

EE102R: BASICS OF ELECTRICAL ENGINEERING LAB

Teaching Scheme : 02 P; Total: 02 hours/week

Credits : 01

Evaluation Scheme : 50 ICA

Total Marks : 50

COURSE DESCRIPTION

This course deal with the practical exposure to verification of network theorems, to verify the relationships of various parameters of single and three phase A.C. circuits, to study the behavior of hysteresis loop/B-H curve of magnetic material, to find output of various machines etc.

DESIRABLE AWARENESS / SKILLS

Concepts and theory of the course EE101R: BASICS OF ELECTRICAL ENGINEERING

COURSE OUTCOMES

On the successful completion of this course, the students shall be able to-

- 1 Apply various basic laws and theorem to electric circuit
- 2 Demonstrate and understand definition relationship of various electric circuits
- 3 Apply the basic concept to understand the working of various machines
- 4 Identify the various wiring systems
- 5 Apply electrical safety measures

RELEVANCE OF COURSE OUTCOMES (COs) WITH POs AND PSOs (WITH STRENGTH OF CO-RELATION)

Course outcome	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO 1	PSO 2	PSO 3
CO1	2				1	3	2	2	3	2	1	3			
CO2	2	1		1	1	2	2	2	3	2	1	3			
CO3	2	1		1	1	2	2	2	3	2	1	3			
CO4	2	1		1	1	2	2	2	3	2	1	3			

1-Weakly correlated

2 – Moderately correlated

3 – Strongly correlated

COURSE CONTENT

Minimum **eight** experiments from the list of experiments provided below shall be performed to cover entire curriculum of course EE101R.

List of Experiments

1. Perform an experiment for Verification of Thevenin's theorem
2. Perform an experiment for Verification of Superposition theorem
3. Perform an experiment for Verification of Norton's theorem
4. Perform an experiment for Verification of Maximum power transfer theorem
5. To perform experiment for Measurement of current, voltage and power in R-L-C series excited by single phase AC supply
6. To study the R-L-C series resonance circuit
7. To perform an experiment to plot hysteresis loop/B-H curve of magnetic material
8. Verification of relationship of line and phase voltages and current for star and delta connected three phase balanced load
9. Perform experiment for measurement of output of single phase/three phase transformer and to find the transformation ratio
10. Perform experiment to measure the rated speed of single phase induction motor /D.C.motor
11. Wiring of simple light circuit for controlling light/fan point (PVC conduit wiring), Wiring of light/fan circuit using two way switches (Staircase wiring), Wiring of power distribution arrangement using single phase MCB distribution board with ELCB, Main switch and Energy meter
12. Study of domestic earthing
13. Study of Battery Maintenance

Evaluation Methodology:

- **ICA** – It shall support for regular performance of practical and its regular assessment. In addition; it shall be based on knowledge/skill acquired and record submitted by student (journal) based on practical performed by him/her. The performance shall be assessed experiment wise using the prescribed internal continuous assessment format.
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