



MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE



Department of Electrical & Electronics Engineering

B. Tech II Year I Semester – R20

DC Machines and Transformers Laboratory – 20EEE204

List of experiments

Sl. No.	Name of the Experiments	Equipment Details	Image
1	Scott connection.	Transformers with MI Ammeters, MI Voltmeters, and Resistive Load	
2	Sumpner's test on transformer.	Transformers with MI Ammeters, MI Voltmeters, and Wattmeter (LPF &UPF).	

3	Magnetization characteristics of DC shunt generator. Determination of critical field resistance and critical speed.	Motor Generator Set, MC Ammeters, MC Voltmeters, Rheostats and Lamp Load.	
4	Hopkinson's test.	Motor Generator Set, MC Ammeters, MC Voltmeters, and Rheostats.	

5

Swinburne's test and Speed control on DC Motor.

DC Motor, MC Ammeters, MC Voltmeters, and Rheostats.








6

Load test on DC shunt generator. Determination of characteristics.

Motor Generator Set, MC Ammeters, MC Voltmeters, Rheostats and Lamp Load.



7	Load test on DC compound generator. Determination of characteristics	Motor Generator Set, MC Ammeters, MC Voltmeters, Rheostats and Lamp Load.	
8	Field's test on DC series machines. Predetermination of efficiency	Motor Generator Set, MC Ammeters, MC Voltmeters, Rheostats and Lamp Load.	
9	Brake test on DC shunt motor and DC Compound motor. Determination of performance curves.	DC Motor, MC Ammeters, MC Voltmeters, MC Voltmeters, Rheostats with loading arrangements.	

10	Load test on single-phase transformer.	Single Phase Transformer with MI Ammeters, MI Voltmeters, and Resistive Load	
11	Parallel operation of single-phase transformers	Single Phase Transformer with MI Ammeters, MI Voltmeters, and Resistive Load	
12	Retardation test on DC shunt motor. Determination of losses at rated speed.	DC Motor with reversing switch, MC Ammeters, MC Voltmeters, and Rheostats.	