NETWORK AND ELECTRICAL ENGINEERING LAB

List of Experiments

ECE-2/4 IISem

Part-A

1. Serial and Parallel Resonance – Timing, Tesonant 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. Two port network parameters – Z-Y Parameters, chain matrix and analytical verification.
4. Verification of Superposition and Reciptrocity theorems.
5. Verification of maximum power transfer theorem. Verification on DC, verification on AC with Resistive and Reactive loads.
6. Experimental determination of Thevenin's and Norton's equivalent circuits and verification by direct test.

Part - B

1. Magnetization characteristics of D.C. shunt generator. Determination of critical field resistance.
2. Swinburne's Test on DC shunt machine (Predetermination of efficiency of a given DC Shunt machine working as motor and generator)
3. Speed control of DC shunt motor by
    a) Armature voltage control method
    b) Field flux control method
4. OC & SC tests on Single-phase t/f (Predetermination of efficiency and regulation at given power factors and determination of equivalent circuit)
5. Brake test on 3-phase Induction motor (Performance characteristics)
6. Regulation of alternator by synchronous impedance method.