Year & Semester : I-II

Lab In charge

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Lab Technician

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Network Analysis Laboratory

Course Objectives:

1. To prepare the students to have a basic knowledge in the analysis of Electric Networks.
2. To make the students to solve the given circuit with various theorems and methods.
3. To familiarize the student to construct and analyze the various three phase circuit's star and delta connections.
4. To distinguish between tie set and cut set methods for solving various circuits
5. To design various types of filters.

Course Outcomes:

1. The students will be able to articulate in working of various components of a circuit.
2. The students will be able familiar with ac and dc circuits solving.
3. The students are ready with the most important concepts like mesh and nodal analysis.

List of Experiments:

1. Verification of KCL & KVL for any network.
2. Verification of Superposition Theorem with analysis.
3. Verification of Thevenin's Theorem with analysis.
4. Verification of Maximum Power Transfer Theorem with analysis.
5. Analysis of RL & RC circuits for pulse excitation.
6. Frequency response of series resonance circuit with analysis and design.
7. Frequency response of parallel resonance circuit with analysis and design.
8. Design and frequency response of constant 'k' low pass & high pass filters.
9. Design and frequency response of Band pass filter.
10. Design and frequency response of Notch filter.
11. Determination of phase of a sinusoidal signal when passed through RL or RC circuits.
12. Impedance transformation through transformer

Note: - Ten experiments must be conducted in above List of Experiments

Equipment required for the Laboratory:

1. Bread boards.
2. Passive components, R, L, and C with different ratings.
3. Dual power supplies.
4. Function generators.
5. Cathode Ray Oscilloscope's.