

MEASUREMENTS & INSTRUMENTS LAB

Equipment Details:

S.No	Name of the item with specification	Quantity
1	Industrial Kelvin Double Bridge	1
2	Anderson Bridge	1
3	Schering Bridge	1
4	Standard Cell	3
5	Crompton D.C.Potential Meter	1
6	Super Sensitive Galvano Meter	4
7	Volt Ratio Box	2
8	Resistance Boxes (Four Dials)	5
9	Resistance Coils (1000 ohms)	2
10	Resistance coils (0.10.20.50.10100ohms)	2sets
11	Decade Inductance Box (Four Dials)	1
12	Variable Type Condenser Box (3 Dials)	5
13	Function Generator	3
14	Single Phase Energy Meter	1
15	Three Phase Energy Meter	1
16	Megger	1
17	Linear Variable Differential Transformer (L.V.D.T)	1
18	Phase Shifting Transformer	1
19	Current Transformer	1
20	Current Transformer	2
21	Multi Meter Digital (DM.354) OSAW Make	3
22	D.C. Power Supply (0-30/v0-5A) (ITL make)	5
23	Power Factor Meter (c.c.5A p.c.600V)	1
24	Cathode Ray Oscilloscopes (30 MHz –Dual Trace)	1
25	Single phase auto transformer 10A/0-270V	4
26	Single phase auto transformer 20A/0-270V	2
27.	LVDT 3 ½ digital display 1 % linearity	1
28.	DC Crompton potentiometer with standard cell volt ratio box Galvano meter 4 terminal resistance box 2-V power supply	1
29.	Kelvin's Double bridge with 4 terminal resistance box	1
30	Sheering bridge built in oscillator and power supply head phone set	1
31.	Anderson bridge built in oscillator and power supply head phone set	1
32.	Phase shifting transformer	1

33	Precision current transformer 1% accuracy 1015105A/5A15VA	4
34	Reactive load 3-phase variable type 415V10A(inductive)	2
35	Reactive load 3-phase variable type 415V 10A(capacitive)	1

List of experiments:

1. Calibration and Testing of single phase energy Meter
2. Calibration of dynamometer power factor meter
3. Crompton D.C. Potentiometer – Calibration of PMMC ammeter and PMMC voltmeter
4. Kelvin's double Bridge – Measurement of resistance – Determination of Tolerance.
5. Measurement of % ratio error and phase angle of given C.T. by comparison.
6. Schering bridge & Anderson bridge.
7. Measurement of 3 phase reactive power with single-phase wattmeter.
8. Measurement of parameters of a choke coil using 3 voltmeter and 3 ammeter methods.
9. Calibration LPF wattmeter – by Phantom testing
10. Measurement of 3 phase power with single watt meter and 2 No's of C.T.
11. LVDT and capacitance pickup – characteristics and Calibration