G. NARAYANAMMA INSTITUTE OF TECHNOLOGY & SCIENCE

(For Women)

(AUTONOMOUS)

Shaikpet, HYDERABAD - 500 104

II Year B.Tech. EEE I-Semester

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ELECTRICAL MACHINES - I LAB

Prerequisites: Basic Electrical Engineering

Course Objectives:

1. To gain thorough knowledge about operation and the performance of DC Machines.
2. To understand Different starting methods of DC Machines.
3. To draw the performance characteristics of DC Machines for different load conditions.

LIST OF EXPERIMENTS

PART A (Compulsory)

1. Magnetization Characteristics of DC Shunt Generator. Determination of its critical fieldresistance and critical speed.
2. Brake test on DC shunt motor.
3. Load test on DC Compound Generator.
4. Brake test on DC Compound motor.
5. Load test on DC Shunt Generator.
6. Load Test on DC Series Generator.
7. Hopkinson's Test on DC Shunt Machines.
8. Swinburne's Test on DC Machine.

PART B (Any two from the following list)

1. Separation of No Load losses in DC Shunt Motor.
2. Retardation test on DC shunt motor.
3. Speed control of DC shunt motor.
4. Field's Test on DC Series machines.

Course outcomes:

After completion of this course student should be able to:

1. Analyze the characteristics of DC machines.
2. Carry out various tests to assess the performance of DC Machines
3. Understand different starting methods of DC Machines.
4. Know conceptual things to implement in real time applications.
5. Choose suitable DC motor for a specific application.
6. Identify the relevant speed control technique based on the application.