Discipline: **MECHANICAL**	Semester: **4TH**	Name of the Teaching Faculty: **MISS SHARMILA SABAR**
Subject: **THEORY OF MACHINES**	No. ofdays/week classallotted:4	SemesterFromdate: ToDate: 04.02.2025 - 17.05.2025 No.of Weeks:15
Week	**Class Day**	**Theory/Practical Topics**
1ST	1ST	Simple mechanism :Link
	2ND	kinematic chain
	3RD	mechanism, machine
	4TH	Inversion
2ND	1ST	four bar link mechanism
	2ND	four bar link mechanism and its inversion
	3RD	Lower pair and higher pair
	4TH	Cam and followers
3RD	1ST	Friction : Friction between nut and screw for square thread
	2ND	screw jack
	3RD	Bearing and its classification
	4TH	Description of roller, needle roller& ball bearings.
4TH	1ST	Torque transmission in flat pivot bearings.
	2ND	Torque transmission in conical pivot bearings.
	3RD	Torque transmission in flat pivot& conical pivot bearings.
	4TH	Torque transmission in Flat collar bearing of single and multiple types
5TH	1ST	Torque transmission for single clutches
	2ND	Torque transmission for multiple clutches
	3RD	Working of simple frictional brakes.
	4TH	Working of Absorption type of dynamometer
6TH	1ST	Power Transmission : Concept of power transmission , Type of drives, belt, gear and chain drive.
	2ND	Computation of velocity ratio,
	3RD	length of belts (open)with and without slip.
	4TH	length of belts (cross)with and without slip.
7TH	1ST	Ratio of belt tensions
	2ND	centrifugal tension and initial tension, Power transmitted by the belt.
	3RD	Determine belt thickness and width for given permissible stress for open and crossed belt considering centrifugal tension.
	4TH	V-belts and V-belts pulleys: Concept of crowning of pulleys.
8TH	1ST	Gear drives and its terminology. Gear trains,
	2ND	working principle of simple, compoundgear trains
	3RD	working principle ofreverted gear trains and epicyclic gear trains.
	4TH	working principle of epicyclic gear trains.
9TH	1ST	Governors and Flywheel : Function of governor
	2ND	Classification of governor
	3RD	Working of Watt governors
	4TH	Working of Porter governors
10TH	1ST	Working of Proel governors
	2ND	Working of Hartnell governors
	3RD	Conceptual explanation of sensitivity, stability.
	4TH	Conceptual explanation isochronism.
11TH	1ST	Function of flywheel.
	2ND	Comparison between flywheel &governor.

	3RD	Fluctuation of energy
	4TH	coefficient of fluctuation of speed.
12TH	1ST	Balancing of Machine:Concept of static and dynamic balancing.
	2ND	Concept of static and dynamic balancing.
	3RD	Static balancing of rotating parts
	4TH	Static balancing of rotating parts
13TH	1ST	Principles of balancing of reciprocating parts
	2ND	Principles of balancing of reciprocating parts
	3RD	Causes and effect of unbalance.
	4TH	Difference between static and dynamic balancing
14TH	1ST	Vibration of machine parts:Introduction to Vibration
	2ND	terms (Amplitude, time period and frequency, cycle)
	3RD	Classification of vibration.
	4TH	Basic concept of natural, forced & damped vibration
15TH	1ST	Basic concept of natural, forced & damped vibration
	2ND	Torsional vibration.
	3RD	Longitudinal vibration.
	4TH	Causes & remedies of vibration.

Signature of Faculty

Signature of HOD

Signature of Academic Coordinator

Signature of Principal