LECTURE PLAN OF NAS

Faculty name : Shweta singh   Year-2nd Semester-3rd Branch-EN   Subject: Network Analysis and Synthesis Sub code :BEE-303

LECT. No.	UNIT	MATTERS TO COVER	DATE	UNIT No.	CHAP. No.	AUTHOR	MATTER COVERED	UNIT No.	No. oF LEC.	ASSIGN. No.	TEST No.
					DETAILS AFTER THE LECTURES ARE DELIVERED			AFTER UNIT COVER			
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'stheorem, 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'stheorem				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 trnsient 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						

						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					