



LAKIREDDY BALI REDDY COLLEGE OF ENGINEERING

(An Autonomous Institution Since 2010)

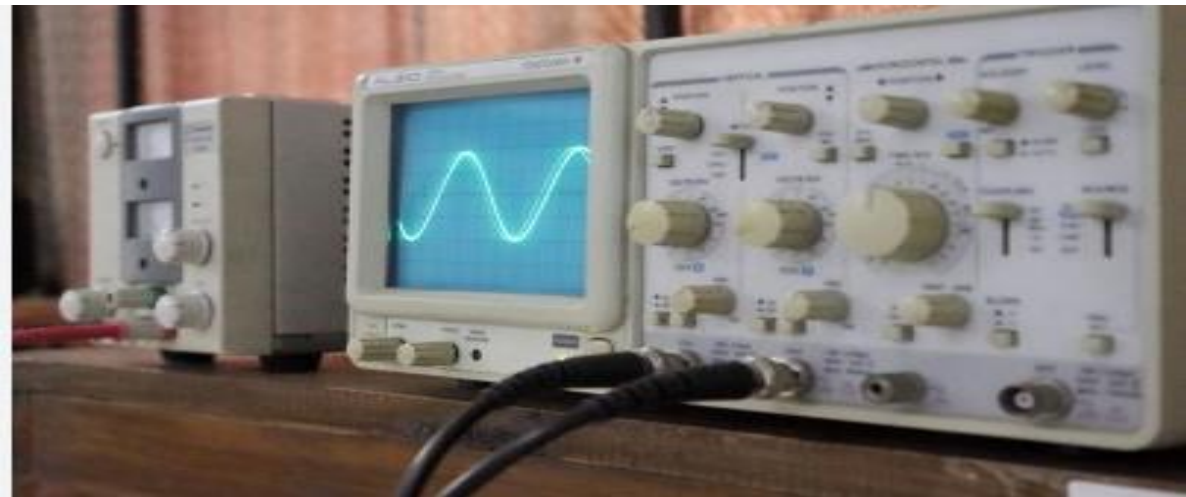
Approved by AICTE, New Delhi and Permanently Affiliated to JNTUK, Kakinada
Accredited by NAAC with Grade 'A' & ISO: 21001:2018, 50001:2018, 14001:2015 certified

Department of Electrical and Electronics Engineering

Accredited by NBA under Tier-I

Name of the lab : Electrical Circuits Lab

The purpose of the electric circuits part of this laboratory is to practice essential laboratory measurement and report preparation skills, to reinforce the concepts and circuit analysis techniques, and to gain an increased understanding of some of the practical issues of electrical engineering circuit analysis



Major equipment in ECA lab

S.No	Name of the equipment	quantity
1.	MOVING IRON AMMETERS Rating : 0 – 50 / 100 mA MAKE : MECO	2 No's
2.	MOVING IRON AMMETERS Rating : 0 – 1 / 2 Amp MAKE : MECO	2 No's
3.	MOVING IRON AMMETERS Rating : 0 – 5 / 10 Amp MAKE : MECO	2 No's
4.	RECTIFIER TYPE AMMETERS Rating : 0 –1 Amps MAKE : MECO	1 No's
5.	MOVING IRON AMMETERS Rating : 0 – 5 / 10A MAKE : MECO	06 No's
6.	MOVING IRON AMMETERS Rating : 0 – 1 / 2 Amp MAKE : MECO	06 No's
7.	Digital MultiMate(Model : 19-SUPER)	12 No's
8.	Voltammeter (MC) Range:0-15/30V MAKE : MECO	10 No's
9.	Ammeter (MC)Range:0-1/2A MAKE : MECO	6 No's
10.	Ammeter (MC)Range:0-500Ma MAKE : MECO	04 No's
11.	Ammeter (MC) Range:0-250/500mA MAKE : MECO	04 No's
12.	Rheostat25 Ohm,5Amp MAKE : MECO	05 No's
13.	Intel Core i3-7 Gen/8 GB III Ram ,500 GB HDD, Make:DELL	3 No's
14.	Intel Core i3-3240 Processor /2 GB III Ram,500 GB HDD, Make: HP	1 No's
15.	Intel Core i3-2100, 3.10GHz 8GB DDR3 Ram,500HDD,	1 No's

	Make: HP	
16.	Wheatstone Bridge Trainer Kit	2 No's
17.	Digital Earth Resistance Trainer Kit	2 No's
18.	Voltammeter (MC)Range: 0-15 / 30V DC MAKE : MECO	6 No's
19.	Voltammeter (MCR)Range: 0-1 / 2A DC MAKE : MECO	6 No's
20.	1-PH UPF WattmeterRange:5/10A,0-150/300V MAKE : MECO	4 No's
21.	Single phase old disc type energy meter	4 No's
22.	Regulated power supply Range:0-30v	2 No's
23.	C.R.O (30Mz) MAKE:SCIETIFIC	2 No's
24.	PT/I1 0DINO 6125 "INTRY" 25Mhz Digital Oscilloscope	3No's
25.	SCIENTIFIC FUNCTION GENERATOR SM 5072	4No's
26.	1 PHASE DIMMERSTAT Rating :0-270 V, 20 Amp MAKE : VOLTAMPMODEL: 20 P-1	4No's
27.	Auto Transformer,0-270V, 10 Amp	2 No's
28.	Function Generators 3MHZ	02 No's
29.	INDUCTIVE COIL (FIXED) Rating :50mH-100mH-150mH tappings,5A	1 No's
30.	1.2 Amps/1500 Ohms (single tube type)	5 No's
31.	REGULATED DC POWER SUPPLY UNIT Model - TSD TSD 30-2	05No's
32.	3KVA-Single phase transformer isolation Transformer 230V/115V---50HzMake:ITL	1No's

B.Tech.(II Sem)

23EE52-Electrical Circuits Lab

List of Experiments

1. Verification of Kirchoff's circuit laws.
2. Verification of node and mesh analysis.
3. Verification of network reduction techniques.
4. Determination of cold and hot resistance of an electric lamp
5. Determination of Parameters of a choke coil.
6. Determination of self, mutual inductances, and coefficient of coupling
7. Series and parallel resonance
8. Locus diagrams of R-L (L Variable) and R-C (C Variable) series circuits
9. Verification of Superposition theorem
10. Verification of Thevenin's and Norton's Theorems
11. Verification of Maximum power transfer theorem
12. Verification of Compensation theorem
13. Verification of Reciprocity and Millman's Theorems

B.Tech.(III Sem) 23EE53- Electrical Circuits Analysis and Simulation Lab

List of Experiments Any 10 of the following experiments are to be conducted

1. Measurement of Active Power and Reactive Power for balanced loads.
2. Measurement of Active Power and Reactive Power for unbalanced loads.
3. Determination of Z and Y parameters.
4. Determination of ABCD and hybrid parameters
5. Verification of Kirchoff's current law and voltage law using simulation tools.
6. Verification of mesh and nodal analysis using simulation tools.

7. Verification of super position and maximum power transfer theorems using simulation tools.
8. Verification of Reciprocity and Compensation theorems using simulation tools.
9. Verification of Thevenin's and Norton's theorems using simulation tools.
10. Verification of series and parallel resonance using simulation tools.
11. Simulation and analysis of transient response of RL, RC and RLC circuits
12. Verification of self-inductance and mutual inductance by using simulation tools

LAB INCHARGE
LAB TECHNICIAN

Mr.A.V.RAVIKIMAR
Mr.MOHD.RASOOL

HOD/EEE