

LESSON PLAN

Subject Name- Design of Machine Elements	Branch- Production Engineering
Subject Code- BPE05001	Semester- 5th , B.Tech

S/N	Module	Topic(s)	Period/Hours
1.	I	Introduction to Design of Machine Element, Morphology of design process,	1
2.	I	Basic requirements for machine, elements and machines,	2
3.	I	Design procedures,	3
4.	I	Engineering Materials, their properties and Manufacturing considerations in design.	4
5.	II	Design of fastening elements: Riveted joint for pressure vessels & structural joints,	5
6.	II	Design of fastening elements: Riveted joint for pressure vessels & structural joints,	6
7.	II	Design of fastening elements: Riveted joint for pressure vessels & structural joints,	7
8.	II	Design of fastening elements: Riveted joint for pressure vessels & structural joints,	8
9.	II	Design of fastening elements welded joint for pressure vessels & structural joints,	9
10.	II	Design of fastening elements welded joint for pressure vessels & structural joints,	10
11.	II	Design of fastening elements welded joint for pressure vessels & structural joints,	11
12.	II	Design of fastening elements welded joint for pressure vessels & structural joints,	12
13.	II	Design of bolted joint	13
14.	II	Design of bolted joint	14
15.	II	Design of cotter joints.	15
16.	II	Design of cotter joints.	16
17.	II	Design of knuckle joints.	17
18.	II	Design of knuckle joints.	18
19.	III	Design of knuckle joints.	19

S/N	Module	Topic(s)	Period/ Hours
20.	III	Design of knuckle joints.	20
21.	III	Design of shaft, keys and couplings.	21
22.	III	Design of shaft, keys and couplings.	22
23.	III	Design of shaft, keys and couplings.	23
24.	III	Design of shaft, keys and couplings.	24
25.	III	Design of belt drives and pulleys.	25
26.	III	Design of belt drives and pulleys.	26
27.	III	Design of belt drives and pulleys.	27
28.	III	Design of belt drives and pulleys.	28
29.	III	Design of belt drives and pulleys.	29
30.	III	Design of belt drives and pulleys.	30
31.	III	Design of belt drives and pulleys.	31
32.	III	Design of belt drives and pulleys.	32
33.	IV	Design of springs: closed coil helical springs of circular section	33
34.	IV	Design of springs: closed coil helical springs of circular section	34
35.	IV	Design of springs: closed coil helical springs of circular section	35
36.	IV	Design of springs: closed coil helical springs of circular section	36
37.	IV	Design of Leaf springs	37
38.	IV	Design of Leaf springs	38
39.	IV	Theory of failure: Application to practical problems.	39
40.	IV	Theory of failure: Application to practical problems.	40
41.	V	Design of IC engine components: Piston	41
42.	V	Design of IC engine components: Piston cont...	42
43.	V	Design of IC engine components: Piston cont...	43
44.	V	Design of IC engine components: Connecting rod	44
45.	V	Design of IC engine components: Connecting rod cont...	45