Discipline:- MECHANICAL ENGG.	SEM:- 4TH	Name of Teaching Faculty:- BHAGBAN PARIDA
SUB:- Theory of Machines	No of Days /per week class allotted:-4	No of Weeks-15 Semester From date : 14.02.2023 To Date: 23.05.2023
Week	Class Day	Theory Topics
1ST	1st	Introduction, Link, kinematic chain
	2nd	Mechanism, machine
	3rd	Four bar link mechanism
	4th	Inversion
2ND	1st	Lower pair and higher pair, Cam and followers
	2nd	Chapter-1 Discussion & Assignment Questions
	3rd	Friction, Related Problem
	4th	Friction between nut and screw for square thread
3RD	1st	Screw jack
	2nd	Bearing and its classification, Description of roller, needle roller & ball bearings
	3rd	Torque transmission in flat pivot bearings, Related Problem
	4th	Torque transmission in conical pivot bearings, Related Problem
4TH	1st	Flat collar bearing of single and multiple types, Related Problem
	2nd	Torque transmission for single and multiple clutches, Related Problem
	3rd	Working of simple frictional brakes
	4th	Working of Absorption type of dynamometer
5TH	1st	Chapter-2 Discussion & Assignment Questions
	2nd	Concept of power transmission,
	3rd	Type of drives, belt, gear and chain drive
	4th	Computation of velocity ratio
6TH	1st	Length of belts (open) , Related Problem

	2nd	Length of belts (cross), Related Problem
	3rd	Ratio of belt tensions, Related Problem
	4th	Centrifugal tension, Related Problem
7TH	1st	Initial tension, Related Problem
	2nd	V-belts and V-belts pulleys,
	3rd	crowning of pulleys
	4th	Gear drives and its terminology
8TH	1st	Gear trains, Working principle of simple gear trains
	2nd	Working principle of compound gear trains
	3rd	Working principle of reverted gear trains
	4th	Working principle of epicyclic gear trains
9TH	1st	Chapter-3 Discussion & Assignment Questions
	2nd	Function of governor, Classification of governor
	3rd	Working of Watt governors, Related Problem
	4th	Working of Porter governors, Related Problem
10TH	1st	Working of Proel governors, Related Problem
	2nd	Working of Hartnell governors, Related Problem
	3rd	Sensitivity, stability and isochronism
	4th	Function of flywheel, Comparison between flywheel & governor
11TH	1st	Fluctuation of energy and coefficient of fluctuation of speed
	2nd	Chapter-4 Discussion & Assignment Questions
	3rd	Concept of static and dynamic balancing
	4th	Static balancing of rotating parts
12TH	1st	Principles of balancing of reciprocating parts
	2nd	Causes and effect of unbalance,
	3rd	Difference between static and dynamic balancing
	4th	Chapter-5 Discussion & Assignment Questions

13TH	1st	Vibration and related terms (Amplitude, time period and frequency, cycle)
	2nd	Classification of vibration
	3rd	Basic concept of natural vibration
	4th	Basic concept of forced vibration
14TH	1st	Basic concept of damped vibration
	2nd	Causes & remedies of vibration
	3rd	Chapter-6 Discussion & Assignment Questions
	4th	Model Question and answer practice set-1
15TH	1st	Model Question and answer practice set-2
	2nd	Model Question and answer practice set-3
	3rd	Model Question and answer practice set-4
	4th	Model Question and answer practice set-5

HOD

14/02/23

Teaching Faculty