II B.Tech I Sem

15AEE11-ELECTRICAL TECHNOLOGY LAB

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Course objective for Electrical technology lab:

1. Students can learn about fundamental concepts circuits, DC, AC Machines.
2. Students can learn about Electrical instruments.
3. Student learn how to apply electrical principles in their applications.
4. Student can able verify theorems such as super position, thevinins and maximum power transfer and the measurements of RLC parameters using bridge principles

Course outcome for Electrical technology lab:

1. Students able to demonstrate knowledge on fundamental concepts circuits, DC, AC Machines.
2. Students able to demonstrate knowledge on how to measure the electrical quantities using measuring instruments.
3. Students are able to apply electrical principles in their applications.
4. Students are able to determine the RLC parameters using bridge principles.

PART-A

1. Series and parallel resonance- timing, resonant frequency, Bandwidth and Q-Factor determination for RLC Network.
2. Time response of first order RC/RL network for periodic non sinusoidal inputs-time constant
   and steady state error determination.
3. Z and Y Parameters.
4. Verification of Superposition Theorem and Reciprocity Theorem
5. Verification of Maximum Power Transfer Theorem
6. Verification of Thevenin's and Norton's Theorems.

PART-B

1. Magnetization Characteristics of DC Shunt Generator. Determination of Critical Field Resistance and Critical Speed.
2. Swinburne's Test and Speed Control of DC Shunt Motor. Predetermination of Efficiencies.
3. Brake Test on DC Shunt Motor. Determination of Performance Curves.
4. O.C. & S.C. Tests on Single phase Transformer
5. Brake Test on Three Phase Induction Motor
6. Regulation of Three-Phase Alternator by Z.P.F. and A.S.A Methods

V. Sub
BOS-chairman