2/4 B.Tech. THIRD SEMESTER

ME3L2 FLUID MECHANICS & HYDRAULIC MACHINERY LAB Credits: 2

Lecture:- - **Internal assessment: 25marks**
Tutorial: - 3 periods/week **Semester end examination: 50 marks**

Objectives:

1. Measure the losses in pipes, coefficient of discharge using notch, venture meter and orifice meter that are studied in a lecture course.
2. Experiment the performance of hydraulic machines viz. turbines and pumps

Learning Outcomes:

At the end of course the student will be able to:

1. Estimate minor and major losses in the pipe lines.
2. Measure the coefficient of discharge through various devices
3. Asses the performance of centrifugal pumps, reciprocating pumps & hydraulic turbines
4. List probable reasons for variation of experimental results with theoretical values.
5. Test the impact of jet on vanes.

Pre-Requisite

Fluid mechanics and Hydraulic Machines

1. Determination of Coefficient of Discharge of Venturimeter.
2. Determination of Coefficient of Discharge of Orifice meter.
3. Determination of friction factor for a given pipe line.
4. Determination of loss of head due to sudden contraction in a pipeline.
5. Coefficient of Discharge of Triangular Notch/Rectangular Notch
6. Impact of jets on Vanes.
7. Performance Test on Pelton Wheel.
8. Performance Test on Francis Turbine.
9. Performance Test on Kaplan Turbine.
10. Performance Test on Single Stage Centrifugal Pump.
11. Performance Test on Multi Stage Centrifugal Pump.
12. Performance Test on Reciprocating Pump.