

GOVERNMENT POLYTECHNIC, MALKANGIRI
DEPARTMENT OF MECHANICAL ENGINEERING

LESSON PLAN

Discipline: Mechanical Engineering	Semester: 3RD	Name of the Teaching Faculty: SHARMILA SABAR
Subject: FLUID MECHANICS & FLUID POWER LAB	No. of days/week class allotted 4	Semester From date:14.07.2025 No. of Week: 15 To date:15.11.2025
Course Outcomes	Measure various properties such as pressure, velocity, flow rate using various instruments. • Calculate different parameters such as co-efficient of friction, power, efficiency etc. of various systems. • Illustrate the need and importance of calibration of pressure gauges. • Describe the construction and working of turbines and pumps. • Test the performance of turbines and pumps and Plot characteristics curves. • Study the hydraulic and pneumatic circuits	
Week	Class Day	Theory/Practical Topics
1st	1st	Verification of Bernoulli's theorem
	2nd	Verification of Bernoulli's theorem
2nd	1st	Determination of Coefficient of Discharge of Venturi meter.
	2nd	Determination of Coefficient of Discharge of Venturi meter.
3rd	1st	Determination of Coefficient of Discharge, coefficient of contraction and coefficient of velocity of Orifice meter.
	2nd	Determination of Coefficient of Discharge, coefficient of contraction and coefficient of velocity of Orifice meter.
4th	1st	Determination of coefficient of friction of flow through pipes.
	2nd	Determination of coefficient of friction of flow through pipes.
5th	1st	Determination of force exerted by the jet of water on the given vane.
	2nd	Determination of force exerted by the jet of water on the given vane.
6th	1st	Determination of minor losses of flow through pipes.
	2nd	Determination of minor losses of flow through pipes.
7th	1st	Calibration of pressure gauge using dead weight pressure gauge tester.
	2nd	Calibration of pressure gauge using dead weight pressure gauge tester.
8th	1st	Calibration of pressure gauge using dead weight pressure gauge tester.
	2nd	Trial on centrifugal pump to determine overall efficiency.
9th	1st	Trial on centrifugal pump to determine overall efficiency.
	2nd	Trial on centrifugal pump to determine overall efficiency.
10th	1st	Trial on reciprocating pump to determine overall efficiency
	2nd	Trial on reciprocating pump to determine overall efficiency
11th	1st	Trial on reciprocating pump to determine overall efficiency
	2nd	Trial on Pelton wheel /Francis/Kaplan turbine to determine overall efficiency
12th	1st	Trial on Pelton wheel /Francis/Kaplan turbine to determine overall efficiency
	2nd	Trial on Pelton wheel /Francis/Kaplan turbine to determine overall efficiency
13th	1st	Analysis of Hydraulic circuits in a hydraulic trainer
	2nd	Analysis of Hydraulic circuits in a hydraulic trainer
14th	1st	Analysis of Hydraulic circuits in a hydraulic trainer
	2nd	Analysis of pneumatic circuits in a pneumatic trainer
15th	1st	Analysis of pneumatic circuits in a pneumatic trainer
	2nd	Analysis of pneumatic circuits in a pneumatic trainer

Sharmila Sabar
Signature of Faculty

Sharmila Sabar
Signature of HOD

Sharmila Sabar
Signature of Principal

Sharmila Sabar
Signature of Academic Coordinator