

## **POWER ELECTRONICS LABORATORY**

**M. Tech – I Sem. (Regular): Electrical (Power Electronics and ASIC Design)**

**Subject: Electrical drives**

**Session: 2011-12**

### **List of Experiments:**

1. To test the performance of Microprocessor controlled reversible DC drive using 1 phase SCR dual converter.
2. To test the performance of Micro-controller based reversible regenerative DC drive using 4-quadrant MOSFET based chopper.
3. To perform slip power recovery using thyristorised Rectifier Bridge converter for wound rotor induction motor.
4. To determine the speed-torque characteristics of single-phase AC motor using thyristorised AC voltage controller with open loop and closed loop control.
5. To control the given 3-phase induction motor using inverter module and SCR AC regulator module with PC interface.
6. To control the given DC motor using Chopper module and SCR Converter module with PC interface.
7. To control the pulse width modulation (PWM) voltage source inverter (VSI) fed 3-phase AC drive with DSP controller.
8. To control the speed of a given three-phase induction motor by V/F (voltage/frequency) control.
9. To perform the 4-quadrant operation using IGBT based chopper capable of driving a 0.5-hp dc motor.
10. To perform the control of 3-phase induction motor using IGBT based 3-phase inverter capable of driving a 0.5 hp ac motor.