

Electrical and Electronics Engineering Department

NETWORK ANALYSIS AND SYNTHESIS LABORATORY

Paper Code: EEC-206	L	T/P	C
Paper: NAS Lab	0	2	1

Course Outcome(CO)	
At the end of the course, the student will be able to:	
CO.EEC 262. 1	Ability to apply network theorems in AC circuit.
CO.EEC 262. 2	Ability to determine transient response of circuit.
CO.EEC 262. 3	Ability to determine two port parameter of circuit.
CO.EEC 262. 4	Ability to realize the circuit from their transfer function.

1. Introduction to scilab and its basic commands.
2. Plot unit step, unit impulse, unit ramp, exponential, parabolic functions and sinusoidal signals using scilab.
3. To determine Z and Y parameters of the given two port network.
4. To determine ABCD parameters of the given two port network.
5. To determine Hybrid parameters of the given two port network.
6. To design Series-Series Connection and determine Z parameters of the given two port network.
7. To design Parallel-Parallel Connection and determine Y parameters of the given two port network.
8. To design Cascade Connection and determine ABCD parameters of the given two port network.
9. To design Series-Parallel Connection and determine h parameters of the given two port network
10. To verify Reciprocity Theorem for the given two port network.

List of Experiments		
Exp No	CO	Experiment
Exp 1	CO4	Introduction to SCILAB and its basic commands.
Exp 2	CO4	Plot unit step, unit impulse, unit ramp, exponential, parabolic functions and sinusoidal signals using SCILAB
Exp 3	CO3	To determine Z and Y parameters of the given two port network.
Exp 4	CO3	To determine ABCD parameters of the given two port network.

Exp 5	CO3	To determine Hybrid parameters of the given two port network.
Exp 6	CO3	To design Series-Series Connection and determine Z parameters of the given two port network.
Exp 7	CO3	To design Parallel-Parallel Connection and determine Y parameters of the given two port network.
Exp 8	CO3	To design Cascade Connection and determine ABCD parameters of the given two port network.
Exp 9	CO3	To design Series-Parallel Connection and determine h parameters of the given two port network
Exp 10	CO1	To verify Reciprocity Theorem for the given two port network.
Extra 1	CO2	To verify resonant frequency, bandwidth & quality factor of RLC series and parallel Resonant circuits.
Extra 2	CO4	Determination of short circuit admittance parameter (Y-parameter) of the given 'pi' network and their interconnection in parallel-parallel fashion and verification of result through SCILAB simulation.