

Facilities for Mechanical

Laboratories

Laboratory Facilities in the Mechanical Department:Engineering Practices Lab CIVIL

Sl.No.Name of the Equipment Quantity available
 1 Assorted components for plumbing consisting of metallic pipes, plastic pipes, flexible pipes, couplings, unions, elbows, plugs and other fittings. 5 Sets.
 2 Carpentry vice (fitted to work bench) 5 Nos.
 3 Standard woodworking tools 5 Sets.
 4 Models of industrial trusses, door joints, furniture joints 5 each
 5 Portable Power Tools: (a) Rotary Hammer 2 Nos. (b) Demolition Hammer 2 Nos. (c) Circular Saw 2 Nos. (d) Planer 2 Nos. (e) Hand Drilling Machine 2 Nos. (f) Jigsaw 2 Nos.

Engineering Practices Lab Mechanical

S.No.Name of the Equipment Quantity available
 1 Arc welding transformer with cables and holders. 5 Nos.
 2 Welding booth with exhaust facility 5 Nos.
 3 Welding accessories like welding shield, chipping hammer, wire brush, etc 5 Sets.
 4 Oxygen and acetylene gas cylinders, blow pipe and other welding outfit. 2 Nos.
 5 Centre lathe 2 Nos.
 6 Hearth furnace, anvil and smithy tools 2 Sets.
 7 Moulding table, foundry tools 2 Sets.
 8 Portable Power Tool: Angle Grinder 2 Nos.
 9 Study-purpose items: centrifugal pump, air-conditioner One each.

Name of the Laboratory: COMPUTER AIDED ENGINEERING DRAWING LABORATORY

Sl.No. Description Specification Quantity
 1 SERVER Altos G540 (2-way) with XEON 5050 3.0GHz 2X2M 667FSB(x1) 2GB DDR II Fully Buffered DIMM SDRAM ECC 667MHz expandable to 32GB 160GB Easy Swap 7200rpm SATA II HDD(x2), Integrated 6-port SATA Controller with support for RAID 0, 1 Integrated Gigabit Ethernet LAN – 1000BaseT(x2), DVD Writer
 2 DESKTOP Acer PC Desktop Intel Pentium – D – Dual core 2.8 GHz with 800MHz FSB, 2x1 MB Cache Intel 945 Chipset Motherboard Integrated Graphics Media Accelerator Integrated Audio Integrated Gigabyte NIC Card 1 GB DDR – II RAM @ 533MHz
 3 PRINTER HP 1007 A4 size Laser Printer 424 PIN TVSE – MSP 455xl Classic – Dot Matrix Printer
 5 AC Blue Star – 3 ton

Available Software S. No. Description Specification Quantity
 1 CAD Package SOLID EDGE – V19 – Permanent License 30 USERS
 2 CAM Package NX CAM – 4.0 – Permanent License 10 USERS
 3 ANALYSIS Package ANSYS – 11.05 USERS
 4 ALG NASTRAN – 22.099 USERS

Name of the Laboratory: MANUFACTURING TECHNOLOGY LAB – I S.No.Name of the Equipment Quantity available
 1 Centre Lathe with accessories 15
 2 Arc welding machine 04
 3 Gas welding machine 01
 4 Brazing machine 01
 5 Sheet Metal Work facility 01
 6 Hand Shear 300mm 01
 7 Bench vice 05
 8 Standard tools and calipers for sheet metal work 05
 9 Sand moulding Facility 05
 10 Moulding Table Moulding boxes, tools and patterns 05
 11 Injection Moulding Machine 01

Name of the Laboratory: FLUID MECHANICS AND MACHINERY LAB

S.No.Name of the Equipment Quantity available
 1 Orifice meter setup 01
 2 Venturi meter setup 01
 3 Rotameter setup 01
 4 Pipe Flow analysis setup 01
 5 Centrifugal pump/submergible pump setup 01
 6 Reciprocating pump setup 01
 7 Gear pump setup 01
 8 Pelton wheel setup 01
 9 Francis turbine setup 01
 10 Kaplan turbine setup 01

Name of the Laboratory: COMPUTER AIDED MACHINE DRAWING LABORATORY

S. No. Description Specification Quantity
 1 SERVER Altos G540 (2-way) with XEON 5050 3.0GHz 2X2M 667FSB(x1) 2GB DDR II Fully Buffered DIMM SDRAM ECC 667MHz expandable to 32GB 160GB Easy Swap 7200rpm SATA II HDD(x2), Integrated 6-port SATA Controller with support for RAID 0, 1 Integrated Gigabit Ethernet LAN – 1000BaseT(x2), DVD Writer
 2 DESKTOP Acer PC Desktop Intel Pentium – D – Dual core 2.8 GHz with 800MHz FSB, 2x1 MB Cache Intel 945 Chipset Motherboard Integrated Graphics Media Accelerator Integrated Audio Integrated Gigabyte NIC Card 1 GB DDR – II RAM @ 533MHz
 3 PRINTER HP 1007 A4 size Laser Printer 424 PIN TVSE – MSP 455xl

Classic & Dot Matrix Printer 5AC Blue Star & 3 ton

Available Software S. No. Description Specification Quantity Remarks
 1 CAD Package SOLID EDGE & V19 &
 Permanent License 30 USERS
 2 CAM Package NX CAM & 4.0 & Permanent License 10
 USERS
 3 ANALYSIS Package ANSYS & 11.05 USERS
 4 ALG NASTRAN & 22.099 USERS

Name of the Laboratory: STRENGTH OF MATERIALS LAB & MATERIAL TESTING LAB

S. No. Name of the Equipment Quantity available
 1 Universal Tensile Testing machine with double shear attachment & 40 Ton Capacity
 2 Torsion Testing Machine (60 NM Capacity)
 3 Impact Testing Machine (300 J Capacity)
 4 Brinell Hardness Testing Machine
 5 Rockwell Hardness Testing Machine
 6 Spring Testing Machine for tensile and compressive loads (2500 N)
 7 Metallurgical Microscopes
 8 Muffle Furnace (800 °C) 1

Name of the Laboratory: METROLOGY AND MEASUREMENTS LAB

S. No. Name of the Equipment Quantity available
 1 Vernier, Micrometer and Dial Gauge Each 52 slip gauges / sine bars
 2 sets
 3 Bevel protractor
 4 Tool makers microscope
 5 Auto-collimator
 6 Floating carriage micrometer
 7 Comparator (Mechanical)
 8 Thermocouple / Pyrometer 1 set
 9 Strain Gauge / LVDT / Wheatstone Bridge 1 set
 10 Force measuring equipment
 11 Torque sensor
 12 Gear Tooth Vernier 1

Name of the Laboratory: Thermal Engineering Lab - I

S. No. Name of the Equipment Quantity available
 1 I.C Engine & 2 stroke and 4 stroke model Each
 Wood Viscometer
 3 Apparatus for Flash and Fire Point
 4 4-stroke Diesel Engine with mechanical loading.
 5 4-stroke Diesel Engine with hydraulic loading.
 6 4-stroke Diesel Engine with electrical loading.
 7 Multi-cylinder Petrol Engine
 8 Single cylinder Petrol Engine
 9 Data Acquisition system with any one of the above engines
 10 Steam Boiler with turbine setup 1

Name of the Laboratory: MANUFACTURING TECHNOLOGY LAB II S.No. Name of the Equipment Quantity available
 1 Centre Lathes
 2 Turret and Capstan Lathes
 3 Horizontal
 4 Tool Dynamometer
 5 Gear Hobbing Machine
 6 CNC Lathe (Trainer or Industrial Type)
 7 Pillar type drilling machine
 8 Bench drilling machine
 9 Shaping machine
 10 Slotting machine 1

Name of the Laboratory : Dynamics Lab S. No. Name of the Equipment Quantity available
 1 Cam analyzer
 2 Motorised gyroscope
 3 Whirling of shaft apparatus
 4 Dynamic balancing machine
 5 Vibrating table
 6 Vibration test facilities apparatus
 7 Governor apparatus - Watt, Porter, Proell and Hartnell governors
 8 Static and dynamic balancing machine 1

Name of the Laboratory : Thermal Engineering Lab - II

S. No. Name of the Equipment Quantity available
 1 Guarded plate apparatus
 2 Lagged pipe apparatus
 3 Natural convection-vertical cylinder apparatus
 4 Forced convection inside tube apparatus
 5 Pin-fin apparatus
 6 Stefan-Boltzmann apparatus
 7 Emissivity measurement apparatus
 8 Parallel/counter flow heat exchanger apparatus
 9 Single/two stage reciprocating air compressor
 10 Refrigeration test rig
 11 Air-conditioning test rig 1

Name of the Laboratory: CAD / CAM LAB S. No. Description Specification Quantity
 1 SERVER Alto G540(2-way) with XEON 5050 3.0GHz 2X2M 667FSB(x1) 2GB DDR II Fully Buffered DIMM SDRAM ECC 667MHz expandable to 32GB 160GB Easy Swap 7200rpm SATA II HDD(x2), Integrated 6-port SATA Controller with support for RAID 0, 1 Integrated Gigabit Ethernet LAN & 1000BaseT(x2), DVD Writer
 2 DESKTOP ACER PC Desktop Intel Pentium & D & Dual core 2.8 GHz with 800MHz FSB, 2x1 MB Cache Intel 945 Chipset Motherboard
 3 Integrated Graphics Media Accelerator
 4 Integrated Audio
 5 Integrated Gigabit NIC Card
 6 1 GB DDR & II RAM @ 533MHz
 7 333PRINTER HP 1007 A4 size Laser Printer
 8 2424 PIN TV SE & MSP 455xl Classic & Dot Matrix

Printer35ACBlue Star &ndash; 3 ton2

Available Software S. No.DescriptionSpecificationQuantity 1CAD PackageSOLID EDGE – V19 –
 Permanent License 30 USERS2CAM PackageNXCAM – 4.0 – Permanent License10
 USERS3ANALYSISPackageANSYS – 11.05USERS4ALG NASTRAN – 22.099USERS

Name of the Laboratory: COMPUTER AIDED SIMULATION AND ANALYSIS LABORATORY

S.No.DescriptionSpecificationQuantity1SERVERAltos G540(2-way) with XEON 5050 3.0GHz 2X2M 667FSB(x1)2GB
 DDRII Fully Buffered DIMM SDRAM ECC 667MHz expandable to 32GB160GB Easy Swap 7200rpm SATAII HDD(x2),
 Integrated 6-port SATA Controller with support for RAID 0,1Integrated Gigabit Ethernet LAN –1000BaseT(x2),
 DVD Writer 012DESKTOPACER PC DesktopIntel Pentium – D – Dual core 2.8 GHz with 800MHz FSB, 2x1
 MB CacheIntel 945 Chipset MotherboardIntegrated Graphics Media AcceleratorIntegrated AudioIntegrated Gigabite NIC
 Card1 GB DDR – II RAM @ 533MHz 333PRINTERHP1007 A4 size Laser Printer 2424 PIN TVSE – MSP
 455xl Classic – Dot Matrix Printer35ACBlue Star – 3 ton2

Available Software S. No.DescriptionSpecificationQuantity 1CAD PackageSOLID EDGE – V19 –
 Permanent License 30 USERS2CAM PackageNXCAM – 4.0 – Permanent License10
 USERS3ANALYSISPackageANSYS – 11.05USERS4ALG NASTRAN – 22.099USERS 5SIMULATION
 PACKAGE MAT LAB 15 USERS

Name of the Laboratory: MECHATRONICS LAB

S. No.Name of the Equipment Quantity available 1Basic Pneumatic Trainer Kit with manual and electrical
 controls12Basic Pneumatic Trainer Kit with PLC control 13HYDROSIM & PNEUMOSIM Software / Automation studio
 1048051 - Microcontroller kit with stepper motor and drive circuit 1No5LAB VIEW software with Sensors to measure
 Temperature, Pressure, Flow rate, direction, speed, velocity and force. 1 SETS6LABVIEW Software 15Nos