

# LABORATORY FACILITIES

## ENGINEERING PRACTICES LABORATORY

- Power Tools -Range Finder
- Power Tools -Digital Live-wire detector
- Single phase Autotransformer
- Single phase resistive load
- Digital Voltmeter
- Digital Ammeter

## ELECTRIC CIRCUITS LABORATORY

- Ammeter
- Voltmeter
- Multi meter
- DCRPS (Single Source)
- DCRPS (Dual Source)
- Digital Storage Oscilloscope
- Cathode Ray Oscilloscope
- Function Generator
- Decade Inductance Box
- DC Regulated Power Supply
- Digital Multimeter
- Digital IC Trainer Kit
- Digital Storage Oscilloscope,25MHz,2 Channel,
- Digital Storage Oscilloscope,50MHz,2 Channel

## POWER SYSTEM SIMULATION LABORATORY

Power System simulation Laboratory is well equipped and upgraded with systems having following configurations:

- 1) INTEL core i3 processors with 2100 CPU & 3.09 GHZ speed
- 2) 4 GB DDR3 RAM with 500 GB Hard Disk Drive
- 3) 18.5" TFT wide screen monitor with the following softwares
  - 1) AU Power Version 1.0 - 30 User License
  - 2) MathCAD version 14 - 30 Users
  - 3) Labview 7 - 5 User License
  - 4) Matlab& Simulink version 6 - 10 user License.

## ELECTRICAL MACHINES LABORATORY – I & II

Electrical Machines Laboratory (I,II) is well equipped with DC Shunt Generator Set, Alternator Set, 3 $\Phi$  Squirrel Cage Induction Motor, 1 $\Phi$  Induction Motor, DC Shunt Motor, DC Compound Motor, DC Series Motor, , DC Compound Generator Set, DC Series Generator Set, 3 $\Phi$  Slip Ring IM- DC Motor Coupled Set, Rectifier Unit ,Power Factor Meters and Frequency Meters.

## **POWER ELECTRONICS LABORATORY**

Power Electronics Laboratory is well equipped with MOSFET module, IGBT module , Single phase Series Inverter , Single phase Cycloconverter , AC phase control using SCR, DIAC and TRIAC , Single phase PWM Inverter , Diode Bridge Rectifier training kit, Single SCR based half controlled and fully controlled converter, UJT pulse trigger circuit for SCR, SCR parallel inverter module, Three phase half and fully controlled bridge converter, SCR DC voltage / current commutated chopper, IGBT chopper , IGBT based PWM inverter, Single phase IGBT based PWM inverter, Transient characteristic of SCR and MOSFET, Step-down and step-up MOSFET based choppers, IGBT based three phase PWM inverters, Resonant DC to DC converter, Analog & Digital IC testers and Auto compute digital LCR-Q meter.

## **MICROPROCESSOR & MICROCONTROLLER LABORATORY**

Our Microprocessor & Microcontroller Laboratory is well equipped with MCS Family Microcontroller Trainer (MICRO 51EB LCD), 8051 Microcontroller Trainer Kit with LED Version, 89c51 Microcontroller Trainer Kits, 80196 Evaluation Kit, MCS 68HC11 Microcontroller Project Card, 8086 Kit with inbuilt assembler, Keyboard & Display Interface Card(8279), DAC & ADC Interface Cards, Stepper Motor Interface Controller with Stepper Motor, Temperature Measurement and Control Module, Traffic Light Controller Card, DMA Interface Card(8257), Interrupt Controller(8259), AL PICPROG-PC Based PIC Programmer, 8085 Microprocessor Trainer Kits With LED Version, 8255, 8251 & 8253 Interface Cards, 8 Digit Multiplexed Display Card and AMD 64 Bit.

## **CONTROL & INSTRUMENTATION LABORATORY**

Control & Instrumentation Laboratory is well equipped with AC Servomotor, DC Motor based Position Control, Lead Lag Network Simulator. Process Control simulator, Synchro Transmitter and Receiver, Phase Shifting Transformer, Kelvin's Double Bridge, DC Servomotor Kit, AC Servomotor Kit, LVDT, Speed Measurement Trainer , Single & three phase Energy meter, Schering Bridge Trainer, Anderson Bridge Kit, Digital Storage Oscilloscope, Stepper Motor Control Trainer, Linear System Simulator, Compensation Design, Temperature Control System, DC Speed Control System, Pressure Transducer Kit, Maxwell's Inductance Bridge, Wheatstone's Bridge, Analog to Digital Converter, Digital to Analog Converter, Torque Cell, Single & Three Phase Autotransformer and Three Phase Resistive, inductive and capacitive Loads.

## **ELECTRON DEVICES AND CIRCUITS LABORATORY**

Devices and Circuits laboratory is well equipped with Auto Transformers, Cathode Ray Oscilloscope, Dual Regulated Power Supplies, Function Generators and various Integrated Circuits.

## **ELECTRICAL DRIVES AND PROJECT LABORATORY**

Electrical Drives and project laboratory is well equipped with 3 phase rectifier trainer with 1HP DC Shunt motor, 3 Phase induction motor using PWM Inverter with 1HP AC 3 Phase Induction motor, DSP based closed loop drive 3 Phase Induction motor drive system along with 3 Phase Induction motor with loading arrangement, FPGA based closed loop 3 Phase Induction motor drive system along with loading arrangement, Brushless DC Motor, DSP based chopper fed DC Motor drive system with fractional HP Motor, Switched Reluctance motor and PLC based & AC drive trainer with 1HP motor.