14ME044	12	10	22	12	10	22	12	10	22	1	1	1	1	1	14	14	14	14	14	70	27	39	27	27	27	0.79	0.89	0.79	0.79	0.79
1SV14ME045	12	12	24	12	12	24	12	12	24	1	1	1	1	1	12.2	12.2	12.2	12.2	12.2	61	25.2	35.2	23.2	25.2	23.2	0.74	0.80	0.68	0.74	0.68
1SV14ME046	11	13	24	11	13	24	11	13	24	1	1	1	1	1	9.4	9.4	9.4	9.4	9.4	47	22.4	34.4	22.4	22.4	22.4	0.66	0.78	0.66	0.66	0.66
1SV14ME049	12	11	23	12	11	23	11	11	22	1	1	1	1	1	16.4	16.4	16.4	16.4	16.4	82	29.4	42.4	30.4	29.4	30.4	0.84	0.96	0.89	0.84	0.89
1SV14ME052	12	9	21	12	9	21	12	9	21	1	1	1	1	1	15.6	15.6	15.6	15.6	15.6	78	28.6	39.6	27.6	28.6	27.6	0.84	0.90	0.81	0.84	0.81
1SV14ME053	12	13	25	12	13	25	12	13	25	1	1	1	1	1	9.6	9.6	9.6	9.6	9.6	48	22.6	31.6	28.6	22.6	19.6	0.66	0.72	0.58	0.66	0.58
1SV14ME054	11	13	24	11	13	24	11	13	24	1	1	1	1	1	11.2	11.2	11.2	11.2	11.2	56	24.2	37.2	25.2	24.2	25.2	0.71	0.85	0.74	0.71	0.74
1SV14ME057	12	13	25	12	13	25	12	13	25	1	1	1	1	1	7.8	7.8	7.8	7.8	7.8	39	19.8	32.8	21.8	19.8	21.8	0.58	0.75	0.64	0.58	0.64
1SV14ME058	24	22	24	14	22	24	14	22	24	1	1	1	1	1	13.6	13.6	13.6	13.6	13.6	68	26.6	39.6	27.6	26.6	27.6	0.78	0.90	0.81	0.78	0.81
1SV14ME059	12	8	20	12	8	20	12	8	20	1	1	1	1	1	12.6	12.6	12.6	12.6	12.6	63	27.6	37.6	25.6	27.6	25.6	0.81	0.85	0.69	0.81	0.69
1SV14ME061	12	13	25	12	13	25	13	13	26	1	1	1	1	1	9	9	9	9	9	45	22	30	18	22	18	0.65	0.68	0.53	0.65	0.53
1SV14ME063	11	12	23	11	12	23	11	12	23	1	1	1	1	1	13.4	13.4	13.4	13.4	13.4	67	26.4	38.4	27.4	26.4	27.4	0.78	0.90	0.81	0.78	0.81
1SV14ME068	12	13	25	12	13	25	12	13	25	1	1	1	1	1	10.2	10.2	10.2	10.2	10.2	51	22.2	34.2	23.2	22.2	23.2	0.65	0.79	0.68	0.65	0.68
1SV14ME070	12	10	22	12	10	22	12	10	22	1	1	1	1	1	5.2	5.2	5.2	5.2	5.2	26	18.2	31.2	19.2	18.2	18.2	0.54	0.71	0.56	0.54	0.56
1SV14ME072	11	13	24	11	13	24	11	13	24	1	1	2	1	1	11	11	11	11	11	55	24	34	22	24	23	0.71	0.77	0.65	0.71	0.65
1SV14ME076	12	12	24	12	12	24	12	12	24	1	1	1	1	1	1.2	1.2	1.2	1.2	1.2	6	18.2	26.2	15.2	13.2	15.2	0.58	0.60	0.45	0.39	0.45
1SV14ME078	12	13	25	12	13	25	13	13	26	1	1	1	1	1	14	14	14	14	14	70	27	39	27	27	27	0.79	0.89	0.79	0.79	0.79
1SV14ME079	11	11	22	11	11	22	11	11	22	1	1	1	1	1	11.2	11.2	11.2	11.2	11.2	56	24.2	37.2	25.2	24.2	25.2	0.71	0.85	0.74	0.71	0.74
1SV14ME080	14	11	25	14	11	25	14	11	25	1	1	1	1	1	10	10	10	10	10	50	22	33	22	22	22	0.63	0.75	0.65	0.65	0.65
1SV14ME082	15	10	25	15	10	25	13	10	23	1	1	1	1	1	13.2	13.2	13.2	13.2	13.2	66	26.2	39.2	25.2	26.2	25.2	0.83	0.89	0.74	0.83	0.74
1SV14ME087	12	10	22	12	10	22	12	10	22	1	1	1	1	1	13.2	13.2	13.2	13.2	13.2	66	29.2	39.2	26.2	29.2	26.2	0.88	0.89	0.73	0.88	0.73
1SV14ME089	14	7	21	14	7	21	14	7	21	1	1	1	1	1	14.8	14.8	14.8	14.8	14.8	74	27.8	37.8	25.8	27.8	25.8	0.82	0.86	0.76	0.82	0.76
1SV14ME090	12	12	24	12	12	24	12	12	24	1	1	1	1	1	15.8	15.8	15.8	15.8	15.8	79	30.8	37.8	23.8	30.8	23.8	0.91	0.86	0.70	0.91	0.70
1SV14ME091	14	11	25	14	11	25	14	11	25	1	1	1	1	1	9	9	9	9	9	45	22	34	22	22	22	0.65	0.77	0.65	0.65	0.65
1SV14ME094	12	13	25	12	13	25	12	13	25	1	1	1	1	1	11.8	11.8	11.8	11.8	11.8	59	26.8	37.8	23.8	26.8	23.8	0.78	0.85	0.69	0.78	0.69
1SV14ME101	14	11	25	14	11	25	14	11	25	1	1	1	1	1	11.8	11.8	11.8	11.8	11.8	59	26.8	37.8	25.8	24.8	25.8	0.75	0.86	0.76	0.73	0.76
1SV14ME410	12	10	22	12	10	22	12	10	22	1	1	1	1	1	10.4	10.4	10.4	10.4	10.4	52	25.4	36.4	23.4	25.4	23.4	0.75	0.83	0.68	0.75	0.68
1SV14ME413	12	10	22	12	10	22	12	10	22	1	1	1	1	1	12.8	12.8	12.8	12.8	12.8	64	25.8	35.8	23.8	25.8	23.8	0.76	0.81	0.70	0.76	0.70
1SV14ME412	1	21	22	1	21	22	1	21	22	1	1	1	1	1	10	10	10	10	10	50	23	33	23	21	21	0.68	0.75	0.62	0.68	0.62
1SV14ME414	12	13	25	12	13	25	12	13	25	1	1	1	1	1	10.8	10.8	10.8	10.8	10.8	54	13.8	31.8	32.8	13.8	32.8	0.58	0.77	0.96	0.58	0.96
1SV14ME400	11	11	22	11	11	22	11	11	22	1	1	1	1	1	10	10	10	10	10	50	23	38	24	23	24	0.68	0.82	0.71	0.68	0.71
1SV14ME402	12	13	25	12	13	25	12	13	25	1	1	1	1	1	8.2	8.2	8.2	8.2	8.2	41	20.2	31.2	20.2	20.2	20.2	0.59	0.71	0.59	0.59	0.59
1SV14ME403	12	13	25	12	13	25	12	13	25	1	1	1	1	1	11	11	11	11	11	55	24	37	25	24	25	0.71	0.84	0.74	0.71	0.74
1SV14ME404	14	11	25	14	11	25	14	11	25	1	1	1	1	1	13.2	13.2	13.2	13.2	13.2	66	26.2	38.2	27.2	26.2	27.2	0.77	0.89	0.80	0.77	0.80
1SV14ME405	12	12	24	12	12	24	12	12	24	1	1	1	1	1	8.6	8.6	8.6	8.6	8.6	43	23.6	34.6	20.6	23.6	20.6	0.69	0.79	0.61	0.69	0.61
1SV14ME406	14	11	25	14	11	25	14	11	25	1	1	1	1	1	11.6	11.6	11.6	11.6	11.6	58	24.6	36.6	24.6	24.6	24.6	0.72	0.83	0.72	0.72	0.72
1SV14ME407	12	13	25	12	13	25	12	13	25	1	1	1	1	1	9	9	9	9	9	45	24	35	21	24	21	0.71	0.80	0.62	0.71	0.62
1SV14ME408	14	11	25	14	11	25	14	12	26	1	1	1	1	1	15.2	15.2	15.2	15.2	15.2	76	28.2	41.2	26.2	28.2	28.2	0.89	0.94	0.86	0.83	0.86
1SV14ME409	3	23	25	3	23	25	2	23	25	1	1	1	1	1	12.8	12.8	12.8	12.8	12.8	64	17.8	38.8	24.8	17.8	24.8	0.82	0.88	0.79	0.82	0.79
1SV14ME411	12	13	25	12	13	25	12	13	25	1	1	1	1	1	12	12	12	12	12	60	15	38	38	15	38	0.44	0.86	1.06	0.44	1.06
1SV14ME412	14	11	25	14	11	25	14	11	25	1	1	1	1	1	10.6	10.6	10.6	10.6	10.6	53	23.6	36.6	24.6	23.6	24.6	0.69	0.83	0.72	0.69	0.72
1SV14ME413	12	13	25	12	13	25	12	13	25	1	1	1	1	1	10.2	10.2	10.2	10.2	10.2	51	25.2	36.2	22.2	25.2	22.2	0.74	0.82	0.65	0.74	0.65
1SV14ME415	14	11	25	14	11	25	14	11	25	1	1	1	1	1	10.2	10.2	10.2	10.2	10.2	51	23.2	36.2	24.2	23.2	24.2	0.68	0.83	0.71	0.68	0.71
1SV14ME416	12	13	25	12	13	25	12	13	25	1	1	1	1	1	15.4	15.4	15.4	15.4	15.4	77	30.4	41.4	27.4	30.4	27.4	0.89	0.94	0.81	0.89	0.81
1SV14ME417	12	13	25	12	13	25	12	13	25	1	1	1	1	1	13.6	13.6	13.6	13.6	13.6	68	26.6	38.6	27.6	26.6	27.6	0.78	0.90	0.81	0.78	0.81
1SV14ME418	12	11	23	12	11	23	12	11	23	1	1	1	1	1	10.6	10.6	10.6	10.6	10.6	53	23.6	36.6	24.6	23.6	24.6	0.69	0.83	0.72	0.69	0.72
1SV14ME421	12	13	25	12	13	25	12	13	25	1	1	1	2	1	13.6	13.6	13.6	13.6	13.6	68	26.6	37.6	25.6	26.6	25.6	0.78	0.89	0.75	0.78	0.75
1SV14ME422	11	13	24	11	13	24	11	13	24	1	1	1	1	1	14	14	14	14	14	70	27	40	28	27	28	0.79	0.91	0.82	0.79	0.82
1SV14ME423	12	11	23	12	11	23	12	11	23	1	1	1	1	1	7.8	7.8	7.8	7.8	7.8	39	19.8	32.8	21.8	19.8	21.8	0.58	0.75	0.64	0.58	0.64
1SV14ME424	14	11	25	14	11	25	14	11	25	1	1	1	1	1	10.2	10.2	10.2	10.2	10.2	51	23.2	34.2	22.2	23.2	22.2	0.68	0.78	0.65	0.68	0.65
1SV14ME425	12	13	25	12	13	25	12	13	25	1	1	1	1	1	13	13	13	13	13	65	28	39	25	28	25	0.82	0.89	0.74	0.82	0.74
1SV14ME427	15	10	25	15	10	25	15	10	25	1	1	1	2	1	10.8	10.8	10.8	10.8	10.8	54	23.8	36.8	24.8	23.8	24.8	0.70	0.84	0.73	0.70	0.73
1SV14ME428	12	12	24	12	12	24	12	12	24	1	1	1	1	1	11.4	11.4	11.4	11.4	11.4	57	27.4	37.4	22.4	27.4	22.4	0.81	0.85	0.66	0.81	0.66
1SV14ME429	14	10	24	14	10	24	14	10	24	1	1	1	1	1	8.4	8.4	8.4	8.4	8.4	42	23.4	33.4	21.4	21.4	21.4	0.63	0.76	0.63	0.63	0.63
1SV14ME430	11	10	21	11	10	21	11	10	21	1	1	1	1	1	10	10	10	10	10	50	23	33	21	23	21	0.74	0.80	0.62	0.74	0.62
1SV15ME431	12	11	23	12	11	23	12	11	23	1	1	1	1	1	12.2	12.2	12.2	12.2	12.2	61	24.2	34.2	23.2	24.2	23.2	0.71	0.76	0.68	0.71	0.68
TOTAL	913	890	1803	913	890	1803	913	890	1803	77	77	77	77	77	867.2	867.2	867	867.2	867.2	4336	1957.2	2747.2	1834.2	1957.2	1834.2	54.42	61.44	51.00	54.42	51.00
NO OF AVERAGE	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77		77	77	77	77	77	77	77	77	77
AVERAGE	24.27	23.8	28.172	24.8	23.61	28.17	24.27	23.8	28.172		1.2	1.2	1.2	1.2	12.55	12.55	13.8	13.55	12.55	67.75	29.8	42.8	28.7		28.7	85.00	97.50	84.29	85.00	84.29

H.O.D
Dept. of Mechanical
S.I.E.T., TUMKUR -6

PRINCIPAL
SIET, TUMAKURU.

SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR- 572 106.

DEPARTMENT OF MECHANICAL ENGINEERING

SUBJECT	FOUNDARY TECHNOLOGY	SUBJECT CODE	10ME844

COURSE OUTCOME

CO1	Understand the conceptual knowledge of casting such as casting methods, pattern and pattern allowances.
CO2	Understand the concept of moulding, core making and comparison of different moulding procedures
CO3	Understand the gating system and casting method to rise ring practices
CO4	Learn the casting defects their causes and remedies
CO5	Understand the conceptual and procedural knowledge to produce the economical and defect free castings

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: 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	S M SHASHIDARA				
BRANCH	ME	ACADEMIC YEAR	2017-18		
COURSE	B.E	SEMESTER	VIII	SECTION	
SUBJECT	FOUNDARY TECHNOLOGY			SUBJECT CODE	10ME844

CO & PO MAPPING

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2	2										
CO2	2	3										
CO3	2	3										
CO4	2	3										
CO5	2	3										
AVERAGE	2	2.8										
											OVERALL MAPPING OF SUBJECT	2.4

CO AND PO ATTAINMENT

	CO%	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	87.87	1.75	1.75										
CO2	93.50	1.87	2.80										
CO3	79.04	1.58	2.37										
CO4	87.87	1.75	2.63										
CO5	79.04	1.58	2.37										
AVERAGE	85.46	1.70	2.38										
												FINAL ATTAINMENT LEVEL	2.0

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Academic year	2017-18			SEM/VIII			Total strength			77		Subject	AUTOMOTIVE ENGINEERING					Subject Code											
SEM/SH	IA TEST 1(30M)			IA TEST 2(30M)			IA TEST 3(30M)			ASSIGNMENT / QUIZ(10 M)			SEE MARK(60M)									Total Co ATTAINMENT					% of Individual CO				
USN	CO1	CO2	TOTAL	CO1	CO2	TOTAL	CO1	CO2	TOTAL	CO1	CO2	CO3	CO4	CO5	CO1+CO2	CO2	CO3	CO4	CO5	TOTAL	CO1=34	CO2=34	CO3=34	CO4=34	CO5=34	CO1	CO2	CO3	CO4	CO5
1SV11ME021	11	12	23	11	12	23	11	12	23	1	1	1	1	1	13	13	13	13	13	65	25	27	26	25	26	0.74	0.84	0.76	0.74	0.76
1SV11ME046	12	3	15	12	3	15	12	3	15	1	1	1	1	1	5.6	5.6	5.6	5.6	5.6	28	16.6	19.6	7.6	16.6	7.6	0.49	0.45	0.22	0.49	0.22
1SV12ME077	12	6	18	12	6	18	12	6	18	1	1	1	1	1	7.6	7.6	7.6	7.6	7.6	38	20.6	24.8	12.8	20.8	12.8	0.61	0.56	0.38	0.61	0.38
1SV13ME018	12	8	20	12	8	20	12	8	20	1	1	1	1	1	10.6	10.6	10.6	10.6	10.6	53	23.6	31.6	15.6	23.6	19.6	0.69	0.71	0.38	0.69	0.58
1SV13ME043	12	6	18	12	6	18	12	6	18	1	1	1	1	1	7.6	7.6	7.6	7.6	7.6	38	20.8	24.8	12.8	20.8	12.8	0.61	0.56	0.38	0.61	0.38
1SV13ME049	1	17	18	1	17	18	1	17	18	1	1	1	1	1	7	7	7	7	7	35	9	26	25	9	25	0.26	0.59	0.76	0.26	0.74
1SV13ME070	11	5	16	11	5	16	11	5	16	1	1	1	1	1	7	7	7	7	7	35	19	24	13	19	13	0.56	0.55	0.38	0.56	0.38
1SV13ME111Z	12	3	15	12	3	15	12	3	15	1	1	1	1	1	9.8	9.8	9.8	9.8	9.8	49	22.8	25.8	13.8	22.8	13.8	0.67	0.59	0.41	0.67	0.41
1SV14ME001	11	14	25	11	14	25	11	14	25	1	1	1	1	1	10.6	10.6	10.6	10.6	10.6	53	22.6	30.6	25.6	22.6	25.6	0.66	0.69	0.75	0.66	0.75
1SV14ME005	12	11	23	12	11	23	12	11	23	1	1	1	1	1	13.6	13.6	13.6	13.6	13.6	68	26.6	33.6	25.6	26.6	25.6	0.78	0.85	0.75	0.78	0.75
1SV14ME007	12	12	24	12	12	24	12	12	24	1	1	1	1	1	12.8	12.8	12.8	12.8	12.8	64	25.8	37.8	25.8	25.8	25.8	0.76	0.95	0.76	0.76	0.76
1SV14ME009	12	14	26	12	14	26	12	14	26	1	1	1	1	1	14.8	14.8	14.8	14.8	14.8	74	27.8	41.8	29.8	27.8	29.8	0.82	0.95	0.88	0.82	0.88
1SV14ME012	12	11	23	12	11	23	12	11	23	1	1	1	1	1	15.2	15.2	15.2	15.2	15.2	76	28.2	39.2	27.2	28.2	27.2	0.83	0.89	0.80	0.83	0.80
1SV14ME014	12	13	25	12	13	25	12	13	25	1	1	1	1	1	14	14	14	14	14	70	27	40	28	27	28	0.79	0.91	0.82	0.79	0.82
1SV14ME015	11	13	24	11	13	24	11	13	24	1	1	1	2	1	15.4	15.4	15.4	15.4	15.4	77	27.4	40.4	29.4	27.4	29.4	0.81	0.92	0.86	0.81	0.86
1SV14ME020	12	10	22	12	10	22	12	10	22	1	2	1	1	1	13.2	13.2	13.2	13.2	13.2	66	26.2	34.2	22.2	26.2	22.2	0.77	0.78	0.65	0.77	0.65
1SV14ME022	15	5	20	15	5	20	15	5	20	1	1	1	1	1	14.8	14.8	14.8	14.8	14.8	74	27.8	37.8	25.8	27.8	25.8	0.82	0.86	0.76	0.82	0.76
1SV14ME024	11	9	20	11	9	20	11	9	20	1	1	1	1	1	12.6	12.6	12.6	12.6	12.6	63	26.6	33.6	18.6	28.6	18.6	0.84	0.76	0.55	0.84	0.55
1SV14ME027	12	12	24	12	12	24	12	12	24	1	1	1	1	1	8.4	8.4	8.4	8.4	8.4	42	20.4	25.4	18.4	20.4	18.4	0.60	0.67	0.54	0.60	0.54
1SV14ME043	12	12	24	12	12	24	12	12	24	1	1	1	1	1	12	12	12	12	12	60	25	37	25	25	25	0.74	0.84	0.74	0.74	0.74
1SV14ME044	12	12	24	12	12	24	12	12	24	1	1	1	1	1	14.2	14.2	14.2	14.2	14.2	71	27.2	39.2	27.2	27.2	27.2	0.80	0.89	0.80	0.80	0.80
1SV14ME045	12	12	24	12	12	24	12	12	24	1	1	1	1	1	11	11	11	11	11	55	24	36	24	24	24	0.71	0.82	0.71	0.71	0.71
1SV14ME046	12	13	25	12	13	25	12	13	25	1	1	1	1	1	12.2	12.2	12.2	12.2	12.2	61	25.2	37.2	25.2	25.2	25.2	0.74	0.85	0.74	0.74	0.74
1SV14ME049	12	12	24	12	12	24	12	12	24	1	1	1	1	1	17.6	17.6	17.6	17.6	17.6	88	30.6	43.6	31.6	30.6	31.6	0.90	0.99	0.93	0.90	0.93
1SV14ME052	12	0	12	12	0	12	12	0	12	1	1	1	1	1	15.6	15.6	15.6	15.6	15.6	78	28.6	40.6	28.6	28.6	28.6	0.84	0.92	0.84	0.84	0.84
1SV14ME053	12	12	24	12	12	24	12	12	24	1	1	1	1	1	9.8	9.8	9.8	9.8	9.8	49	22.8	22.8	10.8	22.8	10.8	0.67	0.52	0.32	0.67	0.32
1SV14ME054	11	11	22	11	11	22	11	11	22	1	1	1	1	1	13.2	13.2	13.2	13.2	13.2	66	26.2	38.2	26.2	26.2	26.2	0.77	0.87	0.77	0.77	0.77
1SV14ME057	12	12	24	12	12	24	12	12	24	1	1	1	1	1	10.8	10.8	10.8	10.8	10.8	54	22.8	33.8	22.8	22.8	22.8	0.67	0.77	0.67	0.67	0.67
1SV14ME058	14	9	23	14	9	23	14	9	23	1	1	1	1	1	12.2	12.2	12.2	12.2	12.2	61	25.2	37.2	25.2	25.2	25.2	0.74	0.85	0.74	0.74	0.74
1SV14ME059	12	8	20	12	8	20	12	8	20	1	1	1	1	1	13.2	13.2	13.2	13.2	13.2	66	26.2	37.2	23.2	26.2	23.2	0.89	0.85	0.68	0.83	0.68
1SV14ME061	12	11	23	12	11	23	12	11	23	1	1	1	1	1	13	13	13	13	13	65	26	34	22	26	22	0.76	0.77	0.65	0.76	0.65
1SV14ME063	11	10	21	11	10	21	11	10	21	1	1	1	1	1	11.6	11.6	11.6	11.6	11.6	58	24.6	31.6	23.6	24.6	23.6	0.72	0.81	0.69	0.72	0.69
1SV14ME068	12	10	22	12	10	22	12	10	22	1	1	1	1	1	11.8	11.8	11.8	11.8	11.8	59	23.8	33.8	22.8	23.8	22.8	0.70	0.77	0.67	0.70	0.67
1SV14ME070	12	8	20	12	8	20	12	8	20	1	1	1	1	1	8.8	8.8	8.8	8.8	8.8	44	25.8	31.8	19.8	21.8	19.8	0.84	0.72	0.58	0.64	0.58
1SV14ME072	11	9	20	11	9	20	11	9	20	1	1	1	1	1	11.4	11.4	11.4	11.4	11.4	57	24.4	32.4	20.4	24.4	20.4	0.72	0.74	0.60	0.72	0.60
1SV14ME076	12	9	21	12	9	21	12	9	21	1	1	1	1	1	9.8	9.8	9.8	9.8	9.8	49	21.8	30.8	19.8	21.8	19.8	0.64	0.70	0.58	0.64	0.58
1SV14ME078	12	9	21	12	9	21	12	9	21	1	1	1	1	1	14.8	14.8	14.8	14.8	14.8	74	27.8	36.8	24.8	27.8	24.8	0.82	0.84	0.73	0.82	0.73
1SV14ME079	11	12	23	11	12	23	11	12	23	1	1	1	1	1	11.4	11.4	11.4	11.4	11.4	57	24.4	33.4	21.4	24.4	21.4	0.72	0.76	0.63	0.72	0.63
1SV14ME080	14	10	24	14	10	24	14	10	24	1	1	1	1	1	10.2	10.2	10.2	10.2	10.2	51	23.2	34.2	23.2	22.2	25.2	0.65	0.78	0.68	0.65	0.68
1SV14ME082	15	2	17	15	2	17	15	2	17	1	1	1	1	1	14.6	14.6	14.6	14.6	14.6	73	29.6	39.6	25.6	29.6	25.6	0.87	0.90	0.75	0.87	0.75
1SV14ME087	12	8	20	12	8	20	12	8	20	1	1	1	1	1	11.2	11.2	11.2	11.2	11.2	56	27.2	29.2	14.2	27.2	14.2	0.80	0.66	0.42	0.80	0.42
1SV14ME089	14	4	18	14	4	18	14	4	18	1	1	1	1	1	11	11	11	11	11	55	24	32	20	24	20	0.71	0.73	0.59	0.71	0.59
1SV14ME090	12	13	25	12	13	25	12	13	25	1	1	1	1	1	11.2	11.2	11.2	11.2	11.2	56	26.2	30.2	26.2	26.2	26.2	0.77	0.69	0.77	0.77	0.77
1SV14ME091	14	9	23	14	9	23	14	9	23	1	1	1	1	1	10.2	10.2	10.2	10.2	10.2	51	23.2	32.2	24.2	22.2	24.2	0.68	0.74	0.71	0.65	0.71
1SV14ME094	12	13	25	12	13	25	12	13	25	1	1	1	1	1	11	11	11	11	11	55	26	35	21	26	21	0.76	0.80	0.62	0.76	0.62
1SV14ME401	14	7	21	14	7	21	14	7	21	1	1	1	1	1	15	15	15	15	15	75	28	41	29	28	29	0.82	0.94	0.85	0.82	0.85
1SV14ME410	12	11	23	12	11	23	12	11	23	1	1	1	1	1	13.8	13.8	13.8	13.8	13.8	69	28.8	35.8	21.8	28.8	21.8	0.85	0.81	0.64	0.85	0.64
1SV14ME411	12	5	17	12	5	17	12	5	17	1	1	1	1	1	14.2	14.2	14.2	14.2	14.2	71	27.2	36.2	26.2	27.2	20.2	0.80	0.87	0.77	0.80	0.77
1SV14ME412	2	20	21	2	20	22	2	20	21	1	1	1	1	1	9.2	9.2	9.2	9.2	9.2	46	22.2	27.2	15.2	22.2	15.2	0.65	0.62	0.45	0.65	0.45
1SV14ME414	12	11	23	12	11	23	12	11	23	1	1	1	1	1	10.2	10.2	10.2	10.2	10.2	51	13.2	32.2	31.2	12.2	31.2	0.39	0.73	0.92	0.36	0.92
1SV15ME409	11	11	22	11	11	22	11	11	22	1	1	1	1	1	11.4	11.4	11.4	11.4	11.4	57	24.4	35.4	23.4	24.4	23.4	0.72	0.80	0.69	0.72	0.69
1SV15ME402	12	9	21	12	9	21	12	9	21	1	1	1	1	1	10.6	10.6	10.6	10.6	10.6	53	22.6	33.6	22.6	22.6	22.6	0.66	0.76	0.66	0.66	0.66
1SV15ME403	12	11	23	12	11	23	12	11	23	1	1	1	1	1	13.4	13.4	13.4	13.4	13.4	67	26.4	35.4	25.4	26.4	25.4	0.78	0.80	0.69	0.78	0.69
1SV15ME404	14	9	23	14	9	23	14	9	23	1	1	1	1	1	13	13	13	13	13	65	26	37	25	26	25	0.76	0.84	0.76	0.76	0.76
1SV15ME405	12	3	15	12	3	15	12	3	15	1	1	1	1	1	13.6	13.6	13.6	13.6	13.6	68	26.6	37.6	23.6	26.6	23.6	0.84	0.85	0.69	0.84	0.69
1SV15ME406	14	8	22	14	8	22	14	8	22	1	1	1	1	1	10	10	10	10	10	50	23	26	14	23	14	0.68	0.59	0.41	0.68	0.41
1SV15ME407	12	13	25	12	13	25	12	13	25	1	1	1	1	1	11	11	11	11	11	55	26	34	20	26	20	0.76	0.77	0.59	0.76	0.59
1SV15ME408	14	8	22	14	8	22	14	8	22	1	1	1	1	1	16.8	16.8	16.8	16.8	16.8	84	25.8	42.8	30.8	25.8	30.8	0.88	0.97	0.91	0.88	0.91
1SV15ME409	2	18	20	2	18	20	2	18	20	1	1	1	1	1	12.8	12.8	12.8	12.8	12.8	64	27.8	35.8	21.8	27.8	21.8	0.82	0.81	0.64	0.82	0.64
1SV15ME411	12	12	24	12	12	24	12	12	24	1	1	1	1	1	14.2	14.2	14.2	14.2	14.2	71	17.2	35.2	33.2	17.2	33.2	0.51	0.80	0.98	0.51	0.98
1SV15ME412	14	8	22	14	8	22	14	8	22	1	1	1	1	1	11.4	11.4	11.4	11.4	11.4	57	24.4	36.4	24.4	24.4	24.4	0.72	0.83	0.72	0.72	0.72
1SV15ME413	12	9	21	12	9	21	12	9	21	1	1	1	1	1	12.6	12.6	12.6	12.6	12.6	63	27.6	35.6	21.6	27.6	21.6	0.81	0.81	0.64	0.81	0.64
1SV15ME415	14	10	24	14	10	24	14	10	24	1	1	1	1	1	13	13	13	13	13	65	26	38	22	26	22	0.76	0.77	0.65	0.76	0.65
1SV15ME416	12	12	24	12	12	24	12	12	24	1	1	1	1	1	14.8	14.8	14.8	14.8	14.8	74	29.8	33.8	25.8	29.8	25.8	0.88	0.90	0.76	0.88	0.76
1SV15ME417	12	9	21	12	9	21	12	9	21	1	1	1	1	1	13.4	13.4	13.4	13.4	13.4	67	26.4	36.4	26.4	26.4	26.4	0.78	0.87	0.78	0.78	0.78
1SV15ME418	12	10	22	12	10	22	12	10	22	1	1	1	1	1	14	14	14	14	14	70	27	36	24	27	24	0.79	0.82	0.71	0.79	0.71
1SV15ME421	12	13	25	12	13	25	12	13	25	1	1	1	1	1	11.2	11.2	11.2	11.2	11.2	56	24.2	34.2	22.2	24.2	22.2	0.71	0.78	0.65	0.71	0.65
1SV15ME422	11	9	20	11	9	20	11	9	20	1	1	1	1	1	13.6	13.6	13.6	13.6	13.6	68	26.6	33.6	27.6	26.6	27.6	0.78	0.90	0.81	0.78	0.81
1SV15ME423	12	6	18	12	6	18	12	6	18	1	1	1	1	1	9.8	9.8	9.8	9.8	9.8	49	21.8	30.8	19.8	21.8	19.8	0.64	0.70	0.58	0.64	0.58
1SV15ME424	14	10	24	14	10	24	14	10	24	1	1	1	1	2	9.2	9.2	9.2	9.2	9.2	46	22.2	28.2	16.2	22.2	16.2	0.65	0.64	0.48	0.65	0.48
1SV15ME425	12	5	17	12	5	17	12	5	17	1	1	1	1	1	14.2	14.2	14.2	14.2	14.2	71	29.2	36.2	25.2	29.2	25.2	0.86	0.89	0.74	0.86	0.74
1SV15ME427	15	3	18	15	3	18	15	3	18	1	1	1	1	1	8.8	8.8	8.8	8.8	8.8	44	21.8	26.8	14.8	21.8	14.8	0.64	0.61	0.44	0.64	0.44
1SV15ME428	12	11	23	12	11	23	12	11	23	1	1	1	1	1	14	14	14	14	14	70	30	33	18	30	18	0.88	0.75	0.53	0.88	0.53
1SV15ME429	14	1	15	14	1	15	14	1	15	1	1	1	1	1	12.2	12.2	12.2	12.2	12.2	61	25.2	36.2	24.2	25.2	24.2	0.74	0.82	0.71	0.74	0.71
1SV15ME430	11	4	15	11	4	15	11	4	15	1	1	1	1	1	11.2	11.2	11.2	11.2	11.2	56	26.2	27.2	13.2	26.2	13.2	0.77	0.62	0.39	0.77	0.39
1SV15ME431	12	8	20	12	8	20	12	8	20	1	1	1	1	1	11.4	11.4	11.4	11.4	11.4	57	23.4	27.4	16.4	23.4	16.4	0.69	0.62	0.48	0.69	0.48
TOTAL	913	721	1634	913	721	1634	913	721	1634	77	1	1	1	1	12.2	12.2	12.2	12.2	12.2	61	25.2	33.2	21.2	25.2	21.2	0.74	0.75	0.62	0.74	0.62
NO OF AVERAGE	77	77	77	77	77	77	77	77	77	77		77	77	77	922	922	922	922	922	4610	1552	26	1720	1552	1720	56.24	59.84	50.59	56.24	50.59
AVERAGE	14.27	11.3	25.581	14.3	11.27	25.59	14.27	11.3	25.581	1.2		1.2	1.2	1.2	14.406	14.40625	14.40625	14.40625	14.40625	72.03125	29.9	41	26.9	29.8	26.9	87.87	93.50	79.04	87.87	79.04
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