

Bhoj Reddy Engineering College for Women: Hyderabad

Department of Electronics and Communication Engineering

Lesson plan of faculty member for the academic year 2020–2021

Class: II B Tech

Branch-Section: CSE-A

Semester: I

Subject: Analog and Digital Electronics

Lectures per week: 3

Lecture Number	Topics to be covered	Date (s)
UNIT – I: Diodes and Applications		
1	Overview of subject	02 September 2020
2	Open circuited p-n junction, p-n junction as a rectifier	05 September 2020
3	V-I characteristics, effect of temperature, diode resistance	07 September 2020
4	diffusion capacitance, diode switching times	09 September 2020
5	breakdown diodes, Tunnel diodes	12 September 2020
6	photo diode, LED	14 September 2020
7	Diode Applications -clipping circuits, comparators,	16 September 2020
8	Half wave rectifier	19 September 2020
9	Full wave rectifier, rectifier with capacitor filter	21 September 2020
UNIT-II: BJTs		
10	Transistor characteristics: The junction transistor, transistor as an amplifier	23 September 2020
11	CB, CE, CC configurations,	26 September 2020
12	comparison of transistor configurations,	28 September 2020
13	operating point, self-bias or Emitter bias, bias compensation	30 September 2020
14	thermal runaway and stability, transistor at low frequencies	03 October 2020
15	CE amplifier response, gain bandwidth product	05 October 2020
16	Emitter follower, RC coupled amplifier	07 October 2020
17	two cascaded CE and multistage CE amplifiers	10 October 2020
UNIT-III: FETs and Digital Circuits		
18	FETs: JFET, V-I characteristics,	12 October 2020
19	MOSFET,	14 October 2020
20	Low frequency CS and CD amplifiers, CS and CD amplifiers.	26 October 2020
21	Digital Circuits: Digital operations of a system, OR gate, AND gate, NOT, EXCLUSIVE OR gate	28 October 2020
22	De Morgan Laws, NAND and NOR DTL gates	31 October 2020
23	modified DTL gates, HTL	09 November 2020
24	TTL gates, output stages, RTL and DCTL	11 November 2020
25	CMOS, Comparison of logic families	16 November 2020
UNIT-IV: Combinational Logic Circuits		
26	Basic Theorems and Properties of Boolean Algebra	18 November 2020
27	Canonical and Standard Forms, Digital Logic Gates	21 November 2020
28	The Map Method, Product-of-Sums Simplification	23 November 2020
29	Don't-Care Conditions, NAND and NOR Implementation	25 November 2020
30	Exclusive-OR Function, Binary Adder-Subtractor, Decimal Adder, Binary Multiplier	28 November 2020
31	Magnitude Comparator, Decoders	02 December2020
32	Encoders, Multiplexers	05 December2020
UNIT-V: Sequential Logic Circuits		
33	Sequential Circuits introduction Latches and flip flops	07 December2020
34	Types of flip-flops	09 December2020
35	Analysis of Clocked Sequential Circuits	12 December2020

36	State Reduction and Assignment	14 December2020
37	Shift Registers	16 December2020
38	Ripple Counters, Synchronous Counters	19 December2020
39	Random-Access Memory, Read-Only Memory.	21 December2020
40	Revision	23 December2020
41	Revision	28 December2020
42	Revision	30 December2020

TEXTBOOKS:

1. Integrated Electronics: Analog and Digital Circuits and Systems, 2/e, Jaccob Millman, Christos Halkias and Chethan D. Parikh, Tata McGraw-Hill Education, India, 2010.
2. 2.Digital Design, 5/e, Morris Mano, and Michael D. Cilette, Pearson,2011

Name and signature of the faculty: T Geetha

Name and signature of Head of the Department: Mrs. N Shribala