

EE6L2	3/4 B.Tech. SIXTH SEMESTER	Credits: 2
Lecture: --	POWER ELECTRONICS & DRIVES LAB	Internal assessment: 25 marks
Lab: 3 periods/week		Semester end examination: 50 marks

Course Objectives:

- To make the students to design triggering circuits of SCR.
- To introduce power electronics components and to obtain the characteristics of SCR, TRIAC, IGBT and MOSFET.
- To perform the experiments on various converters.

Course Outcomes:

Upon completing this lab students must be able to

1. Correlate theoretical and practical analysis of AC-AC converter
2. Correlate theoretical and practical analysis of DC-AC converters
3. Correlate theoretical and practical analysis of converter fed AC and DC drives.
4. Analyze the characteristics of MOSFET, IGBT, SCR,
5. Study SCR firing circuits and commutation techniques.

Any 10 of the following Experiments are to be conducted

1. Study of characteristics of SCR, MOSFET & IGBT
2. Gate firing circuits of SCR's
3. Forced commutation circuits (Class A, Class B, Class C, Class D & Class E)
4. Single phase fully controlled bridge converter with R and RL loads
5. Single phase AC Voltage controller with R and RL loads
6. Single phase cyclo-converter with R and RL loads
7. Single phase bridge inverter with R and RL loads
8. Single phase series inverter with R and RL loads
9. Single phase Parallel inverter with R and RL loads.
10. Single phase dual converter with R, RL and RLE loads
11. Three phase half controlled bridge converter with RL-Load
12. IGBT based four quadrant chopper controlled DC motor drive
13. VSI fed three phase induction motor drive
14. Buck and Boost Converters.