



# SANTHIRAM ENGINEERING COLLEGE, NANDYAL

Department of Electrical and Electronics Engineering

**Name of the Laboratory:** ELECTRICAL TECHNOLOGY AND BASIC SIMULATION (Part – A)

**Regulation:** R15

**Branch:** Electronics & Communication Engineering

**Year & Sem:** II- I

## Course Objectives

- No load and load characteristics of DC generators
- Various tests on DC motors
- The speed control techniques of DC motors

## Course Outcomes

- Conduct experiments to obtain the no-load and load characteristics of D.C. Generators
- Conduct tests on D.C. motors for predetermination of efficiency
- Conduct tests on D.C. motors for determination of efficiency
- Control the speed of D.C. motor in a given range using appropriate method
- Identify the reason as to why D.C. Generator is not building up voltage.

## Part – A

### List of Experiments

1. Magnetization Characteristics of D.C. Shunt Generator. Determination of Critical Field Resistance.
2. Swinburne's Test on DC Shunt Machine (Predetermination of Efficiency of a Given DC Shunt Machine Working as Motor and Generator).
3. Brake Test on DC Shunt Motor. Determination of Performance Characteristics.
4. OC & SC Tests on Single-Phase Transformer (Predetermination of Efficiency and Regulation at Given Power Factors and Determination of Equivalent Circuit).
5. Load Test on Single Phase Transformer.

### List of Equipments

1. DC Shunt Motor Coupled to 5 Hp, 220 V, 1500 RPM DC Shunt Generator
2. Dc Shunt Motor & Alternator Set
3. Dc Shunt Motor & Alternator Set
4. Single Phase Transformer With Auto Transformer Equipment
5. Single Phase Transformer With Resistive Load Equipment



### Lab Instructor:

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