

LESSON PLAN

Discipline:- MECHANICAL ENGG.	SEM:-4TH	Name of Teaching Faculty:-PRAVAT KUMAR SWAIN
SUB:-Theory of Machine (TH-1)	No of Days/per week class allotted:-4	Semester From Date:-04.02.2025To Date:17.05.2025
Week	Class Day	No of Weeks-15
		Theory Topics
1ST	1st	<ul style="list-style-type: none"> • CHAPTER-1 SIMPLE MECHANISM • Introduction, Link, kinematic chain
	2nd	<ul style="list-style-type: none"> • Mechanism, machine
	3rd	<ul style="list-style-type: none"> • Four bar link mechanism
	4th	<ul style="list-style-type: none"> • Inversion
2ND	1st	<ul style="list-style-type: none"> • Lower pair and higher pair
	2nd	<ul style="list-style-type: none"> • Cam and followers
	3rd	<ul style="list-style-type: none"> • Cam and followers
	4th	<ul style="list-style-type: none"> • Discussion of chapter and & probable Questions
3RD	1st	<ul style="list-style-type: none"> • CHAPTER-2 FRICTION • Friction between nut and screw for square thread
	2nd	<ul style="list-style-type: none"> • Screw jack, Friction Related Problem
	3rd	<ul style="list-style-type: none"> • Bearing and its classification, Description of roller, needle roller & ball bearings
	4th	<ul style="list-style-type: none"> • Torque transmission in flat pivot bearings,
4TH	1 st	<ul style="list-style-type: none"> • Solve Numerical
	2nd	<ul style="list-style-type: none"> • Torque transmission in conical pivot bearings, Related Problem
	3rd	<ul style="list-style-type: none"> • Torque transmission in flat collar bearings single and Multiple type, Related Problem
	4th	<ul style="list-style-type: none"> • Torque transmission for single and multiple clutches, Related Problem
5TH	1st	<ul style="list-style-type: none"> • Solve Numerical
	2nd	<ul style="list-style-type: none"> • Working of simple frictional brakes
	3rd	<ul style="list-style-type: none"> • Working of Absorption type of dynamometer
	4th	<ul style="list-style-type: none"> • Solved numerical and probable question
6TH	1st	<ul style="list-style-type: none"> • CHAPTER-3 POWER TRASMISSION • Concept of power transmission, Type of drives, belt, Gear and chain drive
	2nd	<ul style="list-style-type: none"> • Computation of velocity ratio
	3rd	<ul style="list-style-type: none"> • Length of belts(open),Related Problem
	4th	<ul style="list-style-type: none"> • Length of belts(cross),Related Problem

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7 th	1st	<ul style="list-style-type: none"> Ratio of belt tensions, Related Problem
	2nd	<ul style="list-style-type: none"> Centrifugal tension, Related Problem
	3rd	<ul style="list-style-type: none"> Initial tension, Related Problem
	4th	<ul style="list-style-type: none"> V-belts and V-belts pulleys, crowning of pulleys
8 th	1st	<ul style="list-style-type: none"> Gear drives and its terminology
	2nd	<ul style="list-style-type: none"> Gear trains, Working principle of simple gear trains
	3rd	<ul style="list-style-type: none"> Working principle of compound gear trains
	4th	<ul style="list-style-type: none"> Working principle of reverted gear trains
9 th	1st	<ul style="list-style-type: none"> Working principle of epicyclic gear trains
	2nd	<ul style="list-style-type: none"> CHAPTER-4 GOVERNORS AND FLYWHEEL Function of governor, Classification of governor
	3rd	<ul style="list-style-type: none"> Working of Watt governors,
	4th	<ul style="list-style-type: none"> Solve Related Problem
10 th	1st	<ul style="list-style-type: none"> Working of Porter governors, Related Problem
	2nd	<ul style="list-style-type: none"> Working of Proel governors, related problem
	3rd	<ul style="list-style-type: none"> Working of Hartnell governors,
	4th	<ul style="list-style-type: none"> Solve Related Problem
11 th	1st	<ul style="list-style-type: none"> Sensitivity, stability and isochronisms
	2nd	<ul style="list-style-type: none"> Function of fly wheel, Comparison between flywheel & governor
	3rd	<ul style="list-style-type: none"> Fluctuation of energy and coefficient of fluctuation Of speed
	4th	<ul style="list-style-type: none"> Solve numerical of above chapter
12 th	1st	<ul style="list-style-type: none"> Discussion of probable question
	2nd	<ul style="list-style-type: none"> CHAPTER-5 BALANCING OF MACHINE Concept of static and dynamic balancing
	3rd	<ul style="list-style-type: none"> Static balancing of rotating parts
	4th	<ul style="list-style-type: none"> Principles of balancing of reciprocating parts
13 th	1st	<ul style="list-style-type: none"> Principles of balancing of reciprocating parts
	2nd	<ul style="list-style-type: none"> Causes and effect of unbalance,
	3rd	<ul style="list-style-type: none"> Difference between static and dynamic balancing
	4th	<ul style="list-style-type: none"> Discussion of probable question
	1st	<ul style="list-style-type: none"> CHAPTER-6 VIBRATION OF MACHINE PARTS Vibration and related terms(Amplitude, time

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14 th		<ul style="list-style-type: none"> Period and frequency, cycle)
	2nd	<ul style="list-style-type: none"> Classification of vibration
	3rd	<ul style="list-style-type: none"> Basic concept of natural vibration
	4th	<ul style="list-style-type: none"> Basic concept of forced vibration
15 th	1st	<ul style="list-style-type: none"> Basic concept of damped vibration
	2nd	<ul style="list-style-type: none"> Causes & remedies of vibration
	3rd	<ul style="list-style-type: none"> Discussion of probable question
	4th	<ul style="list-style-type: none"> Discussion of probable question

Learning Resources:

Sl No.	Name of the Book	Author Name	Publisher
1	Text Book of Theory of Machine	R.S Khurmi	S. Chand
2	Text Book of Theory of Machine	R.K. Rajput	S. Chand
3	Text Book of Theory of Machine	P.L. Ballany	Dhanpat Rai
4	Text Book of Theory of Machine	Thomas Bevan	Pearson

Prepared By:

Er. PRAVAT KUMAR SWAIN
Lecturer in Mechanical Engg. Department
G.I.E.T (Polytechnic), Jagatpur, Cuttack

01/02/25
Head of the Deptt.
Mechanical Engg. Deptt.
G.I.E.T (Polytechnic), Jagatpur, Cuttack

01/02/25
Principal
G.I.E.T (Polytechnic)
Jagatpur, Cuttack