

**GOVERNMENT POLYTECHNIC, MALKANGIRI  
DEPARTMENT OF MECHANICAL ENGINEERING**

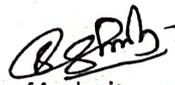
**LESSON PLAN**

Discipline: <b>Mechanical Engineering</b>	Semester: 5th	Name of the Teaching Faculty: <b>CHINMAYA BRAHMADARSHI MISHRA</b>
Subject: <b>Hydraulic Machines &amp; Industrial Fluid Power LAB</b>	No. of days/week class allotted 4	Semester From date:14.07.2025 To date:15.11.2025 No. of Week: 15
Course Outcomes	1. Conducting performance test on impulse and reaction turbine 2. Conducting performance test on centrifugal pump 3. Designing & operating pneumatic circuits 4. Designing & operating Industrial fluid power circuits	
<b>Week</b>	<b>Class Day</b>	<b>Theory/Practical Topics</b>
1st	1st	Performance test on impulse turbine and to find out the efficiency
	2nd	Performance test on impulse turbine and to find out the efficiency
2nd	1st	Performance test on impulse turbine and to find out the efficiency
	2nd	Performance test on Kaplan turbine and to find out the efficiency
3rd	1st	Performance test on Kaplan turbine and to find out the efficiency
	2nd	Performance test on Kaplan turbine and to find out the efficiency
4th	1st	Performance test on Francis turbine and to find out the efficiency
	2nd	Performance test on Francis turbine and to find out the efficiency
5th	1st	Performance test on Francis turbine and to find out the efficiency
	2nd	Performance test on centrifugal pump and to find out the characteristic curves
6th	1st	Performance test on centrifugal pump and to find out the characteristic curves
	2nd	Performance test on centrifugal pump and to find out the characteristic curves
7th	1st	Direct operation of single & double acting pneumatic cylinder.
	2nd	Direct operation of single & double acting pneumatic cylinder.
8th	1st	Direct operation of single & double acting pneumatic cylinder.
	2nd	Operating double acting pneumatic cylinder with quick exhaust valve
9th	1st	Operating double acting pneumatic cylinder with quick exhaust valve
	2nd	Operating double acting pneumatic cylinder with quick exhaust valve
10th	1st	Speed control double acting pneumatic cylinder using metering in and metering out
	2nd	Speed control double acting pneumatic cylinder using metering in and metering out
11th	1st	Speed control double acting pneumatic cylinder using metering in and metering out
	2nd	Direct operation of single & double acting hydraulic cylinder
12th	1st	Direct operation of single & double acting hydraulic cylinder
	2nd	Direct operation of single & double acting hydraulic cylinder
13th	1st	Direct operation of hydraulic motor
	2nd	Direct operation of hydraulic motor
14th	1st	Direct operation of hydraulic motor
	2nd	Speed control double acting hydraulic cylinder using metering in & metering out circuits.
15th	1st	Speed control double acting hydraulic cylinder using metering in & metering out circuits.
	2nd	Speed control double acting hydraulic cylinder using metering in & metering out circuits.

Chinmaya Brahmadarshi  
Signature of Faculty  
Mishra

  
Signature of HOD/

  
Signature of Principal

  
Signature of Academic Coordinator