II Year II Semester	L	Т	Р	С
17EE411	0	0	3	2

ELECTRICAL MACHINES – 1 LABORATORY

Learning objectives:

- To plot the magnetizing characteristics of DC shunt generator and understand the mechanism of self-excitation.
- To control the speed of the DC motors. Determine and predetermine the performance of DC machines.
- To predetermine the efficiency and regulation of transformers and assess their performance.

Note: Any of the 10 experiments to be conducted

- 1. Magnetization characteristics of DC Shunt Generator. Determination of critical field resistance and critical speed.
- 2. Load Test on DC Series Generator.
- 3. Load Test on DC Shunt Generator.
- 4. Load Test on DC Compound Generator.
- 5. Brake test on DC shunt motor. Determination of performance curves.
- 6. Brake test on DC Compound Motor. Determination of performance curves.
- 7. Hopkinson's test on DC shunts machines. Predetermination of efficiency.
- 8. Swinburne's test and Predetermination of efficiencies as Generator and Motor.
- 9. Speed control of DC shunt motor by Field and armature Control.
- 10. OC & SC test on single phase transformer.
- 11. Sumpner's test on single phase transformer.
- 12. Scott connection of transformers
- 13. Parallel operation of Single phase Transformers.

Learning outcomes:

- To determine and predetermine the performance of DC machines and Transformers.
- To control the speed of DC motor.
- To achieve three phase to two phase transformation