Digital Electronics
IMP Questions
UNIT -I

1. What do you understand by number system? Explain All types of number system.
2. Explain fix point and floating point representation ?
3. Write the difference between ASCII and EBCDIC code ?
4. Define code and Explain all types of codes ?
5. Explain error detection and correction methods ?
6. Solve – 1. $(1674.15)_8 = (?)_{10}$

    2. $(5 A 7 B)_{16} = (?)_2$

    3. complement representation 1. 1011101=convert in 2's complement

    2. 734 = convert in 10's complement

    4. Binary to gray conversion 10101

    5. $(01111000)_{BCD} = ()_{Excesss-3}$

    6. $(49)_{BCD} + (39)_{BCD}$

    7. 111001-001100 (Subtract using 2's complement)

UNIT –II

1. What are logic gates ? Explain all types of logic gates?
2. What is Boolean equation? Write all basic Boolean rules ?
3. Write De-Morgan's Theorem and prove it with the help of truth Table ?
4. Explain k-map-Sop and Pos?
5. Solve – 1. $Y = AB + \overline{AC} + A\bar{B}C (AB + C)$

    2. $Y + (A + B) (\overline{A + B}) \bar{A} + B$

    3. $F = \sum m (0,1,2,4) + d(3,5,7)$
6. Draw XOR gate Using NAND Gate?

UNIT –III

1. Explain combinational circuit? What is Adders and explain half and full adders with the help of circuit diagrams?
2. What is subtractor? Explain working of half and full subtractor with the help of circuit diagram?
3. Explain – 1. Multiplexer

    2. Demultiplexer

    3. Encoder & Decoder
4. Explain with diagram 64 to 1 multiplexer using four 16 to 1 multiplexer?
5. Write short note on –
    1. BCD to decimal Decoder.
    2. BCD to Seven segment display decoder.

UNIT –IV

1. Write the difference between combinational and sequential circuit?
2. What is flip flop? Explain RS and D Flip flop?
3. What is JK flip flop? Explain working of masters slave JK flip flop?
4. Explain T flip flop working?

UNIT – V

1. What is register? Explain different types of registers?
2. What is counter? Explain Different types of counter?
3. Explain the working of ripple counter?
4. What is Micro-operation? Explain all types of micro-operation?