

BHUBANANDA ODISHA SCHOOL OF ENGINEERING, CUTTACK
DEPARTMENT OF MECHANICAL ENGINEERING



LESSON PLAN

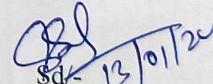
SUBJECT: THEORY OF MACHINES(TH 1)

FACULTY: RUTUPARNA SAHU

ACCADEMIC SESSION: 2023-24

SEMESTER: 4TH

SEC- B


sd/- 13/01/24
HOD (Mechanical Engg.)

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DISCIPLINE: Mechanical Engineering	SEMESTER: 4th B		NAME OF TEACHING FACULTY: RUTUPARNA SAHU
SUBJECT: (TH-1) THEORY OF MACHINES	No. of Days/ per week class allotted: 04 periods per week MONDAY-1Period, TUESDAY-1Period, WEDNESDAY-1Period, THURSDAY-1Period		Semester From Date: 16-01-2024 To Date: 26-04-2024 No. of weeks: 15 weeks
Week	Class Day	No of period available	Theory Topics
1ST	16/01/2024	1	Vision, Mission, PEOs Discussion Syllabus Discussion
	17/01/2024	1	1.0 Simple mechanism 1.1 Link ,kinematic chain, mechanism, machine
	18/01/2024	1	1.1 Link ,kinematic chain, mechanism, machine
2ND	22/01/2024	1	1.2 Inversion, four bar link mechanism and its inversion
	24/01/2024	1	1.2 Inversion, four bar link mechanism and its inversion
	25/01/2024	1	1.3 Lower pair and higher pair
3RD	29/01/2024	1	1.4 Cam and followers

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	30/01/2024	1	1.4 Cam and followers
	31/01/2024	1	2.0 Friction 2.1 Friction between nut and screw for square thread, screw jack
	01/02/2024	1	2.1 Friction between nut and screw for square thread, screw jack
4TH	05/02/2024	1	2.1 Friction between nut and screw for square thread, screw jack
	06/02/2024	1	2.2 Bearing and its classification, Description of roller, needle roller& ball bearings
	07/02/2024	1	2.2 Bearing and its classification, Description of roller, needle roller& ball bearings
	08/02/2024	1	2.3 Torque transmission in flat pivot& conical pivot bearings.
5TH	12/02/2024	1	2.3 Torque transmission in flat pivot& conical pivot bearings.
	13/02/2024	1	2.3 Torque transmission in flat pivot& conical pivot bearings.
	15/02/2024	1	2.4 Flat collar bearing of single and multiple types.
6TH	19/02/2024	1	CLASS TEST-1
	20/02/2024		2.5 Torque transmission for single and multiple clutches
	21/02/2024	1	2.5 Torque transmission for single and multiple clutches
	22/02/2024	1	2.6 Working of simple frictional brakes
7TH	26/02/2024	1	2.6 Working of simple frictional brakes

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	27/02/2024	1	2.7 Working of Absorption type of dynamometer
	28/02/2024	1	Numericals on chapter 2
	29/02/2024	1	Numericals on chapter 2
8TH	04/03/2024	1	Numericals on chapter 2
	06/03/2024	1	Numericals on chapter 2
	07/03/2024	1	3.0 Power Transmission 3.1 Concept of power transmission 3.2 Type of drives, belt, gear and chain drive.
9TH	11/03/2024	1	3.3 Computation of velocity ratio, length of belts (open and cross) with and without slip.
	12/03/2024	1	3.3 Computation of velocity ratio, length of belts (open and cross) with and without slip.
	13/03/2024	1	3.4 Ratio of belt tensions, centrifugal tension and initial tension.
	14/03/2024		3.4 Ratio of belt tensions, centrifugal tension and initial tension.
10TH	18/03/2024	1	3.4 Ratio of belt tensions, centrifugal tension and initial tension.
	19/03/2024	1	3.5 Power transmitted by the belt. 3.6 Determine belt thickness and width for given permissible stress for open and crossed belt considering centrifugal tension.
	20/03/2024	1	3.7 V-belts and V-belts pulleys. 3.8 Concept of crowning of pulleys
	21/03/2024	1	3.9 Gear drives and its terminology
11TH	27/03/2024	1	3.10 Gear trains, working principle of simple, compound,

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12TH	28/03/2024	1	reverted and epicyclic gear trains
	02/04/2024	1	Numericals on chapter 3
	03/04/2024	1	Numericals on chapter 3
	04/04/2024	1	4.0 Governors and Flywheel 4.1 Function of governor 4.2 Classification of governor 4.3 Working of Watt, Porter, Proel and Hartnell governors.
13TH	08/04/2024	1	4.3 Working of Watt, Porter, Proel and Hartnell governors. 4.4 Conceptual explanation of sensitivity, stability and isochronisms. 4.5 Function of flywheel.
	09/04/2024	1	4.6 Comparison between flywheel & governor. 4.7 Fluctuation of energy and coefficient of fluctuation of speed Numericals on chapter 4
	10/04/2024	1	5.0 Balancing of Machine 5.1 Concept of static and dynamic balancing. 5.2 Static balancing of rotating parts. 5.3 Principles of balancing of reciprocating parts.
14TH	15/04/2024	1	5.4 Causes and effect of unbalance. 5.5 Difference between static and dynamic balancing
	16/04/2024	1	6.0 Vibration of machine parts 6.1 Introduction to Vibration and related terms (Amplitude, time period and frequency, cycle)

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			6.2 Classification of vibration.
	18/04/2024	1	6.3 Basic concept of natural, forced & damped vibration 6.4 Torsional and Longitudinal vibration. 6.5 Causes & remedies of vibration
15TH	22/04/2024	1	Revision & Doubt Clear
	23/04/2024	1	CLASS TEST 2
	24/04/2024	1	Previous Year Question discussion
	25/04/2024	1	Previous Year Question discussion