2018

CSIT

CSIT : 1.2

DIGITAL ELCTRONICS

Full Marks: 80

Time: 3 hours

The figures in the margin indicates full marks for the questions

1. Fill in the blanks: 1X5=5
   I. $356)_8$ = ...$)_{16}$
   II. The base of Hexadecimal number is .....
   III. $A\bar{B} + \bar{A}$ B= ?
   IV. The serial data can be converted into parallel data by using .....
   V. Race Around condition occurs in ..... Filp-Flop

2. Prove that $\overline{AB}$ + AB = $\overline{A \oplus B}$ 5
3. Find out the equivalent binary number for (-20)10 by using all possible methods. 3x3=9
4. Design a (1:8) Demultiplexer, and study it's I/O characteristics. 5
5. What is Filp-Flop? Describe the characteristics of aS-SFilop-Flop. 2+8=10
6. Subtract $436)_{16}$ from $A2C)_{16}$ 5
7. Design a Half Subtractor and Full Subtractor and study their I/O characteristics 4+6=10
8. Differentiate between Decoder and Encoder 10
9. Write short notes on : (Any Two) 2×8=16
   a. Sequential Circuit
   b. Clock Signal
   c. DeMorgna's Theorem
10. Design a full adder & study their I/O Charateristics. 5

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