

Department of Electronics & Communication Engineering

Bhoj Reddy Engineering College for Women: Hyderabad

Lesson Plan of faculty member for the academic year 2015– 2016

Name of the faculty member and Department : Ms. A.Archana, EEE

Subject: Electrical Circuits (EC)

Class: II B.Tech.

Branch & Section: ECE-A

Semester: I

No. of lectures per week: 4+1 (Tutorial)

Lecture Number	Date	Topic to be Covered
UNIT – I Introduction to Eletrical circuits		
1.	1/7/15	Introduction to Electrical Circuits
2.	4/7/15	Circuit Concept, R-L-C Parameters; Problems
3.	-,2,4/7/15	Tutorial(-,G2,G1)Voltage and current Sources
4.	6/7/15	Dependent and Independent Sources
5.	7/7/15	Source Transformation
6.	8/7/15	Voltage-Current Relationship for Passive Elements ; Problems
7.	11/7/15	Kirchoff's Laws
8.	6,9,11/7/15	Tutorial(G3,G2,G1)Network Reduction Techniques
9.	13/7/15	Star to Delta, Delta to Star Transformation
10.	14/7/15	Nodal Analysis; Problems
11.	15/7/15	Mesh Analysis
12.	13,16,-/7/15	Tutorial(G3,G2,-)Super node and Super mesh
UNIT – II Single Phase A.C. Circuits		
13.	20/7/15	Single Phase A.C. Circuits
14.	21/7/15	RMS and Average Values; Problems
15.	22/7/15	Form Factor
16.	25/7/15	Steady State Analysis of RLC Circuits
17.	20,23,25/7/15	Tutorial(G3,G2,G1)Reactance, Impedance,Susceptance and Admittance; Problems
18.	27/7/15	Phase and Phase Difference
19.	28/7/15	Power Factor
20.	29/7/15	Real and Reactive powers & Complex power
21.	1/8/15	J-notation, Complex and Polar Representation Problems
UNIT – III Locus Diagrams		
22.	27,30/7/15,1/8/15	Tutorial(-,G2,G1)Locus Diagrams
23.	3/8/15	Series R-L, R-C, R-L-C Combinations
24.	4/8/15	Parallel Combinations
25.	5/8/15	Resonance-Series Circuits; Problems
26.	8/8/15	Parallel Circuits
27.	3,6,8/8/15	Tutorial(G3,G2,G1)Band width and Q factor
28.	11/8/15	Magnetic Circuits; Problems

29.	12/8/15	Faraday's law of Electromagnetic Induction
30.	-,13,-/8/15	Tutorial(-,G2,-)Self and Mutual Inductance
31.	17/8/15	Dot Convention, Coefficient of Coupling
32.	18/8/15	Composite Magnetic Circuits; Problems
33.	19/8/15	Assignment Test-1
UNIT – IV		Network Topology
34.	22/8/15	Definitions
35.	17,20,22/8/15	Tutorial(G3,G2,G1)Graphs, Tree
36.	31/8/15	Basic cutset and Basic tie set Matrices
37.	1/9/15	Loop and Nodal Analysis with dependent Sources
38.	2/9/15	Loop and Nodal Analysis with Independent Sources; Problems
39.	5/9/15	Duality and Dual Networks
40.	31/8/15,3,5/9/15	Tutorial(G3,G2,G1)Problems
UNIT – V		Network Theorems
41.	7/9/15	Network Theorems (with DC)
42.	8/9/15	Tellegen's Theorem; Problems
43.	12/9/15	Problems
44.	7,10,12/9/15	Tutorial(G3,G2,G1)Reciprocity Theorem
45.	14/9/15	Problems
46.	15/9/15	Thevinin's Theorems; Problems
47.	16/9/15	Milliman's Theorem
48.	19/9/15	Problems
49.	14,-,19/9/15	Tutorial(G3,-,G1)Compensation theorem
50.	21/9/15	Superposition Theorem
51.	22/9/15	Norton's Theorems; Problem
52.	23/9/15	Maximum Power Transfer Theorem
53.	26/9/15	Problems
54.	21,-,26/9/15	Tutorial(G3,-,G1)Network Theorems (with AC)
55.	28/9/15	Tellegen's Theorems; Problems
56.	29/9/15	Problems
57.	30/9/15	Thevinin's Theorems;
58.	3/10/15	Problems
59.	28/9/15,1,3/10/15	Tutorial(G3,G2,G1)Reciprocity Theorems;
60.	5/10/15	Superposition Theorem
61.	6/10/15	Maximum Power Transfer Theorems
62.	7/10/15	Norton's Theorems; Problems
63.	10/10/15	Assignment Test-2
64.	5,8,10/10/15	Tutorial(G3,G2,G1)Problems
65.	13/10/15	Revision
66.	14/10/15	Revision
67.	17/10/15	Revision
68.	-,15,17/10/15	Tutorial(-,G2,G1)Revision

Text Books:

- 1.Engineering Circuit Analysis – W.H.Hayt and J.E.Kemmerly and S.M.Durbin. 6 ed.,2008, TMH.
- 2.Circuits & Networks – A.Sudhakar, Shyammohan S.Pillai, 3ed.,2009, TMH.
- 3.Electric Circuits by A.Chakrabarhty, Dhanipat Rai & Sons.

Reference Books:

1. Network Theory – N.C.Jagan & C.Lakshminarayana, 2006, BSP.
2. Electric Circuit Theory – K.Rajeswaran, 2004, PE.
3. Network Analysis M.E.Vanvalkenburg, 3ed., PHI.
4. Basic Circuit Analysis – D.R.Cunnigham & J.A.Stuller, Jaico Publications.

Signature of the staff member

Signature of the H.O.D.