

**SHRIDEVI INSTITUTE OF ENGINEERING AND  
TECHNOLOGY  
DEPARTMENT OF MECHANICAL ENGINEERING**

**ODD SEM**

**2020-21**

**DEPARTMENT OF ME**

<b>SUBJECT</b>	<b>MECHANICS OF MATERIAL</b>	<b>SUBJECT CODE</b>	<b>18ME32</b>
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**COURSE OUTCOME**

<b>CO1</b>	Apply an engineering knowledge to demonstrate the behavior of materials
<b>CO2</b>	Analyze the thin and thick cylinders and draw a stress distribution curve, also to create Mohr's circle diagram for plane stress conditions.
<b>CO3</b>	Determine the various forces and moments in beams
<b>CO4</b>	Evaluate the dimensions of mechanical elements for various applications.
<b>CO5</b>	Compare different strain energy methods and theories of failures in design of machineries

**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.

COLLEGE	SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY											
FACULTY NAME	Maltsha P J											
BRANCH	ME			ACADEMIC YEAR				2020-21				
COURSE	B.E	SEMESTER		III	SECTION							
SUBJECT	MECHANICS OF MATERIAL					SUBJECT CODE			18ME32			
CO & PO MAPPING												
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	1										
CO2	1	2										
CO3	1	3										
CO4	2	3										
CO5	3	2										
AVERAGE	2	2.2										
OVERALL MAPPING OF SUBJECT												2.1

#### CO AND PO ATTAINMENT

	CO%	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	40.66	1.21	0.40										
CO2	57.02	0.57	1.14										
CO3	39.00	0.39	1.17										
CO4	40.66	0.81	1.21										
CO5	39.00	1.17	0.78										
AVERAGE	43.26	0.83	0.94										
FINAL ATTAINMENT LEVEL													0.88

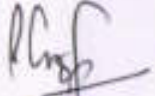
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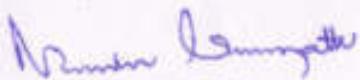
Dept. of Mechanical  
S.I.E.T., TUMKUR -6

*[Signature]*  
PRINCIPAL

S.I.E.T., TUMAKURU.

Academic year	2020-21	SEM III					Total strength			23	Subject MECHANICS OF MATERIALS					Subject Code					18ME32									
SEM:III	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	CO1-12	CO2	CO3	CO4	CO5	CO1-34	CO2-44	CO3-34	CO4-34	CO5-34	CO1	CO2	CO3	CO4	CO5	
1SV17ME005	5	5	10	5	5	10	5	5	10	2	2	2	2	2	0	0	0	0	0	7	12	7	7	7	0.21	0.27	0.21	0.21	0.21	
1SV18ME003	12	15	27	12	15	27	12	15	27	2	2	2	2	2	0	0	0	0	0	14	29	17	14	17	0.41	0.66	0.50	0.41	0.50	
1SV18ME008	15	13	28	15	13	28	15	13	28	2	2	2	2	2	0	0	0	0	0	17	30	15	17	15	0.50	0.68	0.44	0.50	0.44	
1SV18ME010	11	12	23	11	12	23	11	12	23	2	2	2	2	2	0	0	0	0	0	13	25	14	13	14	0.38	0.57	0.41	0.38	0.41	
1SV18ME011	10	13	23	10	13	23	10	13	23	2	2	2	2	2	0	0	0	0	0	12	25	15	12	15	0.35	0.57	0.44	0.35	0.44	
1SV18ME012	13	13	26	13	13	26	13	13	26	2	2	2	2	2	0	0	0	0	0	15	28	15	15	15	0.44	0.64	0.44	0.44	0.44	
1SV18ME013	14	12	26	14	12	26	14	12	26	2	2	2	2	2	0	0	0	0	0	16	28	14	16	14	0.47	0.64	0.41	0.47	0.41	
1SV19ME001	10	17	27	10	17	27	10	17	27	2	2	2	2	2	0	0	0	0	0	12	29	19	12	19	0.35	0.66	0.56	0.35	0.56	
1SV19ME002	10	14	24	10	14	24	10	14	24	2	2	2	2	2	0	0	0	0	0	12	26	16	12	16	0.35	0.59	0.47	0.35	0.47	
1SV19ME003	12	8	20	12	8	20	12	8	20	2	2	2	2	2	0	0	0	0	0	14	22	10	14	10	0.41	0.50	0.29	0.41	0.29	
1SV19ME004	14	8	22	14	8	22	14	8	22	2	2	2	2	2	0	0	0	0	0	16	24	10	16	10	0.47	0.55	0.29	0.47	0.29	
1SV19ME005	15	8	23	15	8	23	15	8	23	2	2	2	2	2	0	0	0	0	0	17	25	10	17	10	0.50	0.57	0.29	0.50	0.29	
1SV19ME006	12	16	28	12	16	28	12	16	28	2	2	2	2	2	0	0	0	0	0	14	30	18	14	18	0.41	0.68	0.53	0.41	0.53	
1SV19ME010	13	13	26	13	13	26	13	13	26	2	2	2	2	2	0	0	0	0	0	15	28	15	15	15	0.44	0.64	0.44	0.44	0.44	
1SV19ME011	10	13	23	10	13	23	10	13	23	2	2	2	2	2	0	0	0	0	0	12	25	15	12	15	0.35	0.57	0.44	0.35	0.44	
1SV19ME012	14	7	21	14	7	21	14	7	21	2	2	2	2	2	0	0	0	0	0	16	23	9	16	9	0.47	0.52	0.26	0.47	0.26	
1SV19ME013	12	9	21	12	9	21	12	9	21	2	2	2	2	2	0	0	0	0	0	14	23	11	14	11	0.41	0.52	0.32	0.41	0.32	
1SV19ME014	10	12	22	10	12	22	10	12	22	2	2	2	2	2	0	0	0	0	0	12	24	14	12	14	0.35	0.55	0.41	0.35	0.41	
1SV19ME015	15	-2	13	15	-2	13	15	-2	13	2	2	2	2	2	0	0	0	0	0	17	15	0	17	0	0.50	0.34	0.00	0.50	0.00	
1SV20ME400	10	17	27	10	17	27	10	17	27	2	2	2	2	2	0	0	0	0	0	12	29	19	12	19	0.35	0.66	0.56	0.35	0.56	
1SV20ME401	13	13	26	13	13	26	13	13	26	2	2	2	2	2	0	0	0	0	0	15	28	15	15	15	0.44	0.64	0.44	0.44	0.44	
1SV20ME402	10	10	20	10	10	20	10	10	20	2	2	2	2	2	0	0	0	0	0	12	22	12	12	12	0.35	0.50	0.35	0.35	0.35	
1SV20ME403	12	13	25	12	13	25	12	13	25	2	2	2	2	2	0	0	0	0	0	14	27	15	14	15	0.41	0.61	0.44	0.41	0.44	
TOTAL	272	259	531	272	259	531	272	259	531	46	46	46	46	46	0	0	0	0	0	318	577	305	318	305	9.35	13.11	8.97	9.35	8.97	
No of Students	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	
Average	11.83	11.3	23.087	11.8	11.26	23.09	11.83	11.3	23.087	2	2	2	2	2	0	0	0	0	0	13.83	25.09	13.26	13.83	13.26	40.66	57.02	39.00	40.66	39.00	

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

  
 PRINCIPAL  
 SIET, TUMAKURU.



DEPARTMENT OF ME

SUBJECT	BASIC THERMODYNAMICS	SUBJECT CODE	18ME33
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**COURSE OUTCOME**

CO1	Explain fundamentals of thermodynamics and evaluate energy interactions across the boundary of thermodynamic systems.
CO2	Apply 1st law of thermodynamics to closed and open systems and determine quantity of energy transfers and change in properties.
CO3	Apply the knowledge of entropy and 2nd law of thermodynamics to solve numerical problems.
CO4	Interpret the behavior of pure substances and its application in practical problems, reversibility and irreversibility to solve numerical problems.
CO5	Evaluate thermodynamic properties of ideal and real gas mixtures using various relations.

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COLLEGE	SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY											
FACULTY NAME	D S Ravikumar											
BRANCH	ME			ACADEMIC YEAR				2020-21				
COURSE	B.E	SEMESTER		III	SECTION							
SUBJECT	BASIC THERMODYNAMICS					SUBJECT CODE			18ME33			
CO & PO MAPPING												
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3											
CO2	3	2										
CO3	3	2										
CO4	3	2	1									
CO5	3		1									
AVERAGE	3	2	1									
OVERALL MAPPING OF SUBJECT												2.0

#### CO AND PO ATTAINMENT


	CO%	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	41.30	1.23											
CO2	57.71	1.71	1.15										
CO3	40.28	1.20	0.80										
CO4	41.30	1.23	0.82	0.40									
CO5	40.28	1.20		0.41									
AVERAGE	44.17	1.31	0.92	0.40									
FINAL ATTAINMENT LEVEL													0.87

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Dept. of Mechanical  
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*Principal*  
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Academic year	2020-21			SEM III			Total strength			23			Subject					BASIC THERMODYNAMICS					Subject Code					18ME33				
SEM/III	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=12	CO2	CO3	CO4	CO5	CO1=34	CO2=44	CO3=34	CO4=34	CO5=34	CO1	CO2	CO3	CO4	CO5			
ISV17ME005	14	6	20	14	6	20	14	6	20	2	2	2	2	2	0	0	0	0	0	16	14	8	16	8	0.47	0.32	0.24	0.47	0.24			
ISV18ME003	14	15	29	14	15	29	14	15	29	2	2	2	2	2	0	0	0	0	0	16	32	17	16	17	0.47	0.73	0.50	0.47	0.50			
ISV18ME008	10	19	29	10	19	29	10	19	29	2	2	2	2	2	0	0	0	0	0	12	40	21	12	21	0.35	0.91	0.62	0.35	0.62			
ISV18ME010	13	10	23	13	10	23	13	10	23	2	2	2	2	2	0	0	0	0	0	15	22	12	15	12	0.44	0.50	0.35	0.44	0.35			
ISV18ME011	15	7	22	15	7	22	15	7	22	2	2	2	2	2	0	0	0	0	0	17	16	9	17	9	0.50	0.36	0.26	0.50	0.26			
ISV18ME012	12	8	20	12	8	20	12	8	20	2	2	2	2	2	0	0	0	0	0	14	18	10	14	10	0.41	0.41	0.29	0.41	0.29			
ISV18ME013	13	10	23	13	10	23	13	10	23	2	2	2	2	2	0	0	0	0	0	15	22	12	15	12	0.44	0.50	0.35	0.44	0.35			
ISV19ME001	10	19	29	10	19	29	10	19	29	2	2	2	2	2	0	0	0	0	0	12	40	21	12	21	0.35	0.91	0.62	0.35	0.62			
ISV19ME002	12	14	26	12	14	26	12	14	26	2	2	2	2	2	0	0	0	0	0	14	30	16	14	16	0.41	0.68	0.47	0.41	0.47			
ISV19ME003	10	7	17	10	7	17	10	7	17	2	2	2	2	2	0	0	0	0	0	12	16	9	12	9	0.35	0.36	0.26	0.35	0.26			
ISV19ME004	12	12	24	12	12	24	12	12	24	2	2	2	2	2	0	0	0	0	0	14	26	14	14	14	0.41	0.59	0.41	0.41	0.41			
ISV19ME005	13	9	22	13	9	22	13	9	22	2	2	2	2	2	0	0	0	0	0	15	20	11	15	11	0.44	0.45	0.32	0.44	0.32			
ISV19ME006	14	14	28	14	14	28	14	14	28	2	2	2	2	2	0	0	0	0	0	16	30	16	16	16	0.47	0.68	0.47	0.47	0.47			
ISV19ME010	10	11	21	10	11	21	10	11	21	2	2	2	2	2	0	0	0	0	0	12	24	13	12	13	0.35	0.55	0.38	0.35	0.38			
ISV19ME011	11	14	25	11	14	25	11	14	25	2	2	2	2	2	0	0	0	0	0	13	30	16	13	16	0.38	0.68	0.47	0.38	0.47			
ISV19ME012	14	9	23	14	9	23	14	9	23	2	2	2	2	2	0	0	0	0	0	16	20	11	16	11	0.47	0.45	0.32	0.47	0.32			
ISV19ME013	12	8	20	12	8	20	12	8	20	2	2	2	2	2	0	0	0	0	0	14	18	10	14	10	0.41	0.41	0.29	0.41	0.29			
ISV19ME014	10	16	26	10	16	26	10	16	26	2	2	2	2	2	0	0	0	0	0	12	34	18	12	18	0.35	0.77	0.53	0.35	0.53			
ISV19ME015	13	7	20	13	7	20	13	7	20	2	2	2	2	2	0	0	0	0	0	15	16	9	15	9	0.44	0.36	0.26	0.44	0.26			
ISV20ME400	12	14	26	12	14	26	12	14	26	2	2	2	2	2	0	0	0	0	0	14	30	16	14	16	0.41	0.68	0.47	0.41	0.47			
ISV20ME401	10	15	25	10	15	25	10	15	25	2	2	2	2	2	0	0	0	0	0	12	32	17	12	17	0.35	0.73	0.50	0.35	0.50			
ISV20ME402	11	9	20	11	9	20	11	9	20	2	2	2	2	2	0	0	0	0	0	13	20	11	13	11	0.38	0.45	0.32	0.38	0.32			
ISV20ME403	12	16	28	12	16	28	12	16	28	2	2	2	2	2	0	0	0	0	0	14	34	18	14	18	0.41	0.77	0.53	0.41	0.53			
TOTAL	277	269	546	277	269	546	277	269	546	46	46	46	46	46	0	0	0	0	0	323	584	315	323	315	9.50	13.27	9.26	9.50	9.26			
No of Students	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23			
Average	12.04	11.7	23.739	12	11.7	23.74	12.04	11.7	23.739	2	2	2	2	2	0	0	0	0	0	14.04	25.39	13.70	14.04	13.70	41.30	57.71	40.28	41.30	40.28			

  
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**DEPARTMENT OF ME**

<b>SUBJECT</b>	<b>MATERIAL SCIENCE</b>	<b>SUBJECT CODE</b>	<b>18ME34</b>
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**COURSE OUTCOME**

<b>CO1</b>	<b>Understand</b> the fundamentals of structure and behavior of engineering materials for various mechanical applications
<b>CO2</b>	<b>Analyze</b> the various modes of failure of engineering material
<b>CO3</b>	<b>Assess</b> the structural and physical properties of engineering materials through various heat treatment process
<b>CO4</b>	<b>Perceive</b> various properties of composites, its application and to provide an alternate to conventional structural materials
<b>CO5</b>	<b>Propose</b> alternate materials which are sustainable, economic and enable new product generation

**PROGRAM OUTCOMES**

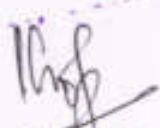
- PO1** Engineering knowledge: An ability to apply knowledge of mathematics (including probability, statistics and discrete mathematics), science, and engineering for solving Engineering problems and Knowledge.
- PO2** Problem analysis: Identify, formulate, research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
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- PO12** Life-long learning: A recognition of the need for, and an ability to engage in, to resolve contemporary issues and acquire lifelong learning.



COLLEGE	SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY											
FACULTY NAME	RAVI KUMAR K R											
BRANCH	ME			ACADEMIC YEAR				2020-21				
COURSE	B.E.	SEMESTER		III	SECTION							
SUBJECT	MATERIAL SCIENCE						SUBJECT CODE		18ME34			
<b>CO &amp; PO MAPPING</b>												
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3											
CO2		2										
CO3	3											
CO4		2										
CO5	3											
AVERAGE	3	2										
OVERALL MAPPING OF SUBJECT												2.5

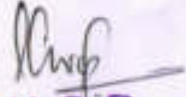
### CO AND PO ATTAINMENT

	CO%	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	57.70	1.73											
CO2	60.10		1.20										
CO3	45.81	1.37											
CO4	58.34		1.16										
CO5	44.53	1.33											
AVERAGE	53.29	1.47	1.18										
FINAL ATTAINMENT LEVEL													1.32

  
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Academic year	2020-21			SEM III			Total strength			Subject					MATERIAL SCIENCE					Subject Code					18ME34									
SEM III	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	CO1-12	CO2	CO3	CO4	CO5	TOTAL	CO1-34	CO2-44	CO3-34	CO4-34	CO5-34	CO1	CO2	CO3	CO4	CO5				
15V17ME005	7	1	8	11	1	12	5	5	10	2	2	2	2	2	4.8	4.8	4.8	4.8	4.8	24	13.8	18.8	7.8	11.8	11.8	0.41	0.43	0.25	0.35	0.35				
15V18ME003	13	10	23	19	6	25	13	11	24	2	2	2	2	2	8	8	8	8	8	40	23	39	16	23	21	0.68	0.89	0.47	0.68	0.62				
15V18ME008	16	7	23	18	9	27	16	9	25	2	2	2	2	2	5.4	5.4	5.4	5.4	5.4	27	23.4	32.4	16.4	23.4	16.4	0.69	0.74	0.48	0.69	0.48				
15V18ME010	18	4	22	11	15	26	13	11	24	2	2	2	2	2	4.8	4.8	4.8	4.8	4.8	24	24.8	21.8	21.8	19.8	17.8	0.73	0.50	0.64	0.58	0.52				
15V18ME011	12	9	21	17	6	23	12	13	25	2	2	2	2	2	2.8	2.8	2.8	2.8	2.8	14	16.8	30.8	10.8	16.8	17.8	0.49	0.70	0.32	0.49	0.52				
15V18ME012	16	5	21	10	17	27	16	8	24	2	2	2	2	2	3.6	3.6	3.6	3.6	3.6	18	21.6	20.6	22.6	21.6	13.6	0.64	0.47	0.66	0.64	0.40				
15V18ME013	13	14	27	11	15	26	18	7	25	2	2	2	2	2	4.2	4.2	4.2	4.2	4.2	21	19.2	31.2	21.2	24.2	13.2	0.56	0.71	0.62	0.71	0.39				
15V19ME001	12	14	26	13	14	27	19	9	28	2	2	2	2	2	3.2	3.2	3.2	3.2	3.2	16	17.2	32.2	19.2	24.2	14.2	0.51	0.73	0.56	0.71	0.42				
15V19ME002	19	6	25	15	14	29	19	8	27	2	2	2	2	2	4.8	4.8	4.8	4.8	4.8	24	25.8	27.8	20.8	25.8	14.8	0.76	0.63	0.61	0.76	0.44				
15V19ME003	12	6	18	19	1	20	13	9	22	2	2	2	2	2	0	0	0	0	0	0	14	27	3	15	11	0.41	0.61	0.09	0.44	0.32				
15V19ME004	11	9	20	11	13	24	15	10	25	2	2	2	2	2	3.6	3.6	3.6	3.6	3.6	18	16.6	25.6	18.6	20.6	15.6	0.49	0.58	0.55	0.61	0.46				
15V19ME005	17	11	28	14	11	25	13	12	25	2	2	2	2	2	5.4	5.4	5.4	5.4	5.4	27	24.4	32.4	18.4	20.4	19.4	0.72	0.74	0.54	0.60	0.57				
15V19ME006	14	12	26	14	14	28	11	16	27	2	2	2	2	2	5.2	5.2	5.2	5.2	5.2	26	21.2	33.2	21.2	18.2	23.2	0.62	0.75	0.62	0.54	0.68				
15V19ME010	18	0	18	17	2	19	12	11	23	2	2	2	2	2	4.2	4.2	4.2	4.2	4.2	21	24.2	23.2	8.2	18.2	17.2	0.71	0.53	0.24	0.54	0.51				
15V19ME011	12	1	13	12	2	14	10	5	15	2	2	2	2	2	7	7	7	7	7	35	21	22	11	19	14	0.62	0.50	0.32	0.56	0.41				
15V19ME012	9	5	14	8	7	15	12	4	16	2	2	2	2	2	2.4	2.4	2.4	2.4	2.4	12	13.4	17.4	11.4	16.4	8.4	0.39	0.40	0.34	0.48	0.25				
15V19ME013	8	9	17	10	10	20	19	4	23	2	2	2	2	2	2.4	2.4	2.4	2.4	2.4	12	12.4	23.4	14.4	23.4	8.4	0.36	0.53	0.42	0.69	0.25				
15V19ME014	9	2	11	9	3	12	5	8	13	2	2	2	2	2	5.2	5.2	5.2	5.2	5.2	26	16.2	18.2	10.2	12.2	15.2	0.48	0.41	0.30	0.36	0.45				
15V19ME015	12	4	16	13	1	14	13	2	15	2	2	2	2	2	6.4	6.4	6.4	6.4	6.4	32	20.4	25.4	9.4	21.4	10.4	0.60	0.58	0.28	0.63	0.31				
15V20ME400	18	8	26	15	12	27	18	10	28	2	2	2	2	2	2.4	2.4	2.4	2.4	2.4	12	22.4	27.4	16.4	22.4	14.4	0.66	0.62	0.48	0.66	0.42				
15V20ME401	12	12	24	10	15	25	12	14	26	2	2	2	2	2	3	3	3	3	3	15	17	27	20	17	19	0.50	0.61	0.59	0.50	0.56				
15V20ME402	11	8	19	11	10	21	11	9	20	2	2	2	2	2	4.2	4.2	4.2	4.2	4.2	21	17.2	25.2	16.2	17.2	15.2	0.51	0.57	0.48	0.51	0.45				
15V20ME403	19	8	27	12	17	29	18	10	28	2	2	2	2	2	4.2	4.2	4.2	4.2	4.2	21	25.2	26.2	23.2	24.2	16.2	0.74	0.60	0.68	0.71	0.48				
TOTAL	308	165	473	300	215	515	313	205	518	46	46	46	46	46	97.2	97.2	97.2	97.2	97.2	486	451.2	608.2	358.2	456.2	348.2	13.27	13.82	10.54	13.42	10.24				
No of Students	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23			
Average	13.39	7.17	20.565	13	9.348	22.39	13.61	8.91	22.5	2	2	2	2	2	4.23	4.23	4.23	4.23	4.23	21.13	19.62	26.44	15.57	19.83	15.14	57.70	60.10	45.81	58.34	44.53				

  
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**DEPARTMENT OF ME**

<b>SUBJECT</b>	<b>Metal Cutting and Forming</b>	<b>SUBJECT CODE</b>	<b>18ME35A</b>
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**COURSE OUTCOME**

<b>CO1</b>	Apply the knowledge of metal cutting using basic machine tools fro the production of components
<b>CO2</b>	Choose the right cutting material and fluids and also evaluate cutting tool parameters for different machining operations
<b>CO3</b>	Evaluate tool life on the basis of wear and wear rate and also discuss the economics of machining process of various cutting tool
<b>CO4</b>	Apply the knowledge of sheet metal forming for production of components
<b>CO5</b>	Design different sheet metal dies for simple sheet metal components

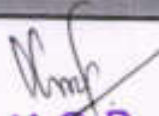
**PROGRAM OUTCOMES**

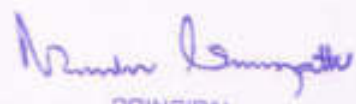
- P01** Engineering knowledge: An ability to apply knowledge of mathematics (including probability, statistics and discrete mathematics), science, and engineering for solving Engineering problems and Knowledge.
- P02** Problem analysis: Identify, formulate, research literature, and analyze complex engineering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

COLLEGE	SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY											
FACULTY NAME	J C Thippeswamy											
BRANCH	ME			ACADEMIC YEAR				2020-21				
COURSE	B.E	SEMESTER		III	SECTION							
SUBJECT	Metal Cutting and Forming						SUBJECT CODE		18ME35A			
CO & PO MAPPING												
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	2	1									
CO2	3	2										
CO3	3	2	1									
CO4	3	2										
CO5	3	2										
AVERAGE	3	2	1									
OVERALL MAPPING OF SUBJECT												2.0

#### CO AND PO ATTAINMENT

	CO%	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	39.26	1.17	0.78	0.39									
CO2	54.35	1.63	1.08										
CO3	36.96	1.10	0.78	0.39									
CO4	39.26	1.17	0.78										
CO5	36.96	1.10	0.78										
AVERAGE	41.35	1.23	0.84	0.39									
FINAL ATTAINMENT LEVEL													0.82

  
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SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY

SIRA ROAD, TUMKUR- 572 106.

**DEPARTMENT OF ME**

<b>SUBJECT</b>	<b>COMPUTER AIDED MACHINE DRAWING</b>	<b>SUBJECT CODE</b>	<b>18ME36A</b>
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**COURSE OUTCOME**

<b>CO1</b>	To read and understand the orthographic and sectional views of various machine components
<b>CO2</b>	To develop 3D models using modeling software's
<b>CO3</b>	To produce 2D drawings by manual drafting and by using drafting packages
<b>CO4</b>	To construct assembly drawings, part drawings and Bill of materials as per BIS Conventions
<b>CO5</b>	To apply limits fits and tolerance to all assemblies and part drawings

**PROGRAM OUTCOMES**

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

**H.O.D**

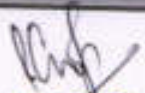
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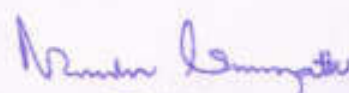
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COLLEGE	SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY											
FACULTY NAME	PRASHANTH S											
BRANCH	ME			ACADEMIC YEAR				2020-21				
COURSE	B.E	SEMESTER		III	SECTION							
SUBJECT	COMPUTER AIDED MACHINE DRAWING						SUBJECT CODE		18ME36A			
CO & PO MAPPING												
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2											
CO2	2				2							
CO3	2				2							
CO4	2		2		2							
CO5	2											2
AVERAGE	2		2		2							2
OVERALL MAPPING OF SUBJECT												2.0

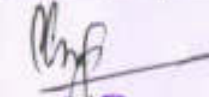
### CO AND PO ATTAINMENT

	CO%	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	42.84	0.85											
CO2	62.45	1.24				1.24							
CO3	43.86	0.87				0.87							
CO4	42.84	0.85		0.85		0.85							
CO5	43.86	0.87											0.87
AVERAGE	47.17	0.93		0.85		0.98							0.87
FINAL ATTAINMENT LEVEL													0.90

  
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Academic year	2020-21			SEM III			Total strength			23			Subject			Computer aided machine drawing			Subject Code			18ME36A									
SEM:III	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	CO1-12	CO2	CO3	CO4	CO5	CO1-34	CO2-44	CO3-34	CO4-34	CO5-34	CO1	CO2	CO3	CO4	CO5		
ISV17ME005	12	8	20	12	8	20	12	8	20	2	2	2	2	2	0	0	0	0	0	14	22	10	14	10	0.41	0.50	0.29	0.41	0.29		
ISV18ME003	10	16	26	10	16	26	10	16	26	2	2	2	2	2	0	0	0	0	0	12	28	18	12	18	0.35	0.64	0.53	0.35	0.53		
ISV18ME008	11	14	25	11	14	25	11	14	25	2	2	2	2	2	0	0	0	0	0	13	27	16	13	16	0.38	0.61	0.47	0.38	0.47		
ISV18ME010	13	13	26	13	13	26	13	13	26	2	2	2	2	2	0	0	0	0	0	15	28	15	15	15	0.44	0.64	0.44	0.44	0.44		
ISV18ME011	14	11	25	14	11	25	14	11	25	2	2	2	2	2	0	0	0	0	0	16	27	13	16	13	0.47	0.61	0.38	0.47	0.38		
ISV18ME012	15	11	26	15	11	26	15	11	26	2	2	2	2	2	0	0	0	0	0	17	28	13	17	13	0.50	0.64	0.38	0.50	0.38		
ISV18ME013	10	19	29	10	19	29	10	19	29	2	2	2	2	2	0	0	0	0	0	12	31	21	12	21	0.35	0.70	0.62	0.35	0.62		
ISV19ME001	14	14	28	14	14	28	14	14	28	2	2	2	2	2	0	0	0	0	0	14	30	18	14	18	0.41	0.68	0.53	0.41	0.53		
ISV19ME002	11	7	18	11	7	18	11	7	18	2	2	2	2	2	0	0	0	0	0	16	30	16	16	16	0.47	0.68	0.47	0.47	0.47		
ISV19ME003	13	13	26	13	13	26	13	13	26	2	2	2	2	2	0	0	0	0	0	13	20	9	13	9	0.38	0.45	0.26	0.38	0.26		
ISV19ME004	15	12	27	15	12	27	15	12	27	2	2	2	2	2	0	0	0	0	0	15	28	15	15	15	0.44	0.64	0.44	0.44	0.44		
ISV19ME005	15	12	27	15	12	27	15	12	27	2	2	2	2	2	0	0	0	0	0	17	29	14	17	14	0.50	0.66	0.41	0.50	0.41		
ISV19ME006	15	12	27	15	12	27	15	12	27	2	2	2	2	2	0	0	0	0	0	17	29	14	17	14	0.50	0.66	0.41	0.50	0.41		
ISV19ME010	13	9	22	13	9	22	13	9	22	2	2	2	2	2	0	0	0	0	0	15	24	11	15	11	0.44	0.55	0.32	0.44	0.32		
ISV19ME011	11	14	25	11	14	25	11	14	25	2	2	2	2	2	0	0	0	0	0	13	27	16	13	16	0.38	0.61	0.47	0.38	0.47		
ISV19ME012	14	6	20	14	6	20	14	6	20	2	2	2	2	2	0	0	0	0	0	16	22	8	16	8	0.47	0.50	0.24	0.47	0.24		
ISV19ME013	12	15	27	12	15	27	12	15	27	2	2	2	2	2	0	0	0	0	0	14	29	17	14	17	0.41	0.66	0.50	0.41	0.50		
ISV19ME014	10	16	26	10	16	26	10	16	26	2	2	2	2	2	0	0	0	0	0	12	28	18	12	18	0.35	0.64	0.53	0.35	0.53		
ISV19ME015	10	16	26	10	16	26	10	16	26	2	2	2	2	2	0	0	0	0	0	12	28	18	12	18	0.35	0.64	0.53	0.35	0.53		
ISV20ME400	15	13	28	15	13	28	15	13	28	2	2	2	2	2	0	0	0	0	0	17	30	15	17	15	0.50	0.68	0.44	0.50	0.44		
ISV20ME401	12	15	27	12	15	27	12	15	27	2	2	2	2	2	0	0	0	0	0	14	29	17	14	17	0.41	0.66	0.50	0.41	0.50		
ISV20ME402	13	13	26	13	13	26	13	13	26	2	2	2	2	2	0	0	0	0	0	15	28	15	15	15	0.44	0.64	0.44	0.44	0.44		
ISV20ME403	14	14	28	14	14	28	14	14	28	2	2	2	2	2	0	0	0	0	0	16	30	16	16	16	0.47	0.68	0.47	0.47	0.47		
TOTAL	289	297	586	289	297	586	289	297	586	46	46	46	46	46	0	0	0	0	0	335	632	343	335	343	9.85	14.36	10.09	9.85	10.09		
No of Students	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23		
Average	12.57	12.9	25.478	12.6	12.91	25.48	12.57	12.9	25.478	2	2	2	2	2	0	0	0	0	0	14.57	27.48	14.91	14.57	14.91	42.84	62.45	43.86	42.84	43.86		

  
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**DEPARTMENT OF ME**

<b>SUBJECT</b>	Management and Economics	<b>SUBJECT CODE</b>	18ME51
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**COURSE OUTCOME**

<b>CO1</b>	Explain the development of management and the role it plays at different levels in an organization
<b>CO2</b>	Comprehend the process and role of effective planning,organizing and staffing for the development of an organization
<b>CO3</b>	Understand the necessity of good leadership,communication and co-ordination for establishing effective control in an organization
<b>CO4</b>	Understand engineering economics demand supply and its importance in economic decision making and problem solving
<b>CO5</b>	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						2020-21				
COURSE	B.E	SEMESTER	V	SECTION								
SUBJECT	Management and Economics						SUBJECT CODE		18ME51			
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	3									1	1	
OVERALL MAPPING OF SUBJECT												1.66

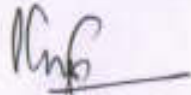
### CO AND PO ATTAINMENT

	CO%	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	44.77										0.44		
CO2	66.16										0.66	0.66	
CO3	46.73	1.40											
CO4	44.77	1.34											
CO5	46.73	1.40											
AVERAGE	49.83	1.38									0.55	0.66	
FINAL ATTAINMENT LEVEL													0.86

  
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Academic year	2020-21		SEM V		Total strength	9	Subject	MANAGEMENT AND ECONOMICS		Subject Code	18ME51																		
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=12	CO2	CO3	CO4	CO5	CO1=34	CO2=44	CO3=34	CO4=34	CO5=34	CO1	CO2	CO3	CO4	CO5
ISV18ME002	14	15	29	14	15	29	14	15	29	2	2	2	2	2	0	0	0	0	0	16	31	17	16	17	0.47	0.70	0.50	0.47	0.50
ISV18ME004	13	16	29	13	16	29	13	16	29	2	2	2	2	2	0	0	0	0	0	15	31	18	15	18	0.44	0.70	0.53	0.44	0.53
ISV18ME005	12	14	26	12	14	26	12	14	26	2	2	2	2	2	0	0	0	0	0	14	28	16	14	16	0.41	0.64	0.47	0.41	0.47
ISV18ME009	15	9	24	15	9	24	15	9	24	2	2	2	2	2	0	0	0	0	0	17	26	11	17	11	0.50	0.59	0.32	0.50	0.32
ISV19ME400	14	14	28	14	14	28	14	14	28	2	2	2	2	2	0	0	0	0	0	16	30	16	16	16	0.47	0.68	0.47	0.47	0.47
ISV19ME401	12	17	29	12	17	29	12	17	29	2	2	2	2	2	0	0	0	0	0	14	31	19	14	19	0.41	0.70	0.56	0.41	0.56
ISV19ME402	13	15	28	13	15	28	13	15	28	2	2	2	2	2	0	0	0	0	0	15	30	17	15	17	0.44	0.68	0.50	0.44	0.50
ISV19ME403	12	15	27	12	15	27	12	15	27	2	2	2	2	2	0	0	0	0	0	14	29	17	14	17	0.41	0.66	0.50	0.41	0.50
ISV19ME404	14	10	24	14	10	24	14	10	24	2	2	2	2	2	0	0	0	0	0	16	26	12	16	12	0.47	0.59	0.35	0.47	0.35
TOTAL	119	125	244	119	125	244	119	125	244	18	18	18	18	18	0	0	0	0	0	137	262	143	137	143	4.03	5.95	4.21	4.03	4.21
No of students	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
AVERAGE	13.22	13.9	27.111	13.2	13.89	27.11	13.22	13.9	27.111	2	2	2	2	2	0	0	0	0	0	15.22	29.11	15.89	15.22	15.89	44.77	66.16	46.73	44.77	46.73

  
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SIRA ROAD, TUMKUR- 572 106.

DEPARTMENT OF ME

SUBJECT	DESIGN OF MACHINE ELEMENT-I	SUBJECT CODE	18ME52
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**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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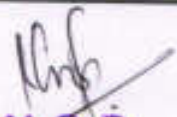
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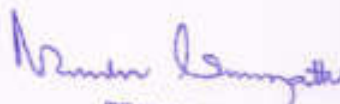
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COLLEGE	SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY											
FACULTY NAME	K P Chandraiah											
BRANCH	ME	ACADEMIC YEAR				2020-21						
COURSE	B.E	SEMESTER	V	SECTION								
SUBJECT	DESIGN OF MACHINE ELEMENT-I				SUBJECT CODE		18ME52					
<b>CO &amp; PO MAPPING</b>												
	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	41.83	1.25	1.25										
CO2	69.44	2.08	2.08										
CO3	41.83	1.25	0.83	1.25			0.41						
CO4	41.83	1.25	1.25										
CO5	53.92	1.07	1.07	1.07			0.53						
AVERAGE	49.77	1.38	1.29	1.16			0.47						
FINAL ATTAINMENT LEVEL													1.07

  
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Academic year	2020-21						Total strength			20	Subject					DESIGN OF MACHINE ELEMENTS - I					Subject Code					18ME52				
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=12	CO2	CO3	CO4	CO5	CO1=34	CO2=44	CO3=34	CO4=34	CO5=34	CO1	CO2	CO3	CO4	CO5	
1SV18ME002	15	14	29	15	14	29	15	14	29	2	2	2	2	2	0	0	0	0	0	17	31	16	17	16	0.50	0.70	0.50	0.50	0.47	
1SV18ME004	12	17	29	12	17	29	12	17	29	2	2	2	2	2	0	0	0	0	0	14	31	19	14	19	0.41	0.70	0.41	0.41	0.56	
1SV18ME005	11	17	28	11	17	28	11	17	28	2	2	2	2	2	0	0	0	0	0	13	30	19	13	19	0.38	0.68	0.38	0.38	0.56	
1SV18ME009	10	18	28	10	18	28	10	18	28	2	2	2	2	2	0	0	0	0	0	12	30	20	12	20	0.35	0.68	0.35	0.35	0.59	
1SV19ME400	11	17	28	11	17	28	11	17	28	2	2	2	2	2	0	0	0	0	0	13	30	19	13	19	0.38	0.68	0.38	0.38	0.56	
1SV19ME401	12	18	30	12	18	30	12	18	30	2	2	2	2	2	0	0	0	0	0	14	32	20	14	20	0.41	0.73	0.41	0.41	0.59	
1SV19ME402	13	16	29	13	16	29	13	16	29	2	2	2	2	2	0	0	0	0	0	15	31	18	15	18	0.44	0.70	0.44	0.44	0.53	
1SV19ME403	12	16	28	12	16	28	12	16	28	2	2	2	2	2	0	0	0	0	0	14	30	18	14	18	0.41	0.68	0.41	0.41	0.53	
1SV19ME404	14	14	28	14	14	28	14	14	28	2	2	2	2	2	0	0	0	0	0	16	30	16	16	16	0.47	0.68	0.47	0.47	0.47	
TOTAL	110	147	257	110	147	257	110	147	257	18	18	18	18	18	0	0	0	0	0	128	275	165	128	165	3.76	6.25	3.76	3.76	4.85	
No of students	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	
AVERAGE	12.22	16.3	28.556	12.2	16.33	28.56	12.22	16.3	28.556	2	2	2	2	2	0	0	0	0	0	14.22	30.56	18.33	14.22	18.33	41.83	69.44	41.83	41.83	53.92	

*[Signature]*

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*[Signature]*

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**DEPARTMENT OF MECHANICAL ENGINEERING**

<b>SUBJECT</b>	<b>Dynamics of Machines</b>	<b>SUBJECT CODE</b>	<b>18ME53</b>
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**COURSE OUTCOME**

<b>CO1</b>	Apply the concepts of static and dynamic balancing of reciprocating and rotating masses on automobiles
<b>CO2</b>	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
<b>CO3</b>	Analyze the stability of governors , gyroscopic effects on ships, plane disc, aero planes , automobiles
<b>CO4</b>	Distinguish different types of vibratory systems
<b>CO5</b>	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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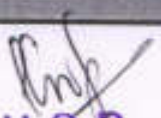
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COLLEGE	SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY											
FACULTY NAME	MALTESHA P J											
BRANCH	ME			ACADEMIC YEAR				2020-21				
COURSE	B.E	SEMESTER			V	SECTION						
SUBJECT	Dynamics of Machines						SUBJECT CODE		18ME53			
CO & PO 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

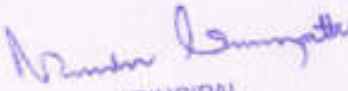
	CO%	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	44.77	0.89											
CO2	63.38		0.63	1.90									
CO3	43.14		0.86	0.86									
CO4	44.77	0.89	0.44	0.89									
CO5	43.14		0.86	1.29									0.86
AVERAGE	47.84	0.89	0.69	1.23									0.86
FINAL ATTAINMENT LEVEL													0.91

  
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Academic year	2020-21			SEM V			Total strength			9					Subject					DYNAMICS OF MACHINES					Subject Code					18ME53				
SEM: V	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=12	CO2	CO3	CO4	CO5	CO1=34	CO2=44	CO3=34	CO4=34	CO5=34	CO1	CO2	CO3	CO4	CO5					
ISV18ME002	14	15	29	14	15	29	14	15	29	2	2	2	2	2	0	0	0	0	0	16	31	17	16	17	0.47	0.70	0.50	0.47	0.50					
ISV18ME004	15	13	28	15	13	28	15	13	28	2	2	2	2	2	0	0	0	0	0	17	30	15	17	15	0.50	0.68	0.44	0.50	0.44					
ISV18ME005	13	10	23	13	10	23	13	10	23	2	2	2	2	2	0	0	0	0	0	15	25	12	15	12	0.44	0.57	0.35	0.44	0.35					
ISV18ME009	12	12	24	12	12	24	12	12	24	2	2	2	2	2	0	0	0	0	0	14	26	14	14	14	0.41	0.59	0.41	0.41	0.41					
ISV19ME400	11	14	25	11	14	25	11	14	25	2	2	2	2	2	0	0	0	0	0	13	27	16	13	16	0.38	0.61	0.47	0.38	0.47					
ISV19ME401	15	13	28	15	13	28	15	13	28	2	2	2	2	2	0	0	0	0	0	17	30	15	17	15	0.50	0.68	0.44	0.50	0.44					
ISV19ME402	14	13	27	14	13	27	14	13	27	2	2	2	2	2	0	0	0	0	0	16	29	15	16	15	0.47	0.66	0.44	0.47	0.44					
ISV19ME403	13	12	25	13	12	25	13	12	25	2	2	2	2	2	0	0	0	0	0	15	27	14	15	14	0.44	0.61	0.41	0.44	0.41					
ISV19ME404	12	12	24	12	12	24	12	12	24	2	2	2	2	2	0	0	0	0	0	14	26	14	14	14	0.41	0.59	0.41	0.41	0.41					
TOTAL	119	114	233	119	114	233	119	114	233	18	18	18	18	18	0	0	0	0	0	137	251	132	137	132	4.03	5.70	3.88	4.03	3.88					
No of students	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9					
AVERAGE	13.22	12.7	25.889	13.2	12.67	25.89	13.22	12.7	25.889	2	2	2	2	2	0	0	0	0	0	15.22	27.89	14.67	15.22	14.67	44.77	63.38	43.14	44.77	43.14					

  
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DEPARTMENT OF ME

SUBJECT	TURBO MACHINES	SUBJECT CODE	18ME54
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**COURSE OUTCOME**

CO1	Model studies and thermodynamics analysis of turbo machines.
CO2	Analyze the energy transfer in Turbo machine with degree of reaction and utilization factor.
CO3	Classify, analyze and understand various type of steam turbine.
CO4	Classify, analyze and understand various type of hydraulic turbine.
CO5	Understand the concept of radial power absorbing machine and the problems involved during its operation.

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

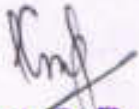
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COLLEGE	SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY											
FACULTY NAME	D S Ravikumar											
BRANCH	ME			ACADEMIC YEAR				2020-21				
COURSE	B.E	SEMESTER			V	SECTION						
SUBJECT	TURBO MACHINES						SUBJECT CODE		18ME54			
CO & PO MAPPING												
	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

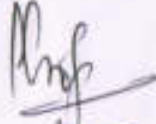
### CO AND PO ATTAINMENT

	CO%	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	44.12	1.32	1.32	1.32									
CO2	65.66	1.96	1.96	1.96									
CO3	46.73	1.40	1.40	1.40									
CO4	44.12	1.32	1.32	1.32									
CO5	46.73	1.40	1.40	1.40									
AVERAGE	49.47	1.48	1.48	1.48									
FINAL ATTAINMENT LEVEL													1.48

  
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Academic year	2020-21		SEM V			Total strength			9	Subject					TURBOMACHINES					Subject Code					18ME54				
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=12	CO2	CO3	CO4	CO5	CO1=34	CO2=44	CO3=34	CO4=34	CO5=34	CO1	CO2	CO3	CO4	CO5
1SV18ME002	15	15	30	15	15	30	15	15	30	2	2	2	2	2	0	0	0	0	0	17	32	17	17	17	0.50	0.73	0.50	0.50	0.50
1SV18ME004	14	14	28	14	14	28	14	14	28	2	2	2	2	2	0	0	0	0	0	16	30	16	16	16	0.47	0.68	0.47	0.47	0.47
1SV18ME005	13	12	25	13	12	25	13	12	25	2	2	2	2	2	0	0	0	0	0	15	27	14	15	14	0.44	0.61	0.41	0.44	0.41
1SV18ME009	12	13	25	12	13	25	12	13	25	2	2	2	2	2	0	0	0	0	0	14	27	15	14	15	0.41	0.61	0.44	0.41	0.44
1SV19ME400	11	14	25	11	14	25	11	14	25	2	2	2	2	2	0	0	0	0	0	13	27	16	13	16	0.38	0.61	0.47	0.38	0.47
1SV19ME401	12	17	29	12	17	29	12	17	29	2	2	2	2	2	0	0	0	0	0	14	31	19	14	19	0.41	0.70	0.56	0.41	0.56
1SV19ME402	12	14	26	12	14	26	12	14	26	2	2	2	2	2	0	0	0	0	0	14	28	16	14	16	0.41	0.64	0.47	0.41	0.47
1SV19ME403	15	13	28	15	13	28	15	13	28	2	2	2	2	2	0	0	0	0	0	17	30	15	17	15	0.50	0.68	0.44	0.50	0.44
1SV19ME404	13	13	26	13	13	26	13	13	26	2	2	2	2	2	0	0	0	0	0	15	28	15	15	15	0.44	0.64	0.44	0.44	0.44
TOTAL	117	125	242	117	125	242	117	125	242	18	18	18	18	18	0	0	0	0	0	135	260	143	135	143	3.97	5.91	4.21	3.97	4.21
No of students	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
AVERAGE	13	13.9	26.889	13	13.89	26.89	13	13.9	26.889	2	2	2	2	2	0	0	0	0	0	15	28.89	15.89	15.00	15.89	44.12	65.66	46.73	44.12	46.73

  
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SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY

SIRA ROAD, TUMKUR- 572 106.

DEPARTMENT OF ME

SUBJECT	FLUID POWER ENGINEERING	SUBJECT CODE	18ME55
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**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.

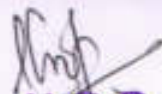
H.O.D  
Dept. of Mechanical  
S.I.E.T. TUMKUR -A

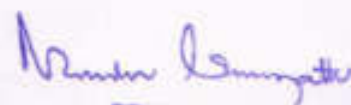
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COLLEGE	SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY											
FACULTY NAME	Santhosh T U											
BRANCH	ME	ACADEMIC YEAR						2020-21				
COURSE	B.E	SEMESTER	V	SECTION								
SUBJECT	FLUID POWER ENGINEERING						SUBJECT CODE	18ME55				
CO & PO MAPPING												
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3											
CO2	2	2										
CO3	2											
CO4	1		2		2							
CO5	2		3		2							1
AVERAGE	2	2	2.5		2							1
OVERALL MAPPING OF SUBJECT												1.9

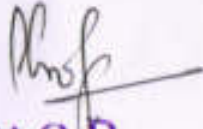
#### CO AND PO ATTAINMENT

	CO%	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	44.44	1.33											
CO2	59.85	1.19	1.19										
CO3	38.89	0.77											
CO4	44.44	0.44		0.88		0.88							
CO5	72.22	1.44		2.16		1.44							0.72
AVERAGE	51.96	1.03	1.19	1.52		1.16							0.72
FINAL ATTAINMENT LEVEL													1.12

  
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Academic year	2020-21			SEM V			Total strength			9	Subject					FLUID POWER ENGINEERING					Subject Code					18ME55				
SEM-V	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=12	CO2	CO3	CO4	CO5	CO1=34	CO2=44	CO3=34	CO4=34	CO5=34	CO1	CO2	CO3	CO4	CO5	
1SV18ME002	14	15	29	14	15	29	14	15	29	2	2	2	2	2	0	0	0	0	0	16	31	17	16	17	0.47	0.70	0.50	0.47	0.35	
1SV18ME004	15	10	25	15	10	25	15	10	25	2	2	2	2	2	0	0	0	0	0	17	27	12	17	12	0.50	0.61	0.35	0.50	0.41	
1SV18ME005	12	12	24	12	12	24	12	12	24	2	2	2	2	2	0	0	0	0	0	14	26	14	14	14	0.41	0.59	0.41	0.41	0.29	
1SV18ME009	11	8	19	11	8	19	11	8	19	2	2	2	2	2	0	0	0	0	0	13	21	10	13	10	0.38	0.48	0.29	0.38	0.38	
1SV19ME400	13	11	24	13	11	24	13	11	24	2	2	2	2	2	0	0	0	0	0	15	26	13	15	13	0.44	0.59	0.38	0.44	0.50	
1SV19ME401	12	15	27	12	15	27	12	15	27	2	2	2	2	2	0	0	0	0	0	14	29	17	14	17	0.41	0.66	0.50	0.41	0.32	
1SV19ME402	15	9	24	15	9	24	15	9	24	2	2	2	2	2	0	0	0	0	0	17	26	11	17	11	0.50	0.59	0.32	0.50	0.41	
1SV19ME403	14	12	26	14	12	26	14	12	26	2	2	2	2	2	0	0	0	0	0	16	28	14	16	14	0.47	0.64	0.41	0.47	0.32	
1SV19ME404	12	9	21	12	9	21	12	9	21	2	2	2	2	2	0	0	0	0	0	14	23	11	14	11	0.41	0.52	0.32	0.41	0.35	
TOTAL	118	101	219	118	101	219	118	101	219	18	18	18	18	18	0	0	0	0	0	136	237	119	136	119	4	5.39	3.5	4	6.5	
No of students	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	
AVERAGE	13.11	11.2	24.333	13.1	11.22	24.33	13.11	11.2	24.333	2	2	2	2	2	0	0	0	0	0	15.11	26.33	13.22	15.11	13.22	44.44	59.85	38.89	44.44	72.22	

  
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DEPARTMENT OF ME

SUBJECT	OPERATION MANAGEMENT	SUBJECT CODE	18ME56
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**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**

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

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COLLEGE	SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY											
FACULTY NAME	RAVI KUMAR K R											
BRANCH	ME			ACADEMIC YEAR				2020-21				
COURSE	B.E	SEMESTER			V	SECTION						
SUBJECT	OPERATION MANAGEMENT						SUBJECT CODE		18ME56			
CO & PO MAPPING												
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	3										
CO2	3	3	2									
CO3	3	3										
CO4	3	3										
CO5	3	3										
AVERAGE	3	3	2									
OVERALL MAPPING OF SUBJECT												2.67

### CO AND PO ATTAINMENT

	CO%	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	44.44	1.33	1.33										
CO2	62.37	1.87	1.87	1.24									
CO3	42.16	1.26	1.26										
CO4	42.16	1.26	1.26										
CO5	42.16	1.26	1.26										
AVERAGE	46.65	1.39	1.39	1.24									
FINAL ATTAINMENT LEVEL													1.34

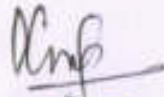
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Academic year	2020-21			SEM V	Total strength					9	Subject					OPERATION MANAGEMENT	Subject Code					18ME56							
SEM-V	IA TEST 1(30M)			IA TEST 2(30M)			IA TEST 3(30M)			ASSIGNMENT / QUIZ(10 M)					SEE MARKS(60)					Total Cos ATTAINMENT					% of individual CO				
USN	CO1	CO2	TOTAL	CO2	CO3	TOTAL	CO4	CO5	TOTAL	CO1	CO2	CO3	CO4	CO5	CO1-12	CO2	CO3	CO4	CO5	CO1-34	CO2-44	CO3-34	CO4-34	CO5-34	CO1	CO2	CO3	CO4	CO5
15V18ME002	15	14	29	15	14	29	15	14	29	2	2	2	2	2	0	0	0	0	0	17	31	16	17	16	0.50	0.70	0.47	0.47	0.47
15V18ME004	14	15	29	14	15	29	14	15	29	2	2	2	2	2	0	0	0	0	0	16	31	17	16	17	0.47	0.70	0.50	0.50	0.50
15V18ME005	12	10	22	12	10	22	12	10	22	2	2	2	2	2	0	0	0	0	0	14	24	12	14	12	0.41	0.55	0.35	0.35	0.35
15V18ME009	13	11	24	13	11	24	13	11	24	2	2	2	2	2	0	0	0	0	0	15	26	13	15	13	0.44	0.59	0.38	0.38	0.38
15V19ME400	14	14	28	14	14	28	14	14	28	2	2	2	2	2	0	0	0	0	0	16	30	16	16	16	0.47	0.68	0.47	0.47	0.47
15V19ME401	11	18	29	11	18	29	11	18	29	2	2	2	2	2	0	0	0	0	0	13	31	20	13	20	0.38	0.70	0.59	0.59	0.59
15V19ME402	12	10	22	12	10	22	12	10	22	2	2	2	2	2	0	0	0	0	0	14	24	12	14	12	0.41	0.55	0.35	0.35	0.35
15V19ME403	13	11	24	13	11	24	13	11	24	2	2	2	2	2	0	0	0	0	0	15	26	13	15	13	0.44	0.59	0.38	0.38	0.38
15V19ME404	14	8	22	14	8	22	14	8	22	2	2	2	2	2	0	0	0	0	0	16	24	10	16	10	0.47	0.55	0.29	0.29	0.29
TOTAL	118	111	229	118	111	229	118	111	229	18	18	18	18	18	0	0	0	0	0	136	247	129	136	129	4.00	5.61	3.79	3.79	3.79
No of students	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
AVERAGE	13.11	12.3	25.444	13.1	12.33	25.44	13.11	12.3	25.444	2	2	2	2	2	0	0	0	0	0	15.11	27.44	14.33	15.11	14.33	44.44	62.37	42.16	42.16	42.16

  
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SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY

SIRA ROAD, TUMKUR- 572 106.

DEPARTMENT OF ME

SUBJECT	Energy Engineering	SUBJECT CODE	17ME71
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**COURSE OUTCOME**

CO1	Summarize the basic concepts of thermal energy systems
CO2	Identify renewable energy sources and their utilization
CO3	Understand the basic concepts of solar radiation and analyze the working of solar PV and thermal systems.
CO4	Understand principles of energy conversion from alternate sources including wind, geothermal, ocean, biomass, and biogas.
CO5	Understand the concepts and applications of fuel cells, thermoelectric convertor and MHD generator. Identify methods of energy storage for specific applications.

**PROGRAM OUTCOMES**

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

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Dept. of Mechanical  
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Principal  
S.I.E.T., TUMKUR.

COLLEGE	SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY											
FACULTY NAME	D S Ravikumar											
BRANCH	ME	ACADEMIC YEAR						2020-21				
COURSE	B.E	SEMESTER	VII	SECTION								
SUBJECT	Energy Engineering						SUBJECT CODE		17ME71			
CO & PO MAPPING												
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3											
CO2	3						2					
CO3	3						2					
CO4	3						1					
CO5	3						2					
AVERAGE	3						1.75					
OVERALL MAPPING OF SUBJECT												2.37

#### CO AND PO ATTAINMENT

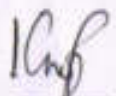
	CO%	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	42.48	1.27											
CO2	67.93	2.03						1.35					
CO3	51.31	1.53						1.02					
CO4	42.48	1.27						0.42					
CO5	51.31	1.53						1.02					
AVERAGE	51.10	1.52						0.95					
FINAL ATTAINMENT LEVEL													1.23

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Academic year	2020-21			SEM VII			Total strength			9	Subject ENERGY ENGINEERING					Subject Code 17ME71													
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	CO1-12	CO2	CO3	CO4	CO5	CO1-34	CO2-44	CO3-34	CO4-34	CO5-34	CO1	CO2	CO3	CO4	CO5
ISV15ME012	11	13	24	11	13	24	11	13	24	2	2	2	2	2	0	0	0	0	0	13	26	15	13	15	0.38	0.59	0.44	0.38	0.44
ISV17ME003	14	13	27	14	13	27	14	13	27	2	2	2	2	2	0	0	0	0	0	16	29	15	16	15	0.47	0.66	0.44	0.47	0.44
ISV17ME006	15	14	29	15	14	29	15	14	29	2	2	2	2	2	0	0	0	0	0	17	31	16	17	16	0.50	0.70	0.47	0.50	0.47
ISV17ME007	10	20	30	10	20	30	10	20	30	2	2	2	2	2	0	0	0	0	0	12	32	22	12	22	0.35	0.73	0.65	0.35	0.65
ISV17ME008	11	15	26	11	15	26	11	15	26	2	2	2	2	2	0	0	0	0	0	13	28	17	13	17	0.38	0.64	0.50	0.38	0.50
ISV17ME011	12	14	26	12	14	26	12	14	26	2	2	2	2	2	0	0	0	0	0	14	28	16	14	16	0.41	0.64	0.47	0.41	0.47
ISV17ME013	13	17	30	13	17	30	13	17	30	2	2	2	2	2	0	0	0	0	0	15	32	19	15	19	0.44	0.73	0.56	0.44	0.56
ISV17ME014	11	18	29	11	18	29	11	18	29	2	2	2	2	2	0	0	0	0	0	13	31	20	13	20	0.38	0.70	0.59	0.38	0.59
ISV17ME015	15	15	30	15	15	30	15	15	30	2	2	2	2	2	0	0	0	0	0	17	32	17	17	17	0.50	0.73	0.50	0.50	0.50
TOTAL	112	139	251	112	139	251	112	139	251	18	18	18	18	18	0	0	0	0	0	130	269	157	130	157	3.82	6.11	4.62	3.82	4.62
No of students	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
AVERAGE	12.44	15.4	27.889	12.4	15.44	27.89	12.44	15.4	27.889	2	2	2	2	2	0	0	0	0	0	14.44	29.89	17.44	14.44	17.44	42.48	67.93	51.31	42.48	51.31

  
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DEPARTMENT OF ME

SUBJECT	Fluid Power Systems	SUBJECT CODE	17ME72
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**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**

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

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COLLEGE	SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY											
FACULTY NAME	Santhosh T U											
BRANCH	ME			ACADEMIC YEAR				2020-21				
COURSE	B.E	SEMESTER			VII	SECTION						
SUBJECT	Fluid Power Systems						SUBJECT CODE		17ME72			
CO & PO MAPPING												
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3											
CO2	2	2										
CO3	2											
CO4	1		2		2							
CO5	2		3		2							1
AVERAGE	2	2	2.5		2							1
OVERALL MAPPING OF SUBJECT												1.9

### CO AND PO ATTAINMENT

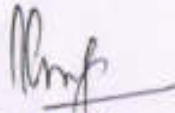
	CO%	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	39.54	1.18											
CO2	55.56	1.11	1.11										
CO3	38.24	0.76											
CO4	39.54	0.39		0.79		0.79							
CO5	38.24	0.76		1.14		0.76							0.38
AVERAGE	42.22	0.84	1.11	0.96		0.77							0.38
FINAL ATTAINMENT LEVEL													0.81

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Academic year	2020-21			SEM VII			Total strength			9	Subject					FLUID POWER SYSTEMS					Subject Code					18ME72				
SEM:III	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	CO1-12	CO2	CO3	CO4	CO5	CO1-34	CO2-44	CO3-34	CO4-34	CO5-34	CO1	CO2	CO3	CO4	CO5	
ISV15ME012	9	11	20	9	11	20	9	11	20	2	2	2	2	2	0	0	0	0	0	11	22	13	11	13	0.32	0.50	0.38	0.32	0.38	
ISV17ME003	10	10	20	10	10	20	10	10	20	2	2	2	2	2	0	0	0	0	0	12	22	12	12	12	0.35	0.50	0.35	0.35	0.35	
ISV17ME006	11	12	23	11	12	23	11	12	23	2	2	2	2	2	0	0	0	0	0	13	25	14	13	14	0.38	0.57	0.41	0.38	0.41	
ISV17ME007	12	12	24	12	12	24	12	12	24	2	2	2	2	2	0	0	0	0	0	14	26	14	14	14	0.41	0.59	0.41	0.41	0.41	
ISV17ME008	14	9	23	14	9	23	14	9	23	2	2	2	2	2	0	0	0	0	0	16	25	11	16	11	0.47	0.57	0.32	0.47	0.32	
ISV17ME011	15	5	20	15	5	20	15	5	20	2	2	2	2	2	0	0	0	0	0	17	22	7	17	7	0.50	0.50	0.21	0.50	0.21	
ISV17ME013	13	13	26	13	13	26	13	13	26	2	2	2	2	2	0	0	0	0	0	15	28	15	15	15	0.44	0.64	0.44	0.44	0.44	
ISV17ME014	10	15	25	10	15	25	10	15	25	2	2	2	2	2	0	0	0	0	0	12	27	17	12	17	0.35	0.61	0.50	0.35	0.50	
ISV17ME015	9	12	21	9	12	21	9	12	21	2	2	2	2	2	0	0	0	0	0	11	23	14	11	14	0.32	0.52	0.41	0.32	0.41	
TOTAL	103	99	202	103	99	202	103	99	202	18	18	18	18	18	0	0	0	0	0	121	220	117	121	117	3.56	5.00	3.44	3.56	3.44	
No of students	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	
AVERAGE	11.44	11	22.444	11.4	11	22.44	11.44	11	22.444	2	2	2	2	2	0	0	0	0	0	13.44	24.44	13.00	13.44	13.00	39.54	55.56	38.24	39.54	38.24	

  
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**DEPARTMENT OF ME**

<b>SUBJECT</b>	<b>Control Engineering</b>	<b>SUBJECT CODE</b>	<b>17ME73</b>
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**COURSE OUTCOME**

<b>CO1</b>	Identify the control system and its types , control actions	
<b>CO2</b>	Construct the system governing equations for physical models(Electrical, Thermal, Mechanical, ElectroMechanical)	
<b>CO3</b>	Analyze the gain of the system using block diagram and signal flow graph	
<b>CO4</b>	Evaluate the stability of Control system in complex domain and frequency domain	
<b>CO5</b>	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.

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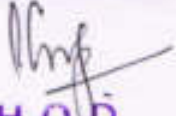
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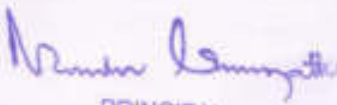


COLLEGE	SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY											
FACULTY NAME	B H Vasudevamurthy											
BRANCH	ME		ACADEMIC YEAR				2020-21					
COURSE	B.E	SEMESTER		VII	SECTION							
SUBJECT	Control Engineering						SUBJECT CODE		17ME73			
<b>CO &amp; PO MAPPING</b>												
	PO1	PO2	PO3	PO4	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

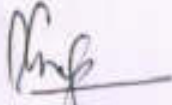
#### CO AND PO ATTAINMENT

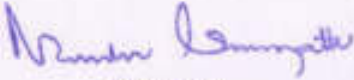
	CO%	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	34.64	0.69											0.34
CO2	50.00	1	1	0.5									
CO3	35.95	0.71	0.71										
CO4	34.64	0.69	0.69	0.34									0.34
CO5	35.95	0.35	0.71	0.35									0.35
AVERAGE	38.23	0.68	0.77	0.39									0.34
FINAL ATTAINMENT LEVEL													0.54

  
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Academic year	2020-21		SEM VII			Total strength			9	Subject CONTROL ENGINEERING					Subject Code 17ME73														
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=12	CO2	CO3	CO4	CO5	CO1=34	CO2=44	CO3=34	CO4=34	CO5=34	CO1	CO2	CO3	CO4	CO5
ISV15ME012	12	6	18	12	6	18	12	6	18	2	2	2	2	2	0	0	0	0	0	14	20	8	14	8	0.41	0.45	0.24	0.41	0.24
ISV17ME003	10	10	20	10	10	20	10	10	20	2	2	2	2	2	0	0	0	0	0	12	22	12	12	12	0.35	0.50	0.35	0.35	0.35
ISV17ME006	13	6	19	13	6	19	13	6	19	2	2	2	2	2	0	0	0	0	0	15	21	8	15	8	0.44	0.48	0.24	0.44	0.24
ISV17ME007	9	15	24	9	15	24	9	15	24	2	2	2	2	2	0	0	0	0	0	11	26	17	11	17	0.32	0.59	0.50	0.32	0.50
ISV17ME008	8	13	21	8	13	21	8	13	21	2	2	2	2	2	0	0	0	0	0	10	23	15	10	15	0.29	0.52	0.44	0.29	0.44
ISV17ME011	10	3	13	10	3	13	10	3	13	2	2	2	2	2	0	0	0	0	0	12	15	5	12	5	0.35	0.34	0.15	0.35	0.15
ISV17ME013	5	19	24	5	19	24	5	19	24	2	2	2	2	2	0	0	0	0	0	7	26	21	7	21	0.21	0.59	0.62	0.21	0.62
ISV17ME014	10	12	22	10	12	22	10	12	22	2	2	2	2	2	0	0	0	0	0	12	24	14	12	14	0.35	0.55	0.41	0.35	0.41
ISV17ME015	11	8	19	11	8	19	11	8	19	2	2	2	2	2	0	0	0	0	0	13	21	10	13	10	0.38	0.48	0.29	0.38	0.29
TOTAL	88	92	180	88	92	180	88	92	180	18	18	18	18	18	0	0	0	0	0	106	198	110	106	110	3.12	4.50	3.24	3.12	3.24
No of students	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
AVERAGE	9.778	10.2	20	9.78	10.22	20	9.778	10.2	20	2	2	2	2	2	0	0	0	0	0	11.78	22.00	12.22	11.78	12.22	34.64	50.00	35.95	34.64	35.95

  
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**DEPARTMENT OF ME**

<b>SUBJECT</b>	<b>TRIBOLOGY</b>	<b>SUBJECT CODE</b>	<b>17ME742</b>
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**COURSE OUTCOME**

<b>CO1</b>	Understand the fundamentals of tribology and associated parameters
<b>CO2</b>	Apply concepts of tribology for the performance analysis and design of components experiencing relative motion
<b>CO3</b>	Analyse the requirements and design hydrodynamic journal and plane slider bearings for a given application
<b>CO4</b>	Select proper bearing materials and lubricants for a given tribological application
<b>CO5</b>	Apply the principles of surface engineering for different applications of tribology

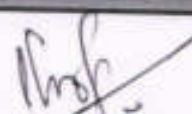
**PROGRAM OUTCOMES**

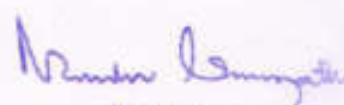
- PO1** Engineering knowledge: An ability to apply knowledge of mathematics (including probability, statistics and discrete mathematics), science, and engineering for solving Engineering problems and Knowledge.
- PO2** Problem analysis: Identify, formulate, research literature, and analyze complex engineering 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.
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- PO10** Communication: Communicate effectively on complex engineering activities with the engineering community and with the society.
- PO11** Project management and finance: An ability to use the modern engineering tools, techniques, skills and management principles to do work as a member and leader in a team, to manage projects in multidisciplinary environments.
- PO12** Life-long learning: A recognition of the need for, and an ability to engage in, to resolve contemporary issues and acquire lifelong learning.

COLLEGE	SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY											
FACULTY NAME	K P Chandraiah											
BRANCH	ME			ACADEMIC YEAR				2020-21				
COURSE	B.E	SEMESTER			VII	SECTION						
SUBJECT	TRIBOLOGY						SUBJECT CODE		17ME742			
<b>CO &amp; PO MAPPING</b>												
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3											
CO2	3	2										
CO3	3	2	3									
CO4	3	2										
CO5	3	2										
AVERAGE	3	2	3									
OVERALL MAPPING OF SUBJECT												2.0

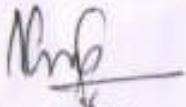
**CO AND PO ATTAINMENT**

	CO%	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	37.25	1.11											
CO2	68.94	2.06	1.37										
CO3	57.84	1.73	1.15	1.73									
CO4	37.25	1.11	0.75										
CO5	57.84	1.73	1.37										
AVERAGE	51.82	1.54	1.16	1.73									
FINAL ATTAINMENT LEVEL													1.47

  
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Academic year	2020-21		SEM VII			Total strength			9	Subject					TRIBOLOGY					Subject Code					18ME742				
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	CO1-12	CO2	CO3	CO4	CO5	CO1-34	CO2-44	CO3-34	CO4-34	CO5-34	CO1	CO2	CO3	CO4	CO5
1SV15ME012	11	17	28	11	17	28	11	17	28	2	2	2	2	2	0	0	0	0	0	13	30	19	13	19	0.38	0.68	0.56	0.38	0.56
1SV17ME003	8	20	28	8	20	28	8	20	28	2	2	2	2	2	0	0	0	0	0	10	30	22	10	22	0.29	0.68	0.65	0.29	0.65
1SV17ME006	9	20	29	9	20	29	9	20	29	2	2	2	2	2	0	0	0	0	0	11	31	22	11	22	0.32	0.70	0.65	0.32	0.65
1SV17ME007	12	17	29	12	17	29	12	17	29	2	2	2	2	2	0	0	0	0	0	14	31	19	14	19	0.41	0.70	0.56	0.41	0.56
1SV17ME008	11	17	28	11	17	28	11	17	28	2	2	2	2	2	0	0	0	0	0	13	30	19	13	19	0.38	0.68	0.56	0.38	0.56
1SV17ME011	10	17	27	10	17	27	10	17	27	2	2	2	2	2	0	0	0	0	0	12	29	19	12	19	0.35	0.66	0.56	0.35	0.56
1SV17ME013	13	16	29	13	16	29	13	16	29	2	2	2	2	2	0	0	0	0	0	15	31	18	15	18	0.44	0.70	0.53	0.44	0.53
1SV17ME014	8	20	28	8	20	28	8	20	28	2	2	2	2	2	0	0	0	0	0	10	30	22	10	22	0.29	0.68	0.65	0.29	0.65
1SV17ME015	14	15	29	14	15	29	14	15	29	2	2	2	2	2	0	0	0	0	0	16	31	17	16	17	0.47	0.70	0.50	0.47	0.50
TOTAL	96	159	255	96	159	255	96	159	255	18	18	18	18	18	0	0	0	0	0	114	273	177	114	177	3.35	6.20	5.21	3.35	5.21
No of students	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
AVERAGE	10.67	17.7	28.333	10.7	17.67	28.33	10.67	17.7	28.333	2	2	2	2	2	0	0	0	0	0	12.67	30.33	19.67	12.67	19.67	37.25	68.94	57.84	37.25	57.84

  
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DEPARTMENT OF ME

SUBJECT	MECHATRONICS	SUBJECT CODE	17ME753
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**COURSE OUTCOME**

CO1	Illustrate various components of Mechatronics systems.
CO2	Assess various control systems used in automation
CO3	Design and conduct experiments to evaluate the performance of a mechatronics system or component with respect to specifications, as well as to analyse and interpret data.
CO4	Apply the principles of Mechatronics design to product design.
CO5	Function effectively as members of multidisciplinary teams.

**PROGRAM OUTCOMES**

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

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COLLEGE	SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY											
FACULTY NAME	Ravi Kumar K R											
BRANCH	ME	ACADEMIC YEAR					2020-21					
COURSE	B.E	SEMESTER	VII	SECTION								
SUBJECT	MECHATRONICS					SUBJECT CODE		17ME753				
CO & PO MAPPING												
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3											
CO2	3	3										
CO3	3	3										
CO4												
CO5		3										
AVERAGE	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	40.85	1.22											
CO2	61.62	1.84	1.84										
CO3	44.77	1.34	1.34										
CO4	40.85												
CO5	44.77		1.34										
AVERAGE	46.57	1.46	1.50										
FINAL ATTAINMENT LEVEL													1.48

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Academic year	2020-21	SEM	VII	Total strength	9	Subject	MECHATRONICS	Subject Code	17ME753																				
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=12	CO2	CO3	CO4	CO5	CO1=34	CO2=44	CO3=34	CO4=34	CO5=34	CO1	CO2	CO3	CO4	CO5
ISV15ME012	10	13	23	10	13	23	10	13	23	2	2	2	2	2	0	0	0	0	0	12	25	15	12	15	0.35	0.57	0.44	0.35	0.44
ISV17ME003	9	13	22	9	13	22	9	13	22	2	2	2	2	2	0	0	0	0	0	11	24	15	11	15	0.32	0.55	0.44	0.32	0.44
ISV17ME006	12	16	28	12	16	28	12	16	28	2	2	2	2	2	0	0	0	0	0	14	30	18	14	18	0.41	0.68	0.53	0.41	0.53
ISV17ME007	13	16	29	13	16	29	13	16	29	2	2	2	2	2	0	0	0	0	0	15	31	18	15	18	0.44	0.70	0.53	0.44	0.53
ISV17ME008	11	15	26	11	15	26	11	15	26	2	2	2	2	2	0	0	0	0	0	13	28	17	13	17	0.38	0.64	0.50	0.38	0.50
ISV17ME011	10	10	20	10	10	20	10	10	20	2	2	2	2	2	0	0	0	0	0	12	22	12	12	12	0.35	0.50	0.35	0.35	0.35
ISV17ME013	14	14	28	14	14	28	14	14	28	2	2	2	2	2	0	0	0	0	0	16	30	16	16	16	0.47	0.68	0.47	0.47	0.47
ISV17ME014	15	9	24	15	9	24	15	9	24	2	2	2	2	2	0	0	0	0	0	17	26	11	17	11	0.50	0.59	0.32	0.50	0.32
ISV17ME015	13	13	26	13	13	26	13	13	26	2	2	2	2	2	0	0	0	0	0	15	28	15	15	15	0.44	0.64	0.44	0.44	0.44
TOTAL	107	119	226	107	119	226	107	119	226	18	18	18	18	18	0	0	0	0	0	125	244	137	125	137	3.68	5.55	4.03	3.68	4.03
No of students	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
AVERAGE	11.89	13.2	25.111	11.9	13.22	25.11	11.89	13.2	25.111	2	2	2	2	2	0	0	0	0	0	13.89	27.11	15.22	13.89	15.22	40.85	61.62	44.77	40.85	44.77

  
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**SHRIDEVI INSTITUTE OF ENGINEERING AND  
TECHNOLOGY  
DEPARTMENT OF MECHANICAL ENGINEERING**

**EVEN SEM**

**2020-21**

**DEPARTMENT OF ME**

<b>SUBJECT</b>	<b>FLUID MECHANICS</b>	<b>SUBJECT CODE</b>	<b>18ME43</b>
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**COURSE OUTCOME**

<b>CO1</b>	Identify and calculate the key fluid properties used in the analysis of fluid behavior. Explain the principles of pressure, buoyancy and floatation
<b>CO2</b>	Apply the knowledge of fluid statics, kinematics and dynamics while addressing problems mechanical and chemical engineering.
<b>CO3</b>	Describe the principles of fluid kinematics and dynamics.
<b>CO4</b>	Explain the concept of boundary layer in fluid flow and apply dimensional analysis to for dimensionless numbers in terms of input output variables.
<b>CO5</b>	Illustrate and explain the basic concept of compressible flow and CFD

**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	K P CHANDRAIAH											
BRANCH	ME			ACADEMIC YEAR				2020-21				
COURSE	B.E	SEMESTER			IV	SECTION						
SUBJECT	FLUID MECHANICS						SUBJECT CODE		18ME43			
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	61.25	1.83	1.83	1.83									
CO2	74.31	2.22	2.22	2.22									
CO3	60.49	1.81	1.81	1.81									
CO4	64.32	1.92	1.92	1.92									
CO5	57.54	1.72	1.72	1.72									
AVERAGE	63.58	1.9	1.9	1.9									
FINAL ATTAINMENT LEVEL													1.9

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*Principal Signature*

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Academic year	2020-21			SEM IV			Total strength			23					Subject					FLUID MECHANICS					Subject Code					18ME43				
SEM:IV	IA TEST 1(30M)			IA TEST 2(30M)			IA TEST 3(30M)			ASSIGNMENT / QUIZ(20 M)					SEE MARKS(60)					Total Cos ATTAINMENT					% of individual CO									
USN	CO1	CO2	TOTAL	CO1	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				
ISV17ME005	13	16	29	12	16	28	12	15	27	4	4	4	4	4	3.2	3.2	3.2	3.2	3.2	16	20.2	35.2	23.2	19.2	22.2	0.59	0.80	0.68	0.56	0.65				
ISV18ME003	13	15	28	11	18	29	17	13	30	4	4	4	4	4	6.2	6.2	6.2	6.2	6.2	31	23.2	36.2	28.2	27.2	23.2	0.68	0.82	0.83	0.80	0.68				
ISV18ME008	12	15	27	10	20	30	11	19	30	4	4	4	4	4	5.2	5.2	5.2	5.2	5.2	26	21.2	34.2	29.2	20.2	28.2	0.62	0.78	0.86	0.59	0.83				
ISV18ME010	11	19	30	12	15	27	19	11	30	4	4	4	4	4	4.6	4.6	4.6	4.6	4.6	23	19.6	39.6	23.6	27.6	19.6	0.58	0.90	0.69	0.81	0.58				
ISV18ME011	18	12	30	14	13	27	11	16	27	4	4	4	4	4	3.6	3.6	3.6	3.6	3.6	18	25.6	33.6	20.6	18.6	23.6	0.75	0.76	0.61	0.55	0.69				
ISV18ME012	9	20	29	11	19	30	18	10	28	4	4	4	4	4	4.2	4.2	4.2	4.2	4.2	21	17.2	39.2	27.2	26.2	18.2	0.51	0.89	0.80	0.77	0.54				
ISV18ME013	16	14	30	12	16	28	16	13	29	4	4	4	4	4	4.6	4.6	4.6	4.6	4.6	23	24.6	34.6	24.6	24.6	21.6	0.72	0.79	0.72	0.72	0.64				
ISV19ME001	12	18	30	18	10	28	12	14	26	4	4	4	4	4	5.6	5.6	5.6	5.6	5.6	28	21.6	45.6	19.6	21.6	23.6	0.64	1.04	0.58	0.64	0.69				
ISV19ME002	11	15	26	13	17	30	12	16	28	4	4	4	4	4	5.2	5.2	5.2	5.2	5.2	26	20.2	37.2	26.2	21.2	25.2	0.59	0.85	0.77	0.62	0.74				
ISV19ME003	0	0	0	0	0	0	17	-17	0	4	4	4	4	4	0	0	0	0	0	0	4	4	4	21	-13	0.12	0.09	0.12	0.62	-0.38				
ISV19ME004	16	12	28	13	13	26	11	19	30	4	4	4	4	4	3.8	3.8	3.8	3.8	3.8	19	23.8	32.8	20.8	18.8	26.8	0.70	0.75	0.61	0.55	0.79				
ISV19ME005	12	18	30	19	7	26	14	14	28	4	4	4	4	4	4.6	4.6	4.6	4.6	4.6	23	20.6	45.6	15.6	22.6	22.6	0.61	1.04	0.46	0.66	0.66				
ISV19ME006	14	16	30	13	16	29	18	10	28	4	4	4	4	4	5.8	5.8	5.8	5.8	5.8	29	23.8	38.8	25.8	27.8	19.8	0.70	0.88	0.76	0.82	0.58				
ISV19ME010	17	9	26	13	9	22	10	18	28	4	4	4	4	4	4.4	4.4	4.4	4.4	4.4	22	25.4	30.4	17.4	18.4	26.4	0.75	0.69	0.51	0.54	0.78				
ISV19ME011	13	11	24	12	13	25	11	15	26	4	4	4	4	4	5	5	5	5	5	25	22	32	22	20	24	0.65	0.73	0.65	0.59	0.71				
ISV19ME012	0	0	0	0	0	0	12	-12	0	4	4	4	4	4	0	0	0	0	0	0	4	4	4	16	-8	0.12	0.09	0.12	0.47	-0.24				
ISV19ME013	13	15	28	12	18	30	16	10	26	4	4	4	4	4	3.6	3.6	3.6	3.6	3.6	18	20.6	34.6	25.6	23.6	17.6	0.61	0.79	0.75	0.69	0.52				
ISV19ME014	12	12	24	18	7	25	11	15	26	4	4	4	4	4	4.6	4.6	4.6	4.6	4.6	23	20.6	38.6	15.6	19.6	23.6	0.61	0.88	0.46	0.58	0.69				
ISV19ME015	18	9	27	10	18	28	19	7	26	4	4	4	4	4	4.6	4.6	4.6	4.6	4.6	23	26.6	27.6	26.6	27.6	15.6	0.78	0.63	0.78	0.81	0.46				
ISV20ME400	19	7	26	18	10	28	10	20	30	4	4	4	4	4	4	4	4	4	4	20	27	33	18	18	28	0.79	0.75	0.53	0.53	0.82				
ISV20ME401	11	8	19	19	2	21	11	9	20	4	4	4	4	4	4	4	4	4	4	20	19	35	10	19	17	0.56	0.80	0.29	0.56	0.50				
ISV20ME402	19	3	22	13	10	23	12	12	24	4	4	4	4	4	4.2	4.2	4.2	4.2	4.2	21	27.2	24.2	18.2	20.2	20.2	0.80	0.55	0.54	0.59	0.59				
ISV20ME403	12	16	28	11	18	29	15	15	30	4	4	4	4	4	5	5	5	5	5	25	21	36	27	24	24	0.62	0.82	0.79	0.71	0.71				
TOTAL	291	280	571	284	285	569	315	262	577	92	92	92	92	92	96	96	96	96	96	480	479	752	473	503	450	14.09	17.09	13.91	14.79	13.24				
No of Storage	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23			
Average	12.65	12.2	24.83	12.3	12.39	24.74	13.7	11.4	25.09	4	4	4	4	4	4.17	4.17	4.17	4.17	4.17	20.87	20.83	32.70	20.57	21.87	19.57	61.25	74.31	60.49	64.32	57.54				

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