# GOVERNMENT POLYTECHNIC JAJPUR

## LESSON PLAN

## PR-3 FLUID MECHANICS & FLUID POWER LAB (MEPC215)

| W | Month | Experi | Main Topic | Activity 1 | Activity 2 | H | Remarks |
|---|---|---|---|---|---|---|---|
| 1 | July | 1 | Bernoulli's Theorem | Set up Bernoulli apparatus | Verify theorem and record observations | 4 | |
| 2 | July | 2 | Venturimeter | Measure discharge through venturimeter | Calculate coefficient of discharge (Cd) | 4 | |
| 3 | July | 3 | Orifice Meter | Determine Cd, Cc and Cv | Perform calculations and plot results | 4 | Class Test-I |
| 4 | August | 4 | Pipe Friction | Measure head loss in pipes | Calculate coefficient of friction | 4 | |
| 5 | August | 5 | Impact of Jet | Determine force on vane | Compare theoretical and experimental values | 4 | Internal Assessment-I |
| 6 | August | 6 | Minor Losses | Measure losses in bends, valves and fittings | Evaluate loss coefficients | 4 | |
| 7 | September | 7 | Pressure Gauge Calibration | Use dead weight pressure gauge tester | Prepare calibration chart | 4 | |
| 8 | September | 8 | Centrifugal Pump | Measure discharge, head and power | Determine overall efficiency | 4 | Class Test-II |
| 9 | October | 9 | Reciprocating Pump | Study construction and operation | Determine overall efficiency | 4 | |
| 10 | October | 10 | Hydraulic Turbine | Pelton/Francis/Kaplan performance test | Calculate turbine efficiency | 4 | |
| 11 | October | 11 | Hydraulic Trainer | Construct basic hydraulic circuits | Observe actuator operation | 4 | Internal Assessment-II |
| 12 | November | 12 | Pneumatic Trainer | Construct pneumatic circuits | Study directional control valves | 4 | |
| 13 | November | Practice | Data Analysis | Tabulate observations | Prepare graphs and calculations | 4 | |
| 14 | November | Practice | Record Submission | Complete practical records | Viva preparation | 4 | |
| 15 | November | Final Practical | Comprehensive Experiment | Revision and course completion | 4 | | |

Tot 60

Course Teacher

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HOD