BASIC ELECTRICAL ENGINEERING LABORATORY			
Course Code	21ELE17/27	CIE Marks	50
Teaching Hours/Week (L:T:P)	0:0:2	SEE Marks	50
Credits	01	Exam Hours	03

Course objectives:

After studying this course, students should be able to

1) Explain how to verify KCL and KVL for DC circuit and maximum power transfer theorem.
2) Explain power and power factor measurement of different types of lamps.
3) Explain the measurement of impedance for R-L circuits.
4) Explain the measurement of power consumed in a 3-phase load.
5) Explain methods of controlling a lamp from different places.
6) Explain the effect of open and short circuits in simple circuits and the suitability of earth resistance.

Sl. NO	Experiments
1	Verification of KCL and KVL for DC circuits
2	Verification of maximum power theorem.
3	Measurement of Current, Power, and Power Factor of Incandescent Lamp, Fluorescent Lamp and LED Lamp.
4	Measurement of Resistance and Inductance of a Choke coil using three voltmeter method.
5	Determination of Phase and Line quantities in three-phase star and delta connected loads.
6	Measurement of 3 - phase Power using Two Wattmeter Method.
7	Determination of efficiency of a single-phase transformer by direct load test.
8	Two Way and Three-Way Control of Lamp and Formation of Truth Table.
9	Measurement of Earth Resistance
10	Study of the effect of Open and Short circuits in simple circuits.

Course outcomes

At the end of the course the student will be able to:

CO1: verify KCL and KVL and maximum power transfer theorem for DC circuits.

CO2: compare power factors of different types of lamps.

CO3: demonstrate the measurement of the impedance of an electrical circuit and power consumed by a3-phase load.

CO4: analyze two-way and three-way control of lamps.

CO5: explain the effects of open and short circuits in simple circuits.

CO6: interpret the suitability of earth resistance measured.

Continuous Internal Evaluation (CIE): The CIE marks awarded in case of Practical shall be based on the weekly evaluation of laboratory journals/ reports/laboratory records after the conduction of every experiment and one practical test. The maximum marks prescribed for the former and the latter shall be 35 and 15. The total CIE marks shall be the sum of marks secured by students in the above events.

Semester End Evaluation (SEE): The practical examinations are to be conducted as per the timetableof the University with a batch-wise strength of not more than 10-15 students per batch.

1) All laboratory experiments are to be included for practical examination.
2) Breakup of marks and the instructions printed on the cover page of the answer script to be strictlyadhered to by the examiners.
3) Students can pick one experiment from the questions lot prepared by the examiners.
4) Change of experiment is allowed only once and 15% Marks allotted to the procedure part to bemade zero.