

**DHANEKULA INSTITUTE OF ENGINEERING & TECHNOLOGY
DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING**

ELECTRICAL CIRCUITS LAB

Electrical Circuits Lab

| S.No | Name of Equipment | Unit Price | Quantity | Cost |
|-------------|---|-------------------|-----------------|-------------|
| 1 | Rheostat 9 ohms 12A | 4768.5 | 2 | 9537 |
| 2 | Rheostat 40 ohms 5A | 2669.5 | 4 | 10678 |
| 3 | Rheostat 18 ohms 5A | 1813.5 | 2 | 3627 |
| 4 | Rheostat 50 ohms 5A | 3238.5 | 4 | 12954 |
| 5 | Rheostat 100 ohms 2.8A | 2006 | 5 | 10030 |
| 6 | Rheostat 360 ohms,1.2A | 1504.5 | 2 | 3009 |
| 7 | Voltmeter (MC) 50/100 V AE | 1800 | 1 | 1800 |
| 8 | Ammeter MI (0-2.5/5)A | 1470 | 1 | 1470 |
| 9 | Voltmeter MC (0-15/30/60)V | 1219 | 5 | 6095 |
| 10 | Dual channel regulated power supply | 45760 | 10 | 457600 |
| 11 | Voltmeter MI(0-30/60)V | 1219 | 4 | 4876 |
| 12 | Digital Multimeter CIE-122 | 2118.1 | 2 | 4236.2 |
| 13 | Series & Parallel Resonance | 1889.52 | 1 | 1889.52 |
| 14 | Time Response of First Order RC/RL Network | 1889.52 | 1 | 1889.52 |
| 15 | Decade Resistance Boxes.(1 Ohm to 1 Mega Ohm) | 2118.1 | 2 | 4236.2 |
| 16 | Decade Capacitance Boxes.(10 PF to 10 MF) | 3542.67 | 2 | 7085.34 |
| 17 | Decade Induction Boxes.(10 μ H to 10 H) | 3946.67 | 2 | 7893.34 |
| 18 | Locus Diagram for RI & RC Series Circuit | 2857.14 | 1 | 2857.14 |
| 19 | 0-40/2A Regulated Power Supply-Integral-DC | 9600 | 2 | 19200 |
| 20 | Deskstand Ammeter 0-2A-Integral-DC | 571.43 | 15 | 8571.45 |
| 21 | Deskstand Voltmeter 0-60V-Integral-DC | 571.43 | 7 | 4000.01 |
| 22 | Deskstand Ammeter 0-2A-Integral-AC | 571.43 | 4 | 2285.72 |

| | | | | |
|-------------------|---------------------------------------|--------|---|------------------|
| 23 | Deskstand Voltmeter 0-60V-Integral-AC | 571.43 | 4 | 2285.72 |
| 24 | Rheostat 9 ohms 12A | 4768.5 | 2 | 9537 |
| Total Cost | | | | 588106.16 |

LIST OF EXPERIMENTS

| S No | Name of the Experiment |
|------|--|
| 1 | Verification of Kirchhoff's circuit laws. |
| 2 | Verification of node and mesh analysis |
| 3 | Determination of cold and hot resistance of an electric lamp |
| 4 | Determination of self, mutual inductances, and coefficient of coupling |
| 5 | Series and parallel resonance |
| 6 | Verification of Superposition theorem |
| 7 | Verification of Thevenin's and Norton's Theorems |
| 8 | Verification of Maximum power transfer theorem |
| 9 | Verification of Compensation theorem |
| 10 | Verification of Reciprocity and Millman's Theorems |

Signature of Lab Incharge

Signature of HOD