GOVT. POLYTECHNIC BOLANGIR		LESSON PLAN
Discipline : Mechanical	Semester: 4th	Name of the Teaching Faculty : Manabhanjan Bhoi
Subject : THEORY OF MACHINES	No. of Days / per week class allotted : 4	Semester From date : 05.02.2025 To Date : 17.05.2025 No. of Weeks: 15
Week	Class Day	Topics
05 Feb to 08 Feb	1st	Simple mechanism
	2nd	Link ,kinematic chain, mechanism, machine
	3rd	Inversion, four bar link mechanism and its inversion
	4th	Lower pair and higher pair
10 Feb to 15 Feb	1st	Cam and followers
	2nd	Friction between nut and screw for square thread, screw jack
	3rd	Bearing and its classification, Description of roller, needle roller& ball bearings.
	4th	Torque transmission in flat pivot& conical pivot bearings.
17 Feb to 22 Feb	1st	Flat collar bearing of single and multiple types.
	2nd	Torque transmission for single and multiple clutches
	3rd	Working of simple frictional brakes.
	4th	Working of Absorption type of dynamometer
24 Feb to 01 Mar	1st	Concept of power transmission
	2nd	Type of drives, belt, gear and chain drive.
	3rd	Computation of velocity ratio, length of belts (open and cross)with and without slip.
	4th	Ratio of belt tensions, centrifugal tension and initial tension.
03 Mar to 08 Mar	1st	Power transmitted by the belt.
	2nd	Determine belt thickness and width for given permissible stress for open and crossed belt considering centrifugal tension.
	3rd	V-belts and V-belts pulleys.
	4th	Concept of crowning of pulleys.
10 Mar to 15 Mar	1st	Gear drives and its terminology.
	2nd	Gear trains, working principle of simple, compound, reverted and epicyclic gear trains.
	3rd	Governors and Flywheel
	4th	Function of governor
17 Mar to 22 Mar	1st	Classification of governor
	2nd	Working of Watt, Porter, Proel and Hartnell governors.
	3rd	Conceptual explanation of sensitivity, stability and isochronisms.
	4th	Function of flywheel.
24 Mar to 29 Mar	1st	Comparison between flywheel &governor.
	2nd	Fluctuation of energy and coefficient of fluctuation of speed.
	3rd	Concept of static and dynamic balancing.
	4th	Static balancing of rotating parts.
31 Mar to 05 Apr	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
07 Apr to 12 Apr	1st	Introduction to Vibration and related terms (Amplitude, time period and
	2nd	Classification of vibration.
	3rd	Basic concept of natural, forced & damped vibration
	4th	Torsional and Longitudinal vibration.
14 Apr to 19 Apr	1st	Causes & remedies of vibration.
	2nd	Revision
	3rd	Class test
	4th	Q & A discaussion

21 Apr to 26 Apr	1st	Revision
	2nd	Class test
	3rd	Q & A discussion
	4th	discussion
28 Apr to 03 May	1st	Revision
	2nd	Class test
	3rd	Q & A discussion
	4th	discussion
05 May to 10 May	1st	Revision
	2nd	Class test
	3rd	Q & A discussion
	4th	discussion
12 May to 17 May	1st	Revision
	2nd	Class test
	3rd	Q & A discussion
	4th	discussion

03/02/25