Name of the Laboratory: Fluid Mechanics Laboratory

Lab code: CHD – 217

Name of the equipment available in the existing laboratory

1. Verification of Bernoulli's Theorem.
2. Pitot static tube apparatus.
3. Reynolds Apparatus.
4. Venturimeter, Orificemeter & Rotameter calibration set-up.
5. Losses due to friction in pipe lines.
6. Losses due to Pipe fitting, Sudden enlargement & Contraction.
7. Flow visualization apparatus (Laminar flow table).
8. Reciprocating pump test rig.
9. Gear pump test rig.
10. Jet pump test rig.
11. Pressure measuring devices.

Name of the experiments:

1. To verify Bernoulli's equation experimentally.
2. To study the velocity distribution in a pipe and also to compute the discharge by integrating the velocity profile.
3. a) To visualize different flow conditions.
   b) To obtain the Reynolds number in different flow conditions.
4. a) To calibrate Venturimeter, by establishing the relationship between flow rate and pressure difference and to find its coefficient of discharge.
   b) To calibrate Orifice meter, by establishing the relationship between flow rate and pressure difference and to find its coefficient of discharge.
   c) To determine the percentage error in Rotameter with the actual flow rate.
5. To find the friction factor for pipes of different diameter of same material.
6. To determine the minor head loss coefficient for different pipe fittings.
7. To draw flow net for irrotational flow past a cylinder (or any other geometry) using Hale –Shaw apparatus.
8. To draw the characteristics curve of reciprocating pump and also to determine efficiency of given reciprocating pump.
9. To draw the characteristics curve of gear pump and also to determine efficiency of given gear oil pump.
10. To draw the characteristics curve of Jet pump and also to determine efficiency of given Jet pump.
11. Study of Pressure measurement.