

ORISSA SCHOOL OF ENGINEERING

LESSON PLAN

Discipline : Mechanical	Semester: 4th	Name of the Teaching Faculty :ER KRUSHNA CHANDRA PADHY	
Subject : THEORY OF MACHINES	No. of Days / per week class allotted : 4	Semester From date : 16.01.2024	To Date :26.04.2024
Week	Class Day	No. of Weesks : 15	
1	1st	Simple mechanism Link ,kinematic chain, mechanism, machine Inversion, four bar link mechanism and its inversion Lower pair and higher pair	
	2nd		
	3rd		
	4th		
2	1st	Cam and followers Friction between nut and screw for square thread, screw jack Bearing and its classification, Description of roller, needle roller& ball bearings. Torque transmission in flat pivot& conical pivot bearings.	
	2nd		
	3rd		
	4th		
3	1st	Flat collar bearing of single and multiple types. Torque transmission for single and multiple clutches Working of simple frictional brakes. Working of Absorption type of dynamometer	
	2nd		
	3rd		
	4th		
	1st	Concept of power transmission Type of drives, belt, gear and chain drive.	
	2nd		

4	3rd	Computation of velocity ratio, length of belts (open and cross) with and without slip. Ratio of belt tensions, centrifugal tension and initial tension.
	4th	
5	1st	Power transmitted by the belt. 3.6 Determine belt thickness and width for given permissible stress for open and crossed belt considering centrifugal tension. 3.7 V-belts and V-belts pulleys. 3.8 Concept of crowning of pulleys.
	2nd	
	3rd	
	4th	
6	1st	Gear drives and its terminology. 3.10 Gear trains, working principle of simple, compound, reverted and epicyclic gear trains. Governors and Flywheel Function of governor
	2nd	
	3rd	
	4th	
7	1st	Classification of governor Working of Watt, Porter, Proell and Hartnell governors. Conceptual explanation of sensitivity, stability and isochronisms. Function of flywheel.
	2nd	
	3rd	
	4th	
	1st	Comparison between flywheel & governor.

8	2nd	Fluctuation of energy and coefficient of fluctuation of speed.
	3rd	Concept of static and dynamic balancing.
	4th	Static balancing of rotating parts.
9	1st	Principles of balancing of reciprocating parts.
	2nd	Causes and effect of unbalance.
	3rd	Difference between static and dynamic balancing
	4th	Vibration of machine parts
10	1st	Introduction to Vibration and related terms (Amplitude, time period and frequency, cycle)
	2nd	Classification of vibration.
	3rd	Basic concept of natural, forced & damped vibration
	4th	Torsional and Longitudinal vibration.
11	1st	Causes & remedies of vibration.
	2nd	Revision
	3rd	Class test
	4th	Q & A discussion

12	1st	Revision Class test Q & A discaussion
	2nd	
	3rd	
	4th	
13	1st	Revision Class test Q & A discaussion
	2nd	
	3rd	
	4th	
14	1st	Revision Class test Q & A discaussion
	2nd	
	3rd	
	4th	
15	1st	Revision Class test Q & A discaussion
	2nd	
	3rd	
	4th	

Principal
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