DE Question Bank

1) Realize a logic circuit for octal and binary encoder?

2) Implement a Full adder using 3x8 decoder?

3) Implement 3-Bit binary to gray code conversion

4) Design a priority encoder for a system with a 3 inputs

5) Design 7-segment decoder

6) What is magnitude comparator? Design 1-bit comparator and write the truth table, logic diagram using basic gates.

7) What is priority generator? Explain with an example.

8) What is Mux? Design 4 to 1 Mux using logic gates. write the truth table & explain it's working.

9) Construct 4:1 Mux using only 2:1 Mux.

10) Construct 8:1 Mux using only 2:1 Mux.

11) Design 16:1 Mux using 8:1 Mux & 2:1 Mux.

12) Realize Y=$\overline{A}$B+$\overline{BC}$+ABC using 8:1 Mux .

13) Implement using 4:1 Mux Y=f(A,B,C,D)=$\sum m(0,1,2,4,6,9,12,14)$.

14) Design and implement BCD to excess-3 code converter.

15) Explain working of Half Substractor & Full Substractor.

16) Realize working of 4-Bit Binary Parallel adder.

17) Design and implement Binary to gray code converter .

18) Y=f(a,b,c)=$\sum m(0,1,6,7)$ realize following function by using 8:1nMux and 4:1 Mux.

19) Construct Full adder using only NAND gates.

20) Design BCD decimal decoder.

21) Construct Full adder using Half adder ,Construct the truth table.

22) Write the difference between flip flop & latch.

23) Write the difference between Sequential circuit and Combinational Circuit.

24) Write a circuit diagram , truth table , characteristics and Excitation table for i)SR flip flop ii)JK flip flop iii)D flip flop & iv) T flip flop.