POWER ELECTRONICS AND DRIVES LABORATORY-I

Course Code: 13EE2209

L	P	C
0	3	2

Pre requisites: Power Electronics, Power Electronics & Drives

Course Outcomes: At the end of the course, the students will be able to
CO1: Test the Phase controlled AC-DC converters
CO2: Test the AC voltage controllers
CO3: Test the DC-AC Inverters.
CO4: Test the DC-DC Choppers.
CO5: Test the Resonant converters.

LIST OF EXPERIMENTS
(ANY TEN EXPERIMENTS TO BE PERFORMED)

1. SPICE Simulation of Three phase full converter using RL E Load.
2. SPICE Simulation of three phase AC Voltage controller using RL load.
3. SPICE Simulation of Three phase inverter with Sinusoidal PWM control for R-Load.
4. SPICE Simulation of single phase current source inverter with RL Load.
5. SPICE Simulation of dc-dc converters.
6. SPICE Simulation of a resonant converter.
7. Performance and operation of 3- phase Semi-Converter with R & R-L load
8. Performance and operation of 3- phase Full-Converter with R & R-L load..
9. Performance & Operation of a four quadrant Chopper fed D.C. Drive
10. Performance & Operation of a 3-phase A.C. Voltage controller with motor load.
11 .Single Phase PWM Inverter with R & R-L load
12. Operation of 3-phase PWM Inverter with R & R-L load.
13 .DC Series motor controller using Jones Chopper.
14. Speed control of 1-Phase Induction Motor using cycloconverter.

Textbooks:

1. Ned Mohan, Tore M. Undelan and William P. Robbins, "*Power Electronics*", John Wiley & Sons, 2007.

2. Md. H. Rashid, "*Power Electronics*", Pearson Education, Third Edition, 2008.

3. Bimal K. Bose, "*Modern Power Electronics and AC Drives*", Prentice-hall Of India Pvt. Ltd,2008.

4. Rashid, M., "*Simulation of Power Electronic Circuits usingPSPICE*", PHI, 2006.