

Electrical Measurements Lab

Objective:

To understand the correct function of electrical parameters and calibration of voltage, current, single phase and three phase power and energy, and measurement of electrical characteristics of resistance, inductance and capacitance of a circuits through appropriate methods.

To understand testing of transformer oil.



Sections Handled: 3-2

Major Equipment Details:

S.No	Name of the Equipment	Quantity
1	Single Phase Energy Meter	1
2	Crompton DC Potentiometer with Accessories	1
3	Resistance Strain Gauge Module	1
4	Portable Kelvin Double Bridge with Accessories	1
5	Schering Bridge with Accessories	1
6	Anderson's Bridge with Accessories	1
7	LVDT Module	1
8	Transformer oil Test Kit	1
9	Wheat Stone Bridge	
10	Digital Stop watch	1
11	Different Ranges of 1- ϕ Auto transformers	2
12	Different Ranges of MI Voltmeters	5
13	Different Ranges of MI Ammeters	6
14	Different Types of 1- ϕ Watt Meters	4

Faculty In charge with qualification: **T Venkateswara Rao, M.Tech**

Lab Technical name with qualification: **N. Ramesh Babu, Diplamo**

Experiment list as per curriculum:

1. Calibration and Testing of 1- ϕ energy Meter.
2. Crompton D.C. Potentiometer -Calibration of PMMC Ammeter and PMMC Voltmeter.

3. Kelvin's Double Bridge - Measurement of Resistance -Determination of Tolerance.
4. Capacitance Measurement Using Schering Bridge.
5. Inductance Measurement Using Anderson Bridge.
6. Measurement of 3- ϕ Reactive power with single-phase wattmeter for balanced loading.
7. Calibration of LVDT
8. Resistance strain gauge - strain measurements and Calibration
9. Dielectric oil testing using H.T. testing Kit
10. Measurement of Power by 3 Voltmeter and 3 Ammeter methods.
11. Measurement of Parameters of choke coil.

Experiment list beyond the curriculum

1. Wheatstone Bridge- Measurement of Medium Resistance
2. Calibration of Single Phase Dynamometer Type wattmeter for Resistance loading.