LESSON PLAN.

Academic Session :- 2022-23

Subject :-MACHINE DESIGN , Subject code - Th-2

Total Period :- 60 per Sem

Teacher :- SUBHASINI MUDULI (PTGF, MECHANICAL ENGINEERING DEPT.)

Theory :- 4p/week

SEMESTER:-5TH

SL NO	MONTH	Week	DATE	UNIT NO/PERIOD ALLOTED	Syllabus to be covered	Syllabus actually covered	Short fall	Signature
1	SEPTEMBER	4TH	19/09/22	1.1/1p	1.0 Introduction: Introduction to Machine Design and Classify it.	COVERED	NILL	
2		4TH	20-09-22	1.2/1p	Different mechanical engineering materials used in design with their uses and their mechanical and physical properties.	COVERED	NILL	
3		4TH	21-09-22	1.2/1p	Different mechanical engineering materials used in design with their uses and their mechanical and physical properties.	COVERED	NILL	
4		4TH	22-09-22	1.3/1P	Define working stress, yield stress, ultimate stress & factor of safety and stress –strain curve for M.S & C.I.	COVERED	NILL	
5		5TH	26-09-22	1.3/1P	ultimate stress & factor of safety	COVERED	NILL	
6		5TH	27-09-22	1.3/1P	stress –strain curve for M.S & C.I.	COVERED	NILL	
7		5TH	28-09-22	1.4/1P	Modes of Failure (By elastic deflection	COVERED	NILL	
8		5TH	29-09-22	1.4/1P	general yielding & fracture)	COVERED	NILL	
9	OCTOBER	2ND	10-10-22	1.5/1P	State the factors governing the design of machine elements.	COVERED	NILL	
10		2ND	11-10-22	1.5/1P	State the factors governing the design of machine elements.	COVERED	NILL	
11		2ND	12-10-22	1.6/1P	Describe design procedure.	COVERED	NILL	
12		2ND	13-10-22	1.6/1P	Describe design procedure.	COVERED	NILL	
13		3RD	17-10-22	2.1 /1P	2.0 Design of fastening elements: Joints and their classification.	COVERED	NILL	
14		3RD	18-10-22	2.2/1P	State types of welded joints	COVERED	NILL	
15		3RD	19-10-22	2.3/1P	State advantages of welded joints over other joints.	COVERED	NILL	
16		3RD	20-10-22	2.4/1P	Design of welded joints for eccentric loads.	COVERED	NILL	
17		4TH	25-10-22	2.5/1P	State types of riveted joints and types of rivets.	COVERED	NILL	
18		4TH	26-10-22	2.6/1P	Describe failure of riveted joint	COVERED	NILL	
19		4TH	27-10-22	2.7/1P	Determine strength & efficiency of riveted joints	COVERED	NILL	
20		5TH	31-10-22	2.8/1P	Design riveted joints for pressure vessel.	COVERED	NILL	
21		1ST	1-11-22	2.9/1P	Joints.	COVERED	NILL	
22		1ST	2-11-22	2.9/1P	Joints.	COVERED	NILL	

23		1ST	3-11-22	2.9/1P	Joints.	COVERED	NILL	
24		1ST	4-11-22	2.9/1P	Joints.	COVERED	NILL	
25		2ND	7-11-22	3.1/1P	of shafts.	COVERED	NILL	
26		2ND	8-11-22	3.2/1P	State materials for shafts.	COVERED	NILL	
27		2ND	9-11-22	3.3/1P	Design solid & hollow shafts to transmit a given power at given rpm based on a) Strength: (i) Shear stress, (ii) Combined bending tension; b) Rigidity: (i) Angle of twist, (ii) Deflection, (iii) Modulus of rigidity	COVERED	NILL	
28	**NOVEMBER**	2ND	10-11-22	3.3/1P	Design solid & hollow shafts to transmit a given power at given rpm based on a) Strength: (i) Shear stress, (ii) Combined	COVERED	NILL	
29		3RD	14-11-22	3.4/1P	State standard size of shaft as per I.S.	COVERED	NILL	
30		3RD	15-11-22	3.5/1P	material of keys.	COVERED	NILL	
31		3RD	16-11-22	3.6/1P	Describe failure of key, effect of key way.	COVERED	NILL	
32		3RD	17-11-22	3.7/1P	failure against shear & crushing.	COVERED	NILL	
33		4TH	21-11-22	3.8/1P	empirical relation for given diameter of shaft.	COVERED	NILL	
34		4TH	22-11-22	3.9/1P	key, taper key as per I.S.	COVERED	NILL	
35		4TH	23-11-22	3.11/1P	Solve numerical on Design of Shaft and keys	COVERED	NILL	
36		4TH	24-11-22	3.11/1P	Solve numerical on Design of Shaft and keys	COVERED	NILL	
37		5TH	28-11-22	4.1/1P	Coupling	COVERED	NILL	
38		5TH	29-11-22	4.2/1P	Requirements of a good shaft coupling	COVERED	NILL	
39		5TH	30-11-22	4.3/1P	Types of Coupling.	COVERED	NILL	
40		1ST	1-12-22	4.4/1P	Design of Sleeve or Muff-Coupling	COVERED	NILL	
41		2ND	5-12-22	4.4/1P	Design of Sleeve or Muff-Coupling			
42		2ND	6-12-22	4.5/1P	Design of Clamp or Compression Coupling			
43		2ND	7-12-22	4.5/1P	Design of Clamp or Compression Coupling			
44		3RD	8-12-22	4.6/1P	Solve simple numerical on above			
45		3RD	12-12-22	4.6/1P	Solve simple numerical on above			
46	**DECEMBER**	3RD	13-12-22	4.6/1P	Solve simple numerical on above			
47		3RD	14-12-22	4.6/1P	Solve simple numerical on above			
48		3RD	15-12-22	4.6/1P	Solve simple numerical on above			
49		4TH	19-12-22	5.1/1P	Materials used for helical spring			
50		4TH	20-12-22	5.1/1P	Materials used for helical spring			
51		4TH	21-12-22	5.2/1P	Standard size spring wire. (SWG).			
52		4TH	22-12-22	5.3/1P	Terms used in compression spring.			
53		5TH	26-12-22	5.4/1P	Stress in helical spring of a circular wire			
54		5TH	27-12-22	5.4/1P	Stress in helical spring of a circular wire			
55		5TH	28-12-22	5.5/1P	Deflection of helical spring of circular wire.			
56		5TH	29-12-22	5.5/1P	Deflection of helical spring of circular wire.			
57		1ST	2-01-23	5.6/1P	Surge in spring			
58		1ST	3-01-23	5.7/1P	helical compression spring			

59	JANUARY	1ST	4-01-23	5.7/1P	Numerical solving			
60		1ST	5-01-23	5.7/1P	Numerical solving			
61		2ND	9-01-23	5.7/1P	Numerical solving			
62		2ND	10-01-23	5.7/1P	Numerical solving			
63		2ND	11-01-23	5.7/1P	Numerical solving			
64		2ND	12-01-23	5.7/1P	Numerical solving			

Subhasini Muduli