Bhoj Reddy Engineering College for Women: Hyderabad

Department of Electrical and Electronics Engineering

Lesson plan of faculty member for the academic year 2018–19

Class: II B Tech Branch-Section: ECE-B Semester: I

Subject: Network analysis Lectures per week: 3+1 (Tutorial)

Lecture Number	Topics to be covered	Date (s)
	UNIT – I	
1	Review of R, L,C, RC, RL, RLC circuits	10 July 2018
2	Network Topology and Terminology of topology	11 July 2018
3	Basic cutest and tie set matrices for planar networks	14 July 2018
4	Tutorial: Problems on Basic tie set matrices	14 July 2018
5	Problems on Basic cutest matrices	17 July 2018
6	Illustrative Problems	18 July 2018
7	Magnetic Circuits, Self and Mutual inductances	21 July 2018
8	Tutorial: Problems on Self and Mutual inductances	21 July 2018
9	Dot convention	24 July 2018
10	Impedance, Reactance concept	25 July 2018
11	Impedance transformation and coupled circuits	28 July 2018
12	Tutorial: Problems on Dot convention	28 July 2018
13	co-efficient of coupling and Ideal transformer	31 July 2018
14	Equivalent T for Magnetically coupled circuits	01 August 2018
	UNIT-II:	
15	Steady state and transient analysis of RC, RL and RLC Circuits	04 August 2018
16	Tutorial: Problems on series and parallel circuit	04 August 2018
17	Circuits with switches, step response, 2nd order series circuits	07 August 2018
18	Step response, 2nd order parallel RLC	08 August 2018
19	Root locus, damping factor, over damped, under damped	11 August 2018
20	Tutorial: Resonance concept critically damped cases	11 August 2018
21	Problems on series and parallel circuit	14 August 2018
22	Quality factor and bandwidth for series resonant circuit	18 August 2018
23	Tutorial: Problems on series and parallel circuit:	18 August 2018
24	Quality factor and bandwidth for parallel resonant circuit	21 August 2018
	UNIT-III	
25	Network Analysis using Laplace transform techniques	25 August 2018
26	Tutorial: Problems on Laplace transform	25 August 2018
27	Step, impulse and exponential excitation for circuits	28 August 2018
28	Problems on Laplace transform techniques	29 August 2018
29	Revision of first and second units	01 September 2018
30	Tutorial: Problems on Different Wave forms	01 September 2018
31	Response due to periodic excitation	08 September 2018
32	Tutorial: RMS and Average value of periodic waveforms	08 September 2018
	UNIT-IV	
33	Introduction to Two port network parameters	11 September 2018
34	Z and Y parameters	15 September 2018
35	Tutorial: Problems on Z parameters	15 September 2018
36	ABCD and h parameters problems	18 September 2018
37	Characteristic impedance and Image transfer constant	19 September 2018
38	Network functions	22 September 2018
39	Tutorial: Problems on Z and Y parameters	22 September 2018
40	Driving point and transfer functions using S-domain	25 September 2018
41	Problems on Y parameters	26 September 2018
42	Problems on Network functions	29 September 2018
43	Tutorial: Problems on ABCD and H parameters	29 September 2018

44	Problems on transfer function	03 October 2018
UNIT-V		
45	Introduction to filters and standard T,π and L sections	04 October 2018
46	Characteristic impedance for T networks	06 October 2018
47	Tutorial: Problems on Filters	06 October 2018
48	Characteristic impedance for π networks	10 October 2018
49	Image transfer constants for T and π networks	11 October 2018
50	Parent Teacher Meeting	13 October 2018
51	Parent Teacher Meeting	13 October 2018
52	Design of Attenuators Problems on attenuators	23 October 2018
53	Foster's Reactance theorem	24 October 2018
54	Properties of LC Networks	27 October 2018
55	Tutorial: Problems on Band pass filter	27 October 2018
56	Design of constant BP Filters	30 October 2018
57	Design of constant K, LP, HP filter	31 October 2018
58	Composite filter design	03 November 2018
59	Tutorial: Problems on constant k low pass filter	03 November 2018
60	T and π network conversion	06 November 2018
61	Revision of Fourth and Fifth units	10 November 2018
62	Tutorial: Problems on constant k high pass filter	10 November 2018

Text books:

1. Network Analysis – ME Van Valkenburg, Prentice Hall of India, 3rd Edition, 2000.

2. Networks, Lines and Fields - JD Ryder, PHI, 2nd Edition, 1999.

REFERENCES

1. Engineering Circuit Analysis – William Hayt and Jack E Kemmerly, MGH, 5th Edition, 1993.

2. Electric Circuits – J. Edminister and M.Nahvi – Schaum's Outlines, Mc Graw Hill Education, 1999.

3. Network Theory – Sudarshan and Shyam Mohan, Mc Graw Hill Education.

Name and signature of the faculty: Mr. T Vinay Kumar ----

Name and signature of Head of the Department: Ms. Manju Bhargavi ----