

# PNS SCHOOL OF ENGG& TECH MARSHAGHAI

## LESSON PLAN

### DEPARTMENT OF MECHANICAL ENGINEERING

**SUBJECT: TOM LAB Pr.1 Periods:4 per week SEMESTER:4th**

**NAME OF DEMONSTRATOR: SANDEEP MALLICK**

**Class start : 22/12/2025 to 18/04/2026**

Week	Class Day	Name of Practical Topics
1st	1ST	Measure the ratio of time of cutting stroke to the return stroke in shaping machine available in institute's workshop by varying the stroke length.
	2ND	Measure the ratio of time of cutting stroke to the return stroke in shaping machine available in institute's workshop by varying the stroke length.
	3RD	Record writing
	4TH	Record writing & Checking
2nd	1ST	Mechanisms and sketch, a. Bicycle free wheelsprocket , b. Geneva mechanism
	2ND	Mechanisms and sketch, a. Bicycle free wheelsprocket , b. Geneva mechanism
	3RD	Record Writing
	4TH	Record Writing & Checking
3rd	1ST	Mechanisms and sketch, .c. Ackerman's steering gear mechanismc d. Foot operated air pump mechanism
	2ND	Mechanisms and sketch, .c. Ackerman's steering gear mechanismc d. Foot operated air pump mechanism
	3RD	Record Writing
	4TH	Record Writing & Checking
4th	1ST	Study of construction and working principle of Eddy current Dynamometers
	2ND	Study of construction and working principle of Eddy current Dynamometers
	3RD	Record Writing and checking
	4TH	Record Writing
5th	1ST	Determine velocity and acceleration of various links of the given mechanism (any two) byrelative velocity method for analysis of motion of links size drawing sheet).
	2ND	Determine velocity and acceleration of various links of the given mechanism (any two) byrelative velocity method for analysis of motion of links size drawing sheet).
	3RD	Determine velocity and acceleration in an I. C. engine's slider crank mechanismby Kleins's construction
	4TH	Determine velocity and acceleration in an I. C. engine's slider crank mechanismby Kleins's construction
6th	1ST	Drawing of profile of radial cam with knife-edge and roller follower with offset reciprocating motion (graphical method).
	2ND	Drawing of profile of radial cam with knife-edge and roller follower with offset reciprocating motion (graphical method)..
	3RD	Record writing
	4TH	Record writing & Checking
7th	1ST	Estimate slip, length of belt, angle of contact in an open and cross belt drive.
	2ND	Estimate slip, length of belt, angle of contact in an open and cross belt drive.
	3RD	Record writing
	4TH	Record writing & Checking
8th	1ST	Calculate braking torque at different speeds and load situations of i) Internal expanding shoe brake ii) Disc Brake
	2ND	Calculate braking torque at different speeds and load situations of i) Internal expanding shoe brake ii) Disc Brake
	3RD	Record writing & Checking
	4TH	Record writing & Checking
9th	1ST	Assemble and dissemble different clutches.
	2ND	Assemble and dissemble different clutches.
	3RD	Record writing & Checking
	4TH	Record writing & Checking
10th	1ST	Measureradius and height of any two types of governors for different rotational speeds, mass of balls and spring stiffness (in spring loaded governors)
	2ND	Measureradius and height of any two types of governors for different rotational speeds, mass of balls and spring stiffness (in spring loaded governors)
	3RD	Record writing & Checking
	4TH	Record writing & Checking

11th	1ST	Perform balancing of rotating unbalanced system
	2ND	Perform balancing of rotating unbalanced system
	3RD	Record writing & Checking
	4TH	Record writing & Checking
12th	1ST	Record writing & Checking
	2ND	Record writing & Checking
	3RD	Record writing & Checking
	4TH	Record writing & Checking

SIGN OF DEMONSTRATOR

SIGN OF HOD

SIGN OF PRINCIPAL