

THEORY OF MACHINE		
LESSON PLAN AS PER SCTEVT WEF dt.16/01/2024 OF 4 TH SEMESTER TO DT. 26/04/24		
MECHANICAL ENGINEERING DEPARTMENT OF GOVT POLYTECHNIC ANGUL		
Discipline :Mechanical engineering	Semester : 4th	Name of the Teachnig Faculty : MRS. LOPAMUDRA SWAIN (LECTURE)
Subject:Theory Of Machine (th-1)	No.of days/Per weeks Class Alloted Weeks :4	Semester From Date: 16th JAN 2024 To Date: 26 APR 2024
Weeks	Class day	Theory
3RD(JAN-2024)	1st	1.1 Link ,kinematic chain, mechanism, machine
	2nd	1.2 Inversion, four bar link mechanism and its inversion
	3rd	1.2 Inversion, four bar link mechanism and its inversion
	4th	1.4 Cam and followers
4TH(JAN-2024)	1st	2.1 Friction between nut and screw for square thread, screw jack
	2nd	2.2 Bearing and its classification, Description of roller, needle roller& ball bearings.
	3rd	2.3 Torque transmission in flat pivot& conical pivot bearings.
	4th	2.4 Flat collar bearing of single and multiple types.
1ST(FEB-2024)	1st	2.5 Torque tranşmission for single and multiple clutches.
	2nd	2.6 Working of simple frictional brakes.
	3rd	2.7 Working of Absorption type of dynamometer
	4th	3.1 Concept of power transmission.
2ND(FEB-2024)	1st	3.2 Type of drives, belt, gear and chain drive.
	2nd	3.3 Computation of velocity ratio, length of belts (open and cross)with and without slip.
	3rd	3.4 Ratio of belt tensions, centrifugal tension and initial tension.
	4th	3.5 Power transmitted by the belt.

3RD(FEB-2024)	1st	HOLIDAY
	2nd	HOLIDAY
	3rd	3.60 Determine belt thickness and width for given permissible stress for open and crossed belt considering centrifugal
	4th	3.7 V-belts and V-belts pulleys
4TH(FEB-2024)	1st	3.8 Concept of crowning of pulleys.
	2nd	3.9 Gear drives and its terminology
	3rd	3.10 Gear trains, working principle of simple, compound, reverted and epicyclic gear trains.
	4th	4.1 Function of governor
1ST(MAR-2024)	1st	4.2 Classification of governor
	2nd	4.3 Working of Watt, Porter, Proel and Hartnell governors.
	3rd	4.4 Conceptual explanation of sensitivity, stability and isochronisms.
	4th	4.5 Function of flywheel.
2ND(MAR-2024)	1st	4.6 Comparison between flywheel & governor
	2nd	4.7 Fluctuation of energy and coefficient of fluctuation of speed.
	3rd	5.1 Concept of static and dynamic balancing.
	4th	5.2 Static balancing of rotating parts.
3RD(MAR-2024)	1st	5.3 Principles of balancing of reciprocating parts
	2nd	5.4 Causes and effect of unbalance.
	3rd	5.5 Difference between static and dynamic balancing
	4th	6.1 Introduction to Vibration and related terms (Amplitude, time period and frequency, cycle)
4TH(MAR-2024)	1st	HOLIDAY
	2nd	HOLIDAY

7TH (MAY-2024)	3rd	6.2 Classification of vibration.
	4th	6.3 Basic concept of natural, forced & damped vibration.
1ST (APR-2024)	1st	INTERNAL ASSESSMENT
	2nd	INTERNAL ASSESSMENT
	3rd	6.3 Basic concept of natural, forced & damped vibration.
	4th	6.5 Causes & remedies of vibration.
2ND (APR-2024)	1st	6.5 Causes & remedies of vibration.
	2nd	6.4 Torsional and Longitudinal vibration.
	3rd	6.4 Torsional and Longitudinal vibration.
	4th	6.4 Torsional and Longitudinal vibration.
3RD (APR-2024)	1st	3.1 Revision to the topic : Concept of power transmission.
	2nd	3.2 Type of drives, belt, gear and chain drive.
	3rd	3.2 Type of drives, belt, gear and chain drive.
	4th	3.3 Computation of velocity ratio, length of belts (open and cross) with and without slip.
4TH (APR-2024)	1st	HOLIDAY
	2nd	HOLIDAY
	3rd	3.3 Computation of velocity ratio, length of belts (open and cross) with and without slip.
	4th	3.3 Computation of velocity ratio, length of belts (open and cross) with and without slip.

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18/01/2024