

LECTURE PLAN OF NAS

Faculty name : Shweta singh Year-2nd Semester-4th Branch-EN Subject: Network Analysis and Synthesis Sub code :BEE-303

LECT. No.	UNIT	MATTERS TO COVER	DETAILS AFTER THE LECTURES ARE DELIVERED				AFTER UNIT COVER			
			DATE	UNIT No.	CHAP. No.	AUTHOR	MATTER COVERED	UNIT No.	No. oF LEC.	ASSIGN. No.
1	UNIT-1	Graph Theory: Introduction, Graph of a network.				A. Chakrabarti				
2		Definitions of Tree, Co tree & Link				A. Chakrabarti				
3		Definitions of basic loop and basic cut set				A. Chakrabarti				
4		Definitions of Incidence matrix, Cut set matrix				A. Chakrabarti				
5		Definitions of Tie set matrix & Numericals				A. Chakrabarti				
6		Duality of a network, Loop and Nodal				A. Chakrabarti				
7	Unit – II	Basic of Network				A. Chakrabarti				
8		Network Theorems :Superposition theorem, Numericals				A. Chakrabarti				
9		Thevenin's theorem, Norton's theorem				A. Chakrabarti				
10		Numericals on Thevenin's theorem, Norton's theorem				A. Chakrabarti				
11		Maximum power transfer theorem, Numericals				A. Chakrabarti				
12		Reciprocity theorem. Millman's theorem				A. Chakrabarti				
13		Compensation theorem, Tellegen's theorem				A. Chakrabarti				
14		Numericals on various theorems				A. Chakrabarti				
15	Numericals on various theorems				A. Chakrabarti					
16	Numericals on various theorems				A. Chakrabarti					
17	Unit – III	Transient Circuit Analysis: Introduction				A. Chakrabarti				
18		Types of response: Natural response and forced response.				A. Chakrabarti				
19		Transient response analysis of dc & ac circuits				A. Chakrabarti				
20		steady state response analysis of dc & ac circuits				A. Chakrabarti				
21		Evaluation of time response both through classical and Laplace methods.				A. Chakrabarti				
22		Numericals on transient response				A. Chakrabarti				
23	Numericals on steady state response				A. Chakrabarti					
24		Network Functions: Introduction				A. Chakrabarti				

25		Concept of complex frequency			A. Chakrabarti					
26		Transform impedances network functions of one port Network.			A. Chakrabarti					
27		Transform impedances network functions of two port Network.			A. Chakrabarti					
28		Concept of poles and zeros			A. Chakrabarti					
29		Properties of driving point functions			A. Chakrabarti					
30		Properties of transfer functions.			A. Chakrabarti					
31	Unit – IV	Two Port Networks:Introduction			A. Chakrabarti					
32		Characterization of LTI two port networks			A. Chakrabarti					
33		Z, Y parameters			A. Chakrabarti					
34		ABCD, A'B'C'D parameters			A. Chakrabarti					
35		g and h parameters			A. Chakrabarti					
36		Reciprocity and symmetry of two port networks			A. Chakrabarti					
37		Inter-relationships between the parameters of two port networks			A. Chakrabarti					
38		Ladder and Lattice networks			A. Chakrabarti					
39		T & Π representation of two port networks			A. Chakrabarti					
40			Network Synthesis: Introduction			A. Chakrabarti				
41		Positive real function; definition and properties			A. Chakrabarti					
42		Properties of LC, RC and RL driving point functions			A. Chakrabarti					
43		Synthesis of LC driving point immittance functions using Foster and Cauer first forms			A. Chakrabarti					
44		Synthesis of LC driving point immittance functions using Foster and Cauer second forms			A. Chakrabarti					
45	Unit – V	Synthesis of RC driving point immittance functions using Foster and Cauer first forms			A. Chakrabarti					
46		Synthesis of RC driving point immittance functions using Foster and Cauer second forms			A. Chakrabarti					
47		Filters: Introduction, Image parameters and characteristics impedance			A. Chakrabarti					

48	Passive and active filter fundamentals				A. Chakrabarti					
49	Low pass filters, High pass				A. Chakrabarti					
50	Introduction to active filters				A. Chakrabarti					
52	Numericals				A. Chakrabarti					
53	Numericals				A. Chakrabarti					
54	Numericals				A. Chakrabarti					
55	Numericals				A. Chakrabarti					