



JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY: KAKINADA
KAKINADA – 533 003, Andhra Pradesh, India
DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

I Year - II Semester		L	T	P	C
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BASIC ELECTRICAL ENGINEERING LAB					

Learning Objectives:

- To plot the magnetizing characteristics of DC shunt generator and understand the mechanism of self-excitation.
- To control the speed of DC motors.
- To determine and predetermine the performance of DC machines.
- To predetermine the efficiency and regulation of transformers and assess their performance.
- To analyse performance of three phase induction motor.
- To understand the significance of regulation of an alternator using synchronous impedance method.

Any ten of the following experiments are to be conducted

1. Magnetization characteristics of D.C. Shunt generator.
2. Speed control of D.C. shunt motor.
3. Brake test on DC shunt motor.
4. Swinburne's test on DC machine
5. Load test on DC shunt generator
6. Load test on DC series generator.
7. Separation of losses in DC shunt motor
8. OC & SC tests on single-phase transformer
9. Sumpner's test on single phase transformer
10. Brake test on 3-phase Induction motor.
11. Regulation of alternator by synchronous impedance method.

Learning Outcomes:

The student should be able to:

- Determine and predetermine the performance of DC machines and transformers.
- Control the DC shunt machines.
- Compute the performance of 1-phase transformer.
- Perform tests on 3-phase induction motor and alternator to determine their performance characteristics.