ELECTRICAL CIRCUITS NETWORKS LAB

Equipment Details:

S.No	Name of the item with specification	Quantity
1	Dual Channel – Power supply 0-30V2A	3
2	Power supply 0-30V2A (single channel)	4
3.	Power supply 0-30V2A(single channel)	3
4	Dual Channel – Power supply 0-30V2A	3
5	Function Generators 1 MHz	2
6	Function Generators 1 MHz	3
7	Multi meters – digital	2
8	Multi meters – digital	8
9	Multi meters – digital	10
10	Multi meters – digital	8
11	DC Ammeters (0-100M.A) analog panel type	9
12	DC Ammeters (0-100M.A) analog panel type	5
13	DC Voltmeters (0-30 V) analog panel type	5
14	DC Voltmeters (0-30 V) analog panel type	5
15	Decade Resistance box	5
16	Decade Resistance box	6
17	Decade capacitance box	5
18	Decade capacitance box	5
19	Decade inductance box	5
20	Decade inductance box	6

21	Bread Boards	12
22	Bread Boards	6
23	Bread Boards	5
24	Multi meters bench type	4
14	Soldering Iron (60W, 250V)	1
15	Condenser 15 MFD, 250V	2
16	Condenser 20 MFD, 250V	2
17	Condenser 33 MFD, 250V	2
18	Condenser 423 MFD, 250V	2
19	Cathode Ray oscilloscope	4
20	Cathode Ray oscilloscope	2
21	LCR Bridge 230Vm 50Hz, 0.15A	1
22	LCR Bridge 230Vm 50Hz, 0.15A	2
23	AC voltmeter (0-300V) analog type	2
24	Dimmers 10A	2
25	A.C. Ammeter 0 – ½ Amps	3
26	Rheostat 185 Ohms / 2.3 Amps	2
27.	Rheostat 1350 Ohms / 1.1 Amps	2
28.	Wattmeters LPF 40W, 2.5A 150/300V	2

List of experiments:

1. Verification Thevenin's Theorem and Norton's Theorem
2. Verification of Maximum Power Transfer Theorem
3. Verification of Superposition Theorem
4. Verification of Compensation Theorem
5. Verification of Reciprocity Theorem and Millmann's Theorem
6. Finding resonant frequency in Series and Parallel circuits
7. Determination of Self Inductance, Mutual Inductance and Coefficient of coupling
8. Calculation of Z and Y Parameters
9. Construction of current locus diagram for RL and RC circuit
10. Mesh and Nodal Analysis by simulation
11. Determination of Average value and RMS value of a complex wave
12. Determination of parameters of a coil.
13. Determination of Time constant of RL and RC series circuit.