I Year-II Semester		L	T	P	C
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Basic Electrical Engineering Lab (ES1208)					

Prerequisite Course: Students require Basic knowledge of Electrical circuit components

Course Description and 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 alternators using synchronous impedance method.

Course Outcomes:

Upon completion of the course, the student will be able to achieve the following outcomes.

CO	Course Outcomes	POs
1	Plot the magnetizing characteristics of DC shunt generator and understand the mechanism of self-excitation.	3
2	Understand and control the speed of DC motors.	2
3	Determine and predetermine the performance of DC machines.	3
4	Predetermine the efficiency and regulation of transformers and assess their performance.	4
5	Analyse performance of three phase induction motor and understand the significance of regulation of an alternators using synchronous impedance method.	3

Syllabus:

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 iun 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.