CONTINUOUS ASSESSMENT TEST -II[CSE&IT]

Subject: DIGITAL PRINCIPLES AND SYSTEM DESIGN	**Duration: 1Hr 30 Min**
Subject Code: CS8351	**Date: 15.09.2020**
Branch/ Year/Sem: CSE & IT / II / III	**Max.Marks:50**

PART -A   (5X2=10 MARKS)
ANSWER ALL QUESTIONS

1. Compare moore circuit and mealy circuit.[CO3][U]

2. Difference between Combinational circuits and sequential circuits.[CO3][U]

3. Difference between latch and flipflop.[CO3][U]

4. Write the excitation table for all the flipflops.[CO3][A]

5. Difference between multiplexer and decoder.[CO2][U]

PART –B   (2X13=26 Marks)

ANSWER ALL QUESTIONS

6.a)i)Implement $F(A,B,C,D)= \sum m(1,3,4,11,12,13,14,15)$ using 8:1 MUX[CO2][A]   (3)

  ii)Implement $F(A,B,C,D)= \prod M(0,3,5,6,8,9,10,14)$ using 8:1 MUX[CO2][A]   (3)

  iii)Implement $F(A,B,C,D)= \sum m(0,1,2,4,6,9,12,14)$ using 4:1 MUX[CO2][A]   (4)

  iv)Implement $F(A,B,C,D)= \sum m(0,2,6,10,11,12,13)+d(3,8,14)$ using 8:1 MUX[CO2][A]   (3)

(OR)

6 b)i)Design Master Slave JK FlipFlop.[CO3][C]   (7)
  ii)Design a Binary Multiplier.[CO2][C]   (6)

7 a) Design a BCD to 7segment decoder.[CO2][C]   (13)

(OR)

7b) Design a Priority Encoder.[CO2][C]   (13)

PART –C   (1X14=14 Marks)

8. a)Design a flip-flop to convert D flipflop to T flipflop.[CO3][A]   (6)
   b)Desin a flip-flop to convert SR flipflop to JK flipflop.[CO3][A]   (8)

CO	CS8351	DIGITAL PRINCIPLES AND SYSTEM DESIGN	L	T	P	C
			3	0	0	3
C202.1 (CO1)		Simplify Boolean functions using KMap.				
C202.2 (CO2)		Design and Analyze Combinational and Sequential Circuits				
C202.3 (CO3)		Implement designs using Programmable Logic Devices				
C202.4 (CO4)		Write HDL code for combinational and Sequential Circuits.				
C202.5 (CO5)		Model memory arrays for any Boolean function .				