

COURSE OUTCOMES FOR SEM-3 DEP. OF ELECTRONICS

Teacher Name:-Naba Kumar Dhara

Sub: Electronics

UNIT-1

Course Sub: Number System and Codes

1. Students will be able to contrast and compare digital representation of information with the analog representation.
2. will be able to explain fundamental concepts of the decimal number system. Represent number systems in powers of the base.
3. will understand the fundamentals of converting from one number system to another.
4. will be able to count, convert among, and do arithmetic in the binary, hexadecimal and octal number systems.
5. will be able to represent signed decimal numbers in 2's complement form, and vice versa.
6. will be able to represent data in codes and interpret those codes.
7. will be able to demonstrate how voltage levels are used to represent digital quantities and describe various parameters of a pulse waveform.

Course Sub: Boolean algebra & Logic Gates

1. will be able to explain the basic logic operations of NOT, AND, OR, NAND, NOR, and XOR.
2. will be able to interpret logic functions, circuits, truth tables, and Boolean algebra expressions.
3. will be able to apply the laws of Boolean algebra to simplify circuits and Boolean algebra expressions.
4. will be able to use the methods of systematic reduction of Boolean algebra expressions including Karnaugh maps.
5. will be able to know SOP & POS using K-map.
6. will understand the basic electronics of logic circuits and be able to use integrated circuit packages.
7. will be able to model, analyze, and test a digital circuit using a computer software application

Unit-2

Course Sub:-Combinational logic analysis and Design

The students will be able to

1. Know about different types of combinational circuits such as multiplexer, demultiplexer, adder, subtractor.
2. Explain logic operations of combinational circuits.
3. Design various combinational circuits using IC-gates.

Teacher's Name-Arinda Ghosh

Sub: Electronics

Unit-3

Course Sub: Sequential logic design

The Students will be able to

1. Know about Memory circuits.
2. Know about Clock-pulse.
3. Explain working and Boolean expressions of various Flip-flop.
4. Design various latch and flip-flops.
4. uses of various flip-flop.

Unit-4

Course Sub: VHDL

The Students will

1. Learn the IEEE Standard 1076 Hardware Description Language (VHDL)

2. Be able to model complex digital systems at several level of abstractions; behavioral and structural, synthesis and rapid system prototyping.
3. Be able to develop and simulate register-level models of hierarchical digital systems
4. Develop a formal testbench from informal system requirements
5. Be able to design and model complex digital system independently or in a team