

# DEPARTMENT OF ELECTRICAL ENGINEERING

## INDUSTRIAL POWER LABORATORY-1

### PROCESS AUTOMATION LAB

#### List of Compulsory Experiments:

1. SCADA Experiments (EE6491-M.Tech Industrial Power and Automation, EE6291-M. Tech Power System )
  - a) SCADA- Transmission Module RTU in Local and Remote Mode.
    - a. Ferranti Effect
    - b. VAR Compensation (Series and Shunt)
    - c. Transmission Line Modelling
  - b) SCADA- Distribution Module RTU in Local and Remote Mode.
    - a. Load Shedding
    - b. Transformer Loading
    - c. Study of Communication Link
2. PLC Programming Experiments (EE6491-M.Tech Industrial Power and Automation, EE6191-M. Tech Instrumentation and Control System )
  - a) Control of Batch Process Reactor
  - b) Lift Control
  - c) Speed Control of AC Servo Motor
  - d) Automatic Star Delta Starter of Three Phase Induction Motor
  - e) Water Level Control
3. AC Servo Motor Control using dSPACE (EE6491-M.Tech Industrial Power and Automation, EE6391-M. Tech Power Electronics )

#### List of Desirable Experiments:

1. Testing of Numerical Overload Relay
2. Study of Common Industrial Communication Protocols