Bhoj Reddy Engineering College for Women: Hyderabad
Department of Electrical and Electronics Engineering

Lesson plan of faculty member for the academic year 2020–21

Class: II B Tech Branch-Section: EEE Semester: I
Subject: Electrical Circuit Analysis Lectures per week: 3+1 (Tutorial)

Lecture Number	Topics to be covered	Date
UNIT – I: NETWORK THEOREMS		
1.	Basics of circuits	01 September 2020
2.	Superposition Theorem with DC	03 September 2020
3.	Superposition Theorem with AC	05 September 2020
4.	Tutorial: Problems on Reciprocity Theorem with DC and AC	07 September 2020
5.	Thevenin's Theorem with DC and AC	08 September 2020
6.	Norton's Theorem with DC and AC	10 September 2020
7.	Maximum Power Transfer Theorem with DC and AC	12 September 2020
8.	Tutorial: Problems on Maximum Power Transfer Theorem	14 September 2020
9.	Compensation theorem with DC and AC	15 September 2020
10.	Duality & Dual networks	17 September 2020
11.	Tutorial: Review of unit – I	19 September 2020
12.	Class test on unit – I	21 September 2020
UNIT – II: SOLUTION OF FIRST AND SECOND ORDER NETWORKS		
13.	Transient response of series R-L and R-C circuits for DC excitation using classical Method	22 September 2020
14.	Transient response of series R-L-C circuit for DC excitation using classical method	24 September 2020
15.	Tutorial: Problems on series circuits with DC excitation	28 September 2020
16.	Transient response of Parallel R-L and R-C circuits for DC excitation using classical method	29 September 2020
17.	Transient response of Parallel R-L-C circuit for DC excitation using classical method	01 October 2020
18.	Tutorial: Problems on parallel circuits with DC excitation	03 October 2020
19.	Transient response of series R-L and R-C circuits for sinusoidal excitation using classical method	05 October 2020
20.	Transient response of series R-L-C circuit for sinusoidal excitation using classical method	06 October 2020
21.	Transient response of parallel R-L circuit for sinusoidal excitation using classical method	08 October 2020
22.	Transient response of parallel R-C circuit for sinusoidal excitation using classical method	10 October 2020
23.	Transient response of parallel R-L-C circuit for sinusoidal excitation using classical method	12 October 2020
24.	Review of unit – II	13 October 2020
25.	Tutorial: Class test on unit – II	15 October 2020
UNIT – III: SINUSOIDAL STEADY STATE ANALYSIS		
26.	Representation of sine function as rotating phasor, phasor diagrams	26 October 2020
27.	Impedances and Admittances	27 October 2020
28.	Tutorial: Problems on Z and Y	29 October 2020
29.	Assignment Test – I	31 October 2020

Lecture Number	Topics to be covered	Date (s)
30.	Distribution of Mid – I papers	09 November 2020
31.	RMS values, average power and complex power	10 November 2020
32.	Three-phase circuits	12 November 2020
33.	Mutual coupled circuits	16 November 2020
34.	Dot Convention in coupled circuits, Ideal Transformer	17 November 2020
UNIT – IV: ELECTRICAL CIRCUIT ANALYSIS USING LAPLACE TRANSFORMS		
35.	Review of Laplace Transform	19 November 2020
36.	Parent Teacher Meeting	21 November 2020
37.	Analysis of electrical circuits using Laplace Transform for standard inputs	23 November 2020
38.	Convolution integral, inverse Laplace transform, transformed network with initial conditions	24 November2020
39.	Tutorial: Problems on analysis of circuits using LT	26 November2020
40.	Transfer function representation, Poles and Zeros	28November 2020
41.	Frequency response (magnitude and phase plots)	01 December 2020
42.	Series and parallel resonances	03 December 2020
43.	Tutorial: Review of units – III and IV	05 December 2020
44.	Class test on units – III and IV	07 December 2020
UNIT-V: TWO PORT NETWORK AND NETWORK FUNCTIONS		
45.	Two port networks, terminal pairs, relationship of two port variables parameters	08 December 2020
46.	Impedance and Admittance parameters	10 December 2020
47.	Tutorial: Problems on Z and Y parameters	12 December 2020
48.	ABCD and Hybrid parameters	14 December 2020
49.	Relation between parameters	15 December 2020
50.	Relation between parameters	17 December 2020
51.	Tutorial: Problems on ABCD and Hybrid parameters	19 December 2020
52.	Assignment Test – II	21 December 2020
53.	Interconnections of two port networks	22 December 2020
54.	Revision	24 December 2020
55.	Tutorial: Solvation of previous question paper problems	28 December 2020
56.	Problems on ABCD and Hybrid parameters	29 December 2020
57.	Solvation of previous question paper problems	30 December 2020
58.	Revision	02 January 2021

TEXTBOOKS:

1. D. Roy Choudhury, “Networks and Systems”, New Age International Publications, 1998.
2. William Hayt and Jack E. Kemmerly, “Engineering circuit analysis,” Mc Graw Hill Company, 6th edition, 2016.
3. C. K. Alexander and M. N. O. Sadiku, “Electric Circuits”, McGraw Hill Education, 2004.
4. N.C. Jagan and C. Laxmi Narayana, “Network Analysis,” BS Publications, 2014.
5. A. Chakrabarthy, “Circuit Theory,” Dhanpat Rai & Sons, 2005.
6. A. Sudhakar and Shyam Mohan S Palli, “Network Theory,” Tata Mc Graw-Hill Education Private Limited.

Name and signature of the faculty: T Vinay Kumar–

Name and signature of Head of the Department: R Manju Bhargavi –