

## MECHANICAL ENGINEERING DEPARTMENT

LESSON PLAN	
JHARSUGUDA ENGINEERING SCHOOL, JHARSUGUDA	
Name of the Faculty: <i>B. Kishan, M. Sorcen</i>	Academic Year:
Course No.: Th. <i>1</i>	Course Name: Theory of Machine
Program: Diploma	Branch: MECHANICAL
Year / Sem : II/ IV	Section: <i>M<sub>1</sub>/M<sub>2</sub></i>

Sl. No.	Period /Class	Time (min)	Unit	Topic to be covered	Teaching method
1.	1.	55	1	Simple mechanism , Link ,kinematic chain	Black board
2.	2.	55	1	Mechanism, machine inversion	Black board & smart class
3.	3.	55	1	four bar link mechanism and its inversion	Black board
4.	4.	55	1	Lower pair and higher pair	Black board
5.	5.	55	1	Cam and followers	Black board
6.	6.	55	1	Revision of Unit / Class -1	Black board
7.	7.	55	2	Friction ,Friction between nut and screw for square thread	Black board & smart class
8.	8.	55	2	screw jack	Black board
9.	9.	55	2	Bearing and its classification	Black board
10.	10.	55	2	Description of roller, needle roller & ball bearings	Black board
11.	11.	55	2	Torque transmission in flat pivot bearings	Black board & smart class
12.	12.	55	2	Torque transmission in conical pivot bearings	Black board & smart class
13.	13.	55	2	Flat collar bearing of single type	Black board
14.	14.		2	Flat collar bearing of multiple type	Black board
15.	15.	55	2	Torque transmission for single clutches	Black board & smart class
16.	16.		2	Torque transmission for multiple clutches	Black board
17.	17.	55	2	Working of simple frictional brakes	Black board & smart class
18.	18.	55	2	Working of Absorption type of dynamometer	Black board & smart class
19.	19.		2	Revision of Unit / Class -2	Black board
20.	20.	55	3	Power Transmission , Concept of power transmission	Black board
21.	21.	55		Type of drives, belt, gear and chain drive	Black board & smart class
22.	22.	55	3	Computation of velocity ratio, length of belts (open and cross)with and without slip	Black board
23.	23.	55	3	Ratio of belt tensions, centrifugal tension and initial tension	Black board
24.	24.	55	3	Power transmitted by the belt Determine belt thickness and width for given permissible stress for crossed belt considering centrifugal tension	smart class

25.	25.	55	3	Determine belt thickness and width for given permissible stress for crossed belt considering centrifugal tension	Black board
26.	26.	55	3	V-belts and V-belts pulleys, Concept of crowning of pulleys	Black board & smart class
27.	27.	55	3	Gear drives and its terminology	Black board
28.	28.	55	3	Gear trains, working principle of simple, compound	Black board
29.	29.	55	3	Reverted and epicyclic gear trains	Black board
30.	30.	55	3	Revision of Unit / Class -3	Black board
31.	31.	55	4	Governors and Flywheel	Black board
32.	32.		4	Function of governor, Classification of governor	Black board
33.	33.	55	4	Working of Watt, Porter	Blackboard
34.	34.	55	4	Proel and Hartnell governors	Black board
35.	35.	55	4	Conceptual explanation of sensitivity, stability and isochronisms	Black board & smart class
36.	36.	55	4	Function of flywheel, Comparison between flywheel & governor	Black board
37.	37.	55	4	Fluctuation of energy	Black board
38.	38.	55	4	Coefficient of fluctuation of speed	Black board
39.	39.	55	4	Revision of Unit / Class -4	Black board
40.	40.	55	5	Balancing of Machine ,Concept of static balancing	smart class
41.	41.	55	5	Dynamic balancing	Black board
42.	42.	55	5	Static balancing of rotating parts	smart class
43.	43.	55	5	Principles of balancing of reciprocating parts	smart class
44.	44.	55	5	Causes and effect of unbalance, Difference between static and dynamic balancing	Black board
45.	45.	55	5	Revision of Unit / Class -5	Black board
46.	46.	55	6	Vibration of machine parts, Introduction to Vibration and related terms (Amplitude, time period and frequency, cycle)	Black board
47.	47.	55	6	Classification of vibration, Basic concept of natural	Black board
48.	48.	55	6	forced vibration	Black board
49.	49.	55	6	Damped vibration	Black board
50.	50.	55	6	Torsional and Longitudinal vibration	Black board
51.	51.	55	6	Causes & remedies of vibration	Black board
52.	52.	55	6	Revision of Unit / Class -6	Black board
53.	53.	55		Tutorial Class for unit/chapter-1	Black board
54.	54.	55		Tutorial Class for unit/chapter-2	Black board
55.	55.	55		Tutorial Class for unit/chapter-3	Black board
56.	56.	55		Tutorial Class for unit/chapter-4	Black board
57.	57.	55		Tutorial Class for unit/chapter-5	Black board
58.	58.	55		Tutorial Class for unit/chapter-6	Black board
59.	59.	55		Semester Question paper discussion	Black board
60.	60.	55		Semester Question paper discussion	Black board

M. S. Rao

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