

Badriprasad Institute of Technology, Sambalpur

Lesson plan for Theory -1, Theory of Machine

Semester & Branch: 4th Sem. Mechanical Engineering

Total Periods- 60

Name of the Faculty: Mr. Nitesh Ku Jha

No of periods /week- 4

Week	Day	Topics
1st	1st	Link ,kinematic chain, mechanism, machine
	2nd	Inversion, four bar link mechanism and its inversion
	3rd	Lower pair and higher pair
	4th	Cam and followers
2nd	5th	Friction between nut and screw for square thread, screw jack
	6th	Solving Basic Problems
	7th	Bearing and its classification, Description of roller, needle roller& ball bearings.
	8th	Torque transmission in flat pivot & conical pivot bearings.
3rd	9th	Solving Basic Problems
	10th	Flat collar bearing of single and multiple types.
	11th	Solving Basic Problems
	12th	Torque transmission for single and multiple clutches
4th	13th	Solving Basic Problems
	14th	Working of simple frictional brakes.
	15th	Working of Absorption type of dynamometer
	16th	Solving Basic Problems
	17th	Concept of power transmission
	18th	Type of drives, belt, gear and chain drive.
	19th	Computation of velocity ratio, length of belts (open and cross) with and without slip
	20th	Solving Basic Problems
6th	21st	Ratio of belt tensions, centrifugal tension and initial tension.
	22nd	Solving Basic Problems
	23rd	Power transmitted by the belt.
	24th	Determine belt thickness and width for given permissible stress open and crossed belt considering centrifugal tension.
7th	25th	V-belts and V-belts pulleys.
	26th	Concept of crowning of pulleys.
	27th	Gear drives and its terminology.
	28th	Gear trains, working principle of simple, compound
8th	29th	Problems on Gear Ratio
	30th	Reverted and epicyclic gear trains.
	31st	Problems on Gear Ratio
	32nd	Function of governor

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Name of the Faculty: Mr. Paresh Pradhan

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9th	33rd	Classification of governor
	34th	Working of Watt governor
	35th	Solving Some Basic Problems
	36th	Working of Porter governor.
10th	37th	Solving Some Basic Problems
	38th	Working of Proel governor.
	39th	Solving Some Basic Problems
	40th	Working of Hartnell governors.
11th	41st	Solving Some Basic Problems
	42nd	Conceptual explanation of sensitivity, stability and isochronisms
	43rd	Function of flywheel.
	44th	Fluctuation of energy and coefficient of fluctuation of speed.
12th	45th	Basic Problem On Fly Wheel
	46th	Concept of static and dynamic balancing.
	47th	Static balancing of rotating parts.
	48th	Principles of balancing of reciprocating parts.
13th	49th	Solving Some Basic Problems
	50th	Causes and effect of unbalance.
	51st	Difference between static and dynamic balancing
	52nd	Introduction to Vibration and related terms (Amplitude, time period and frequency, cycle)
14th	53rd	Classification of vibration.
	54th	Basic concept of natural, forced & damped vibration
	55th	Torsional and Longitudinal vibration.
	56th	Solving Some Basic Problems
15th	57th	Causes & remedies of vibration
	58th	Revision chapter 1
	59th	Revision chapter 2
	60th	Revision chapter 3

Sign of Faculty

Sign of HOD