

**BHUBANANANDA ODISHA SCHOOL OF ENGINEERING, CUTTACK
DEPARTMENT OF MECHANICAL ENGINEERING**



LESSON PLAN

SUBJECT: THEORY OF MACHINES (TH 1)

FACULTY: NARESH KUMAR PRADHAN

ACCADEMIC SESSION: 2022-23

SEMESTER: 4th

SEC: A

FACULTY SIGNATURE

HOD SIGNATURE

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DISCIPLINE: Mechanical Engineering	SEMESTER: 4th (A)		NAME OF TEACHING FACULTY: N.K. Pradhan
SUBJECT: (TH-2) THEORY OF MACHINES	No. of Days/ per week class allotted: 04 periods per week MON-1Period, WED-1Period, THU-1Period, SAT-1Period		Semester From Date: 14-02-2022 To Date: 23-05-2022 No. of weeks: 15 weeks
Week	Class Day	No of period available	Theory Topics
1 st	15/02/2022	1	1.1 Link, kinematic chain
	16/02/2022	1	1.1 mechanism, machine
2 nd	20/02/2022	1	1.2 Inversion, four bar link mechanism
	22/02/2022	1	1.2 four bar link mechanism and its inversion
	23/02/2022	1	1.3 Lower pair
	25/02/2022	1	1.3 higher pair
3 rd	27/02/2022	1	1.3 Cam and followers
	01/03/2022	1	Class test-1 2.1 Friction between nut and screw for square thread
	02/03/2022	1	2.1 screw jack

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	04/03/2022	1	2.2 Bearing and its classification
4 th	06/03/2022	1	2.2 Description of roller, needle roller & ball bearings
	09/03/2022	1	2.3 Torque transmission in flat pivot bearings
	11/03/2022	1	2.3 Torque transmission in conical pivot bearings
5 th	13/03/2022	1	2.4 Flat collar bearing of single and multiple types
	15/03/2022	1	2.5 Torque transmission for single clutches
	16/03/2022	1	2.5 Torque transmission for multiple clutches
	18/03/2022	1	2.6 Working of simple frictional brakes
6 th	20/03/2022	1	2.7 Working of Absorption type of dynamometer
	22/03/2022	1	3.1 Concept of power transmission 3.2 Type of drives, belt, gear and chain drive
	23/03/2022	1	3.3 Computation of velocity ratio, length of open belts with and without slip
	25/03/2022	1	3.3 Computation of velocity ratio, length of cross belts with and without slip
7 th	27/03/2022	1	3.4 Ratio of belt tensions, centrifugal tension

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	29/03/2022	1	3.4 initial tension 3.5 Power transmitted by the belt
8 th	03/04/2022	1	3.6 Determine belt thickness and width for given permissible stress for open and crossed belt considering centrifugal tension
	05/04/2022	1	3.7 V-belts and V-belts pulleys
	06/04/2022	1	3.8 Concept of crowning of pulleys
	08/04/2022	1	3.9 Gear drives and its terminology
9 th	10//04/2022	1	3.10 Gear trains, working principle of simple, compound
	12/04/2022	1	3.10 Gear trains, working principle of reverted and epicyclic gear trains.
	13/042022	1	4.1 Function of governor 4.2 Classification of governor
	15/04/2022	1	4.3 Working of Watt governors
10 th	17/04/2022	1	4.3 Working of Porter governors
	19/04/2022	1	Class test-2 4.3 Working of Proel governors
	20/04/2022	1	4.3 Working of Hartnell governors
11 th	24/04/2022	1	Internal Assessment
	26/04/2022	1	4.4 Conceptual explanation of sensitivity, stability and isochronism
	27/04/2022	1	4.5 Function of flywheel 4.6 Comparison between flywheel &governor
	29/04/2022	1	4.7 Fluctuation of energy and coefficient of fluctuation of speed

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12 th	01/05/2022	1	5.1 Concept of static and dynamic balancing
	03/05/2022	1	5.2 Static balancing of rotating parts
	04/05/2022	1	5.3 Principles of balancing of reciprocating parts
	06/05/2022	1	5.3 Principles of balancing of reciprocating parts
13 th	08/05/2022	1	5.4 Causes and effect of unbalance
	10/05/2022	1	5.5 Difference between static and dynamic balancing
	11/05/2022	1	6.1 Introduction to Vibration and related terms (Amplitude, time period and frequency, cycle)
	13/05/2022	1	Class test-3 6.2 Classification of vibration
14 th	15/05/2022	1	6.3 Basic concept of natural, forced & damped vibration
	17/05/2022	1	6.4 Torsional and Longitudinal vibration
	18/05/2022	1	6.5 Causes & remedies of vibration
	20/05/2022	1	Previous Year question Discussion
15 th	22/05/2022	1	Previous Year question Discussion