

3/4 B.Tech. FIRST SEMESTER

EE5L1 ELECTRICAL MACHINES LAB – II Credits: 2

Practical: 3 periods/week

Internal assessment: 25 marks

Tutorial: 0 period /week

Semester end examination: 50 marks

Objective :

In this lab students understand the performance of single phase transformer, parallel operation of transformer, performance of induction motor, regulation of alternator and equivalent circuit of single phase induction motor.

Learning outcomes :

After completing the lab course, students understand the

1. Performance of the single phase transformer at No load and full load, performance of three phase induction motor, regulation of alternator and performance of single phase induction motor.

Any 10 of the Following Experiments are Required to be Conducted:

1. O.C. & S.C. Tests on Single phase Transformer
2. Sumpner's test on single phase transformers
3. Scott connection of transformers
4. Parallel operation of two Single phase Transformers
5. Brake test on three phase Induction Motor
6. No-load & Blocked rotor tests on three phase Induction motor
7. Regulation of a three –phase alternator by synchronous impedance & m.m.f. methods
8. Regulation of three-phase alternator by Z.P.F. and A.S.A methods
9. V and Inverted V curves of a three—phase synchronous motor.
10. Equivalent Circuit of a single phase induction motor
11. Determination of X_d and X_q of a salient pole synchronous machine
12. Separation of core losses of a single phase transformer
13. Measurement of Harmonics in 3 phase transformer
14. Measurement of sequence impedance of a three-phase alternator.