

EE6L1	3/4 B.Tech. SIXTH SEMESTER	Credits: 2
Lecture: --	ELECTRICAL MACHINES LAB – III	Internal assessment: 25 marks
Lab : 3 periods/week		Semester end examination: 50 marks

Course Objective:

In this lab students understand the performance of alternator, regulation of alternator, performance of synchronous motor, performance of induction generator and performance of special machines.

Course Outcomes:

After completing this lab course, student is able to

1. Understand the starting and connecting procedures of synchronous generators and performance of the alternator at different loads
2. Synchronize the given alternator across the supply lines
3. Obtain the 'V' & 'A' curves of synchronous motor
4. Understand the performance of special machines such as three phase squirrel cage induction generator and three phase schrage motor.

List of experiments:

The following experiments are required to be conducted:

1. Regulation of a three-phase alternator by synchronous impedance method
2. Regulation of a three-phase alternator by mmf method.
3. Regulation of a three-phase alternator by Z.P.F. method
4. Regulation of a three-phase alternator by A.S.A method
5. Load test on three phase Alternator.
6. Measurement of sequence impedance of a three-phase alternator.
7. 'V' & 'A' curves of a three-phase synchronous motor.
8. Determination of X_d and X_q of a salient pole synchronous machine
9. Brake test on three phase squirrel cage induction generator.
10. Brake test on three phase Schrage motor.