

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: Analog Electronics

Lectures per week: 3

Lecture Number	Topics to be covered	Date (s)
UNIT – I: Diode Circuits		
1	Introduction	1 September 2020
2	P-N junction diode, I-V characteristics of a diode	3 September 2020
3	Review of half-wave and full-wave rectifiers,	5 September 2020
4	Clamping and clipping circuits	8 September 2020
5	Input output characteristics of BJT in CB, CE, CC configurations,	10 September 2020
6	Biassing circuits	12 September 2020
7	Load line analysis	15 September 2020
8	Introduction to h-parameter model, Analysis of CE Amplifier	17 September 2020
9	Analysis of CC and CB Amplifiers	19 September 2020
10	Small signal equivalent circuits	22 September 2020
11	Problems on Small signal equivalent circuits	24 September 2020
12	Problems on Small signal equivalent circuits	26 September 2020
UNIT-II: MOSFET Circuits		
13	MOSFET structure and I-V characteristics	29 September 2020
14	MOSFET as a switch.	1 October 2020
15	Small signal equivalent circuits - gain, input and output impedances	3 October 2020
16	Small-signal model	6 October 2020
17	Common-source, common-gate and common-drain amplifiers, trans conductance,	8 October 020
18	High frequency equivalent circuit.	10 October 2020
UNIT-III: Multi-Stage and Power Amplifiers		
19	Direct coupled	13 October 2020
20	RC Coupled multi-stage amplifiers	15 October 2020
21	Differential Amplifiers,	27 October 020
22	Power amplifiers - Class A, Class B and Class C	29 October 2020
UNIT-IV: Positive and Negative Feedback in Amplifiers		
23	Classification of amplifiers, Concepts of feedback – Classification of feedback amplifiers	31 October 2020
24	General characteristics of negative feedback amplifiers – Effect of Feedback on Amplifier characteristics	3 November 2020
25	Tutorial: Voltage series, Voltage shunt Feedback configurations	10 November 2020
26	Problems on feedback configurations	12 November 2020
27	Current series and Current Shunt Feedback configurations	17 November 2020
28	Simple problems on feedback configurations	19 November 2020
29	Frequency and amplitude stability of oscillators	21 November 2020
30	Conditions for Oscillations, RC and LC type Oscillators	24 November 2020
31	Generalized analysis of LC oscillators	26 November 2020
32	Hartley oscillator,	28 November 2020
33	Colpitts oscillator	1 December 2020
34	RC phase shift oscillator	3 December 2020
35	Wien-bridge oscillators.	5 December 2020
UNIT-V: Operational Amplifiers		
36	Ideal op-amp	8 December 2020
37	Output offset voltage, input bias current, input offset current, slew	10 December 2020

Lecture Number	Topics to be covered	Date (s)
	rate, gain bandwidth product	
38	Inverting and non-inverting amplifier	12 December 2020
39	Differentiator and integrator	15 December 2020
40	Square-wave and triangular-wave generators	17 December 2020
41	Revision	19 December 2020
42	Revision	22 December 2020
43	Revision	24 December 2020
44	Revision	29 December 2020
45	Revision	31 December 2020

TEXT BOOKS:

1. Integrated Electronics, Jacob Millman, Christos C Halkias, McGraw Hill Education, 2nd edition 2010
2. Op-Amps & Linear ICs – Ramakanth A. Gayakwad, PHI, 2003.
3. Electronic Devices Conventional and current version -Thomas L. Floyd 2015, pearson.
4. J. Millman and A. Grabel, "Microelectronics", McGraw Hill Education, 1988.P.
5. Horowitz and W. Hill, "The Art of Electronics", Cambridge University Press, 1989.
6. P. R. Gray, R. G. Meyer and S. Lewis, "Analysis and Design of Analog Integrated Circuits", John Wiley & Sons, 2001.

Name and signature of the faculty: Nazma Sultana ----

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