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-B 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	01 September 2020
2	Open circuited p-n junction, p-n junction as a rectifier	03 September 2020
3	V-I characteristics, effect of temperature, diode resistance	05 September 2020
4	diffusion capacitance, diode switching times	08 September 2020
5	breakdown diodes, Tunnel diodes	10 September 2020
6	photo diode, LED	12 September 2020
7	Diode Applications -clipping circuits, comparators,	15 September 2020
8	Half wave rectifier	17 September 2020
9	Full wave rectifier, rectifier with capacitor filter	19 September 2020
UNIT-II: BJTs		
10	Transistor characteristics: The junction transistor, transistor as an amplifier	22 September 2020
11	CB, CE, CC configurations,	24 September 2020
12	comparison of transistor configurations,	26 September 2020
13	operating point, self-bias or Emitter bias, bias compensation	29 September 2020
14	thermal runaway and stability, transistor at low frequencies	06 October 2020
15	CE amplifier response, gain bandwidth product	08 October 2020
16	Emitter follower, RC coupled amplifier	10 October 2020
17	two cascaded CE and multistage CE amplifiers	13 October 2020
UNIT-III: FETs and Digital Circuits		
18	FETs: JFET, V-I characteristics,	15 October 2020
19	MOSFET,	27 October 2020
20	Low frequency CS and CD amplifiers, CS and CD amplifiers.	29 October 2020
21	Digital Circuits: Digital operations of a system, OR gate, AND gate, NOT, EXCLUSIVE OR gate	31 October 2020
22	De Morgan Laws, NAND and NOR DTL gates	10 November 2020
23	modified DTL gates, HTL	12 November 2020
24	TTL gates, output stages, RTL and DCTL	17 November 2020
25	CMOS, Comparison of logic families	19 November 2020
UNIT-IV: Combinational Logic Circuits		
26	Basic Theorems and Properties of Boolean Algebra	21 November 2020
27	Canonical and Standard Forms, Digital Logic Gates	24 November 2020
28	The Map Method, Product-of-Sums Simplification	26 November 2020
29	Don’t-Care Conditions, NAND and NOR Implementation	28 November 2020
30	Exclusive-OR Function, Binary Adder-Subtractor, Decimal Adder, Binary Multiplier	01 December2020
31	Magnitude Comparator, Decoders	03 December2020
32	Encoders, Multiplexers	05 December2020
UNIT-V: Sequential Logic Circuits		
33	Sequential Circuits introduction Latches and flip flops	08 December2020
34	Types of flip-flops	10 December2020
35	Analysis of Clocked Sequential Circuits	12 December2020

36	State Reduction and Assignment	15 December2020
37	Shift Registers	17 December2020
38	Ripple Counters, Synchronous Counters	19 December2020
39	Random-Access Memory, Read-Only Memory.	22 December2020
40	Revision	24 December2020
41	Revision	29 December2020
42	Revision	31 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