

1. Basic Electrical Engineering Lab



- Rheostat, Choke coils, Capacitor Bank etc.
- Single phase two winding transformers.
- Single phase autotransformers.
- D.C. Motors
- Three phase Variac
- Three-phase Lamp load
- AC/DC Voltmeters

- AC/DC Ammeters
- Wattmeter (LPF & UPF)
- Power factor meters
- Frequency Meters
- Tachometers



2. Electrical Workshop



- Winding machines.
- Power Drill.
- Lathe machine.
- Wire Gauge Measurements instruments.

- Wiring tools/Boards
- Electrical Wires, Cables and Insulation materials.
- Lamination sheets etc.



3. Junior Machine Lab



- Single phase (220/110V, 2 kVA) and three-phase (3 kVA, 415 V) transformers.
- D.C. Motors (2.2kW, 3.7 kW) and D.C. Generators (3.7 kW, 5.5 kW)
- Three-phase squirrel cage Induction Motors (3HP, 5 HP, 10 HP)
- Three phase slip ring induction motor
- Three-Phase Alternator (5 kVA, 415 V) coupled with D.C. Motors (7.5 kW)

- Three phase and single phase R-L-C loads
- Thyristor DC drive (5 HP)
- Digital storage Oscilloscope
- Power Analyzer
- Power Quality Analyzer
- ADMC-401, Digital Signal Processing Board
- Digital Power Meter
- Wattmeters, Power factor meters, Frequency Meters, Tachometers



4. Senior Machine Lab



- Single phase (220/110, 2 kVA) transformer
- Three-phase (3 kVA, 415 V) transformers
- D.C. Motors (2.2kW, 3.7 kW) and D.C. Generators (3.7 kW, 5.5 kW),
- Three-phase squirrel cage Induction Motors (3HP, 5 HP, 10 HP)
- Three-phase slip ring induction Motor (5 HP, 415 V) coupled with D.C. Shunt Generator (3.7 kW)
- Three-Phase Alternator, (5 kVA, 415 V) coupled with D.C. Motors (7.5 kW)

- Single Phase capacitor start and capacitor run induction motors.
- Micro-Processor based variable voltage - variable frequency (V/f) A.C. drives
- Generalized Electrical Machine (Mawdsley, U.K.)
- Three-Phase A.C. Commutator Motors
- Eddy current dynamo-drives
- Three phase and single phase R-L-C loads
- Wattmeters, Frequency Meters, Tachometers, Megger
- Three phase power quality analyser



5. Instrumentation and Measurements Lab



- Wheatstone Bridge
- Maxwell Bridge
- Kelvin's Bridge
- Wein Bridge
- Strain Gauge, LDR, LVDT, Inductive and capacitive transducers, digital oscilloscope.

- A.C./D.C. Voltmeters
- A.C./D.C. Ammeters
- Tachometers
- Wattmeter
- Power factor meters
- Frequency Meters

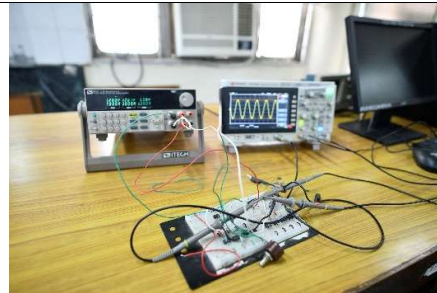


6. Linear Integrated Circuits Lab



- Temperature, displacement, and position transducers.
- Strain Gauge.
- LCR meter.

- IC tester
- Digital Storage Oscilloscope, Arbitrary Function Generator
- Analog & Digital IC's and components.
- Regulated power supply



7. Electrical Energy Utilization Lab



- 1104 dSpace Controller cards
- Fluke 434 II Power Quality Analyzer
- Fluke 43 B Clamp meter
- Lux Meter
- Three Phase Inverter

- Digital Storage Oscilloscope
- Spherical Testing



8. Power Electronics Lab



- Power Semiconductor components: Diodes, SCRs, MOSFET, BJTs, TRIAC and IGBT.
- A.C. Voltage Controller kit
- Voltage and current commutation kits for SCRs
- Firing circuits for SCR using R, & RC components

- Power Quality Analyzer
- Arbitrary Function Generator
- Digital signal processing kits TMSF2812



9. Drives Lab



- 1104 dSpace Controller cards
- Fluke 434 II Power Quality Analyzer
- Fluke 43 B Clamp meter
- Semikron Inverter-Converter Stack Assembly- 25kVA
- Encoders

- TMS320C2000 TI based microcontroller high power development kits
- Voltage sensors
- Current sensors
- Switched mode power supply
- Oscilloscope – Infvision Agilent V/f and vector control drives



10. Control System Lab



- A.C. and D.C. servomotors.
- Electrohydraulic Servo systems (Feedback UK).
- Synchro position sensor and error detector system.
- DC servo mechanism (Feedback UK).
- Time Response Analysis Board for 1st order and 2nd order systems.

- Temperature control of electric oven.
- PIC/AVR Micro-Controller Board.
- Stepper motor control board.
- FPGA Based Data acquisition systems.
- Transputerised work stations
- Level, Pressure and Flow Controller System.
- Digital Controller for level control system.
- Voltage & Current Sensor.



11. Microprocessor and Microcontrollers Lab



- 8085 & 8086 Microprocessor Boards.
- PIC and AVR Microcontroller Boards.
- Intel 8051 and 8096 based Microcontrollers Boards

- PPI for 8085 Microprocessors
- Stepper motor control using Microprocessors.
- Microprocessor Based Display Control Boards



12. Process Control Lab



- Pressure Process Control
- Temperature Process Control
- Flow Process Control

- PLC
- NI Instruments Labview Software



13. Power System Lab



- Transformer oil test kit
- Insulation Resistance tester
- Transmission line models
- Phase shifters
- High voltage surge recording equipment

- Under/Over voltage, under frequency, over current static Relays.
- Megger relay test kit, Megger earth tester
- Programmable power supply unit (GW Instech.)



14. Switch Gear and Protection Lab



- Microcontroller Based Earth Faulty Relay
- Microcontroller Based Over current Relay
- Microcontroller Based Over/Under Frequency Relay

- Over current Relay simulator
- Feeder Protection Simulator
- 11kV Circuit Breaker
- Differential Line Protection Relay



15. Power System Simulation Lab



- MATLAB, Simulink, Simpower system
- PSCAD
- PRDC-Mypower,

- Digisilent power factory,
- ETAP



16.High Voltage Lab



- High Voltage Cable tester

- 300 KV, 15KJ Impulse Generator
- 100KV Power Frequency Testing Transformer



17. Simulation Lab



- MATLAB
- Motorsolve

➤ ETAP

