

II Year – I SEMESTER

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THERMAL AND HYDRO LAB**Course Objective:**

To impart practical knowledge on the performance evaluation methods of various internal combustion engines, flow measuring equipment and hydraulic turbines and pumps.

NOTE: To conduct a minimum of 12 experiments by conducting a minimum of six from each section.

SECTION A - THERMAL ENGINEERING LAB

1. I.C. Engines valve / port timing diagrams.
2. I.C. Engines performance test on 4 -stroke Diesel engine.
3. I.C. Engines performance test on 2-stroke petrol engine.
4. Evaluation of engine friction by conducting Morse test on 4-stroke multi cylinder petrol engine
5. Determination of FHP by retardation and motoring test on IC engine
6. I.C. Engines heat balance on petrol / Diesel engines.
7. Economical speed test of an IC engine
8. Study of boilers

SECTION B – HYDRAULIC MACHINES LAB

1. Impact of jets on Vanes.
2. Performance Test on Pelton Wheel.
3. Performance Test on Francis Turbine.
4. Performance Test on Kaplan Turbine.
5. Performance Test on Single Stage Centrifugal Pump.
6. Performance Test on Reciprocating Pump.
7. Calibration of Venturimeter.
8. Calibration of Orifice meter.
9. Determination of loss of head due to sudden contraction in a pipeline.