

GOVERNMENT POLYTECHNIC MAYURBHANJ LESSONPLAN -2023/24(W)

discipline: MECHANICAL ENGINEERING		semester : 4TH		name of the teaching faculty : D. D. Pramanik		
subject : TOM		No. of days per week classified:04		semester from date:16.01.24 To 26.04.2024		
MONTH	WEEK	DAY		TOPICS		
JAN	3rd	1st	UNIT-1	Link ,kinematic chain, mechanism, machine		
		2nd		Inversion, four bar link mechanism and its inversion		
		3rd		Lower pair and higher pair		
		5th		Cam and followers		
	4th	1st		Cam and followers		
		2nd		Revision of unit 1		
		3rd		Friction between nut and screw for square thread, screw jack		
		5th		Bearing and its classification, Description of roller, needle roller& ball bearings.		
FEB	1st	2nd	UNIT -2	Torque transmission in flat pivot& conical pivot bearings.		
		3rd		Flat collar bearing of single and multiple types.		
		5th		Torque transmission for single and multiple clutches		
		1st		Working of simple frictional brakes.		
	2nd	2nd		Features of Iron-Carbon diagram with salient micro-constituents of Iron and Steel		
		3rd		Class Test 1		
		5th		Class Test 1		
		1st		Working of Absorption type of dynamometer		
	3rd	2nd		Revision of Unit 2		
		3rd		Concept of power transmission		
		5th		Type of drives, belt, gear and chain drive.		
		4th		1st	Computation of velocity ratio, length of belts (open and cross)with and without slip.	
	2nd			Ratio of belt tensions, centrifugal tension and initial tension,3.5 Power transmitted by the belt.		
	5th			Determine belt thickness and width for given permissible stress for open and crossed belt considering centrifugal force.		
	2nd			V-belts and V-belts pulleys.		
	MARCH	1st		3rd	UNIT -3	Concept of crowning of pulleys.
5th			Gear drives and its terminology.			
1st			Gear trains, working principle of simple, compound, reverted and epicyclic gear trains.			
2nd			Internal Exam			
2nd		3rd	Internal Exam			
		5th	Revision of Unit 3			
		3rd	1st	UNIT -4		Function of governor
			2nd			Classification of governor
3rd			Working of Watt, Porter, Proel and Hartnell governors.			
5th			Conceptual explanation of sensitivity, stability and isochronisms.			
4th		1st	Function of flywheel.			
		2nd	Comparison between flywheel &governor.			

		3rd		Fluctuation of energy and coefficient of fluctuation of speed.
		5th		Revision of Unit 4
APRIL	1st	1st	UNIT -5	Concept of static and dynamic balancing.
		2nd		Static balancing of rotating parts.
		3rd		Principles of balancing of reciprocating parts.
		5th		Causes and effect of unbalance.
		1st		Difference between static and dynamic balancing
	2nd	2nd	Revision of Unit 5	
		3rd	UNIT -6	Introduction to Vibration and related terms (Amplitude, time period and frequency, cycle)
		5th		Classification of vibration.
	3rd	1st	Basic concept of natural, forced & damped vibration	
		2nd	Torsional and Longitudinal vibration.6.5 Causes & remedies of vibration.	
		3rd	Previous Year Question Paper discussion	
	4th	5th	Previous Year Question Paper discussion	
		1st	Class Test 2	
		2nd	Class Test 2	