

Bhoj Reddy Engineering College for Women: Hyderabad  
Department of Electronics and Communication Engineering  
Lesson plan of faculty member for the academic year 2016–17

Class: II B Tech

Branch-Section: ECE-A

Semester: II

Subject: Electronic Circuit Analysis(ECA)

Lectures per week: 4

Lecture Number	Topics to be covered	Date (s)
<b>UNIT I: SINGLE STAGE &amp; MULTISTAGE AMPLIFIERS</b>		
1	Classification of amplifiers, Distortion in amplifiers	09 December 2016
2	Introduction to h-parameter model	13 December 2016
3	CE,CC, CB approximate h-parameter model analysis	14 December 2016
4	Analysis of CE amplifier analysis with Re	15 December 2016
5	Analysis of emitter follower circuit	16 December 2016
6	Miller's Theorem and its dual	20 December 2016
7	Design of single stage RC coupled amplifier using BJT	21 December 2016
8	Analysis of Cascaded RC Coupled BJT amplifiers	22 December 2016
9	Cascaded RC Coupled BJT amplifiers(contd....)	23 December 2016
10	Cascode Amplifiers	27 December 2016
11	Darlington Pair	28 December 2016
12	Direct Coupled Amplifier	29 December 2016
13	RC Coupled Amplifier	30 December 2016
14	Transformer Coupled Amplifier	03 January 2017
<b>UNIT II: BJT AMPLIFIERS &amp; MOS AMPLIFIERS</b>		
15	Logarithms, Decibels	04 January 2017
16	Frequency response of BJT Amplifier	05 January 2017
17	BJT Amplifier analysis at low & high frequencies	06 January 2017
18	BJT Amplifier analysis at low & high frequencies (contd...)	10 January 2017
19	Effect of bypass capacitor	11 January 2017
20	Effect of coupling capacitors	12 January 2017
21	CE hybrid pi transistor model	13 January 2017
22	CE short circuit current gain, current gain with resistive load	17 January 2017
23	Single stage CE amplifier response, Gain BW product	18 January 2017
24	Emitter follower at high frequencies	19 January 2017
25	MOS basic concepts, MOS small signal model	20 January 2017
26	CS amplifier with resistive load	24 January 2017
<b>UNIT III: FEEDBACK AMPLIFIERS &amp; OSCILLATORS</b>		
27	Feedback concept, Classification of Feedback amplifiers, Negative feedback amplifier characteristics	25 January 2017
28	Effect of feedback on amplifier characteristics	27 January 2017
29	Voltage series feedback amplifiers analysis, Voltage shunt feedback amplifiers analysis	21 February 2017
30	Current series feedback amplifiers analysis, Current shunt feedback amplifiers analysis	22 February 2017
31	Classification of oscillators, Conditions for Oscillations	23 February 2017
32	RC phase shift oscillator	28 February 2017
33	Wien Bridge oscillator	01 March 2017
34	Generalized analysis of LC oscillators	02 March 2017
35	Hartley oscillator, Colpitts oscillator	03 March 2017
36	Crystal oscillator, Stability of oscillators	07 March 2017
37	Illustrative Problems	08 March 2017
<b>UNIT IV: LARGE SIGNAL AMPLIFIERS</b>		
38	Classification of Amplifiers	09 March 2017
39	Transformer coupled Class A Amplifier	10 March 2017
40	Class A amplifier, Efficiency of Class A amplifier	14 March 2017
41	Class B amplifier, Efficiency of Class B amplifier	15 March 2017

42	Push pull class B amplifier	16 March 2017
43	Complementary symmetry class B amplifier	17 March 2017
44	Distortion in power amplifiers	21 March 2017
45	Thermal stability and Heat sinks	22 March 2017
46	Illustrative Problems	23 March 2017
<b>UNIT V: TUNED AMPLIFIERS</b>		
47	Introduction, Q factor, Small signal tuned amplifiers	24 March 2017
48	Single tuned amplifiers (Contd...)	28 March 2017
49	Double tuned amplifiers	30 March 2017
50	Double tuned amplifiers (Contd...)	31 March 2017
51	Stagger Tuned Amplifier	04 April 2017
52	Stagger Tuned Amplifier (Contd...)	06 April 2017
53	Stability of tuned amplifiers	07 April 2017
54	Problems Stagger tuned amplifier	11 April 2017
55	Problems on Tuned amplifiers	12 April 2017
56	Previous question papers discussion	13 April 2017

### Text Books:

Integrated Electronics - Jacob Millman and C Halkias, 1991 Ed., 2008, TMH.

Electronic Devices and Circuits, B.P. Singh, Rekha Singh, Pearson, 2013

Design of Analog CMOS Integrated Circuits-Behzad Razavi 2008, TMH

### Reference Books:

1. Electronic Circuit Analysis - Rashid Cengage Learning, 2013.
2. Electronic Circuit Analysis - K. Lal Kishore, 2004, BSP.
3. Electronic Devices and Circuit Theory - Robert L. Boylestad, Louis, Nashelsky, 9th Ed, 2008, PE.

Name and signature of the faculty: K.Sushma -----

Name and signature of Head of the Department: Ms N Shribala -----