

Descriptive Questions.

1. Explain the working of Half Adder and Full Adder
2. Describe NAND, NOR, XOR and XNOR gate with its diagram, Boolean expression and truth table.
3. Given the Boolean Equation $A^1 + CA = 0$, $AB = AC$, $A^1 B + AB^1 + BC^1 = C^1 D$, what are the values of A, B, C, D?
4. What are flip flop? Explain SR, JK Flip Flop in detail.
5. What are logic gates? Explain the different types of logic gates with truth table and logic circuit diagram.
6. Explain the block diagram of digital computer with the help neat diagram.
7. What is Boolean algebra? Explain Boolean Law in with the help of Truth Table
8. Explain the working of Half Subtractor.
9. Convert the given binary number 1001101001 into its equivalent decimal, octal and hexadecimal number
10. Simplify the following Boolean function: $F=X'Y'Z + X'YZ +XY'$ Draw the truth table and the logic diagram for the simplified expression.
11. Write a note on multiplexers.
12. What are decoders explain in detail with truth table and circuit diagram.
13. What are fixed and floating point representation.
14. Various number conversion: octal, binary, decimal, hexadecimal
15. What are Machine Language and Assembly Language? Explain its difference with an example.
16. What are timing and control instructions.
17. Explain direct and indirect addressing with the help of neat diagram.
18. Write a note on
 - a. Pipelining
 - b. RISC
 - c. CISC
19. What are the various classifications of computer memory?
20. What are Direct Memory Mapping(DMA) explain in detail.
21. What are cache memory explain in detail? explain direct mapping and set associative mapping.