



ELECTRICAL MACHINES – I LAB

- 1. Obtain OCC of a DC shunt Generator at below, rated and above rated speeds.**
- 2. Obtain Internal and External characteristics of DC Shunt Generator.**
- 3. Obtain Internal and External characteristics of DC Series Generator.**
- 4. Obtain Internal and External characteristics of DC Compound Generator**
- 5. Identify the terminals of the following DC Machines i) DC Shunt motor ii) DC Series Motor iii) Compound Motor.**
- 6. Identify various parts of dc machine using cut sectional working model
i) DC Shunt motor ii) DC Series Motor iii) Compound Motor.**
- 7. Obtain performance characteristics by conducting Brake Test on DC Shunt Motor**
- 8. Obtain performance characteristics by conducting Brake Test on DC Series Motor.**

9. Obtain performance characteristics by conducting Brake Test on DC Compound Motor.
10. Speed control of DC Shunt Motor by i) Rheostatic control method ii) Field control method
11. Obtain the performance of a DC Shunt Motor by conducting Swinburne's test.

ELECTRICAL MACHINES – II LAB

1. Conduct load test on 1-phase Transformer and calculate efficiency and regulation
2. Conduct the following two tests on 1-phase Transformer I) O.C. test ii) S.C. tests and from the result a) Draw the equivalent circuit. b) Calculate efficiency at various loads and power factor c) Find the load at which maximum efficiency occurs. d) Calculate All-day efficiency for the given load cycle of 24 hours.
3. Obtain the efficiency and regulation of two similar 1-phase transformers by conducting Sumpner's test.
4. Conduct Scott connection (T-connection) on transformers.
5. Connect two identical 1-ph transformers in parallel and observe the load sharing.
6. Conduct oil testing using oil testing kit to know the dielectric strength of transformer oil.
7. Conduct (direct) load test on Alternator and obtain voltage regulation.
8. Obtain the regulation of Alternator by using synchronous impedance method.
9. Synchronize the given Alternator with supply mains by using bright lamp method.

ELECTRICAL MACHINES – III LAB

1. Conduct brake test on 3-phase squirrel cage induction motor.
2. Conduct Brake test on 3-phase slip ring induction motor.
3. Conduct load test on synchronous motor and draw V and inverted V curves

4. Perform Load test on Single phase split type induction motor.
5. Perform Load test on single phase capacitor type induction motor
6. Perform Load test on a single phase Universal motor
7. Conduct suitable tests and draw circle diagram of squirrel cage induction motor.
8. Conduct suitable tests and draw circle diagram of slip ring induction motor.
9. Identify and rectify faults in AC motors.
10. Identify and rectify faults in AC starters

BASIC ELECTRICAL ENGINEERING LAB

- 1 Make a circuit with One lamp controlled by one switch with PVC surface conduit system
- 2 Make a circuit with One lamp controlled by one switch and provision of 2/3-pin socket.
- 3 Make a circuit for Stair case wiring and Go-down wiring
- 4 Make the electrical wiring for Fluorescent Lamp
5. Identifying the terminals and testing for its operation of Three Point and 4-Point starters.
6. Identifying the terminals and testing for its operation of DOL (Direct On Line) starter and Star – Delta Starter.
7. Identify of Terminals of the Following DC Machines with the Use of Test Lamp
(a) DC Shunt Motor (ii) DC Series Motor (iii) DC Compound Motor
8. Measuring the values of Insulation Resistance of the Following DC Machines with the Use of Megger. (a) DC Shunt Motor (ii) DC Series Motor (iii) DC Compound Motor
9. Identify of Terminals of the Following AC Machines with the Use of Test Lamp
(a) 3-Phase Squirrel Cage Induction Motor (ii) 3- Phase Slip Ring Induction Motor.

10. Measuring the values of Insulation Resistance of the Following DC Machines with the Use of Megger. (a) 3-Phase Squirrel Cage Induction Motor (ii) 3- Phase Slip Ring Induction Motor.

11. Draw the Speed Control Characteristics of DC Shunt Motor By Armature Control method.

12. Draw the Speed Control Characteristics of Dc Shunt Motor By Field flux Control method.

13. Draw the Performance Characteristics (Speed, Efficiency) of Three Phase Squirrel cage Induction Motor by load test .

14. Draw the Performance Characteristics of Single Phase AC Series Motor

15. Draw the Performance Characteristics of Ac Single Phase Induction Motor.

16. Measure the earth resistance at the Place of Pipe Earthing System or Plate Earthing system Using earth Megger .

17. Demonstrate the Procedure of First Aid on Electric Shock .