ACADEMIC SESSION : 2023-24 (WINTER-2023)				
DESCIPLINE: MECHANICAL ENGINEERING		SEMESTER: 5TH	NAME OF THE TEACHING FACULTY: DIBYAJYOTI PANDA	
SUBJECT: DESIGN OF MACHINE ELEMENTS			SEMESTER FROM DATE 01/08/2023 TO 30/11/2023	
SL NO	DATE	CHAPTER	THEORY TOPIC NAME	NO OF PERIODS
1	01-08-2023	Introduction	Introduction to Machine Design and Classify it	1
2	03-08-2023 & 04-08-2023		Different mechanical engineering materials used in design with their uses and their mechanical and physical properties.	2
3	07-08-2023 & 08-08-2023		Working stress, yield stress, ultimate stress & factor of safety and stress –strain curve for M.S & C.I.	2
4	10-08-2023 & 11-08-2023		Modes of Failure (By elastic deflection, general yielding & fracture)	2
5	14-08-2023 & 17-08-2023		Factors governing the design of machine elements	2
6	18-08-2023 & 21-08-2023		Describe design procedure	2
7	22-08-2023 & 24-08-2023	Design of fastening elements	Joints and their classification	2
8	25-08-2023		Types of welded joints	1
9	28-08-2023		Advantages of welded joints over other joints	1
10	29-08-2023 & 31-08-2023		Design of welded joints for eccentric loads	2
11	01-09-2023 & 04-09-2023		Types of riveted joints and types of rivets.	2
12	05-09-2023		Failure of riveted joints	1
13	07-09-2023		Strength & efficiency of riveted joints	1
14	08-09-2023		Riveted joints for pressure vessel.	1
15	11-09-2023 & 12-09-2023		Numerical on Welded Joint and Riveted Joints	2
16	14-09-2023	Design of shafts and Keys	Function of shafts, materials for shafts	1
17	15-09-2023 & 18-09-2023		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	2
18	21-09-2023		Standard size of shaft as per I.S	1
19	22-09-2023		Function of keys, types of keys & material of keys	1

20	25-09-2023 & 26-09-2023	Design of shafts and Keys	Failure of key, effect of key way	2
21	28-09-2023 & 03-10-2023		Design rectangular sunk key considering its failure against shear & crushing	2
22	05-10-2023 & 06-10-2023		Design rectangular sunk key by using empirical relation for given diameter of shaft.	2
23	09-10-2023		Specification of parallel key, gib-head key, taper key as perI.S.	1
24	10-10-2023, 12-10-2023 & 13-10-2023		Numerical on Design of Shaft and keys	3
25	16-10-2023 & 17 -10-2023	Design of Coupling	Design of Shaft Coupling	2
26	19-10-2023		Requirements of a good shaft coupling	1
27	31-10-2023 & 02-11-2023		Types of Coupling	2
28	03-11-2023 & 06-11-2023		Design of Sleeve or Muff-Coupling	2
29	07-11-2023 & 09-11-2023		Design of Clamp or Compression Coupling	2
30	10-11-2023 & 13-11-2023		Simple numerical	2
31	16-11-2023	Design a closed coil helical spring	Materials used for helical spring.	1
32	17-11-2023		Standard size spring wire. (SWG)	1
33	20-11-2023 & 21-11-2023		Terms used in compression spring	2
34	23-11-2023		Stress in helical spring of a circular wire	1
35	24-11-2023		Deflection of helical spring of circular wire.	1
36	28-11-2023		Surge in spring	1
37	30-11-2023		Numerical on design of closed coil helical compression spring	1
			TOTAL CLASS	58

31/7/23

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