

### Laboratory Details

Sr. No.	Name of Laboratory	Major Instruments
1	Applied Thermodynamics	Bomb Calorimeter, Flash Point Apparatus, Double stage Reciprocating Air Compressor Test Rig, Exhaust Gas Analyser, Gas Calorimeter
2	Metallurgy	Binocular Metallurgical Microscope, Trinocular Microscope, Standard Metallurgical Microstructure Set, muffle Furnace, Red Dye Penetrant kit, BIE make Vickers cum Brinnel's Hardness Tester, Rockwell Hardness Tester, Dessicator, Magnetic Particle Crack detector
3	Fluid mechanics	Pressure measuring device, Saybolt Viscometer, Metacentric height of ship model, Flow net apparatus, Calibration of Venturimeter / Orificemeter, Calibration of notch , Reynolds Apparatus, Heleshaw apparatus, Friction Losses in pipes
4	Theory of Machines	Clutch Plate Test Rig, Kinematic Pairs, Scotch yoke Mechanism, Elliptical Trammel, Oldham's Coupling, Ackerman Steering gear type mechanism, Pendulum Pump Model, Rotary engine model, Cut section model of Solex Carburetor
5	I.C. Engine	Computerized VCR Diesel engine Test Setup, Morse Test 3-cylinder petrol engine test setup
6	CAD/CAM	Equipped with high end softwares like CATIA V6, Pro-E, MATLAB, ANSYS, MASTERCAM
7	Basic Mechanical Engineering Lab	Model of Cochran Boiler, Model of Wilcox Boiler, Model of 2 stroke Diesel Engine, Model of 2 stroke Petrol engine, Model of 4 stroke Petrol engine, Model of 4 stroke Diesel engine, Flywheel, Models of Mechanisms, Couplings, Bearings & keys
8	Heat Transfer	Thermal conductivity of metal rod , Thermal conductivity of insulation powder , Composite wall apparatus , Forced convection apparatus , Emissivity of Test Surface , Pool boiling , Heat Pipe , Stefan boltzman apparatus
9	Refrigeration & Air Conditioning	Vapour Compressor Refrigeration Test RIG [0.5 TR], Air Conditioner Trainer (0.5 T.R), Vapour Absorption Refrigeration Test RIG (Electrolux), Ice Plant Trainer [30 kg per day]

10	Metrology Quality Control	Vernier Calliper 0-300 mm LC 0.02 mm , Depth Vernier calliper 0-200 mm LC 0.02 mm , Vernier Calliper 0-150 mm LC 0.02 mm , Outside micrometer 0-25 mm LC 0.01 , Digital outside micro meter inside 0-25 mm (0.01mm) , Screw thread micrometer 0-25 mm , Gear tooth Vernier 1-26 module
11	Mechatronics	Calibration of flow meter/ Flow Transducer Trainer: SET UP FOR CALIBRATION OF FLOW METERS. Orifice , Ventury, Rotameter Trainer( with digital flowmeter ) , Calibration of Thermocouple/RTD (0-500°C): SET UP FOR CALIBRATION OF TERMOCOUPLE / RTD: Temperature Range: 0-1000°C
12	Hydraulics & Pneumatics	Advanced Hydraulic Trainer Kit , Advanced Customized Electro-Pneumatic Trainer , Noiseless Air Compressor
13	Dynamics of Machinery	Static and Dynamic Balancing Apparatus , Vibration Lab ( Three Frames ) , Critical Speed of Single Rotor , Horizontal Balancing Machine FIE make HDM-50
14	Turbo Machines	Impact of jet on vane apparatus , Centrifugal pump test rig , Pelton wheel turbine test rig , Francis turbine Test rig
15	Work shop	CNC Lathe Trainer- Model: SS-PT-100, Bench vice, Sensitive Drilling Machine, Bench Grinder, Power Hack saw machine , Carpentry vice, Smith's Hearth, Milling Machine