

Roll No.

Total Pages : 2

BT-3/D-18

33113

DIGITAL ELECTRONICS AND LOGIC DESIGN

Paper : IT-207N

Time : Three Hours]

[Maximum Marks : 75

Note : Attempt *five* questions in all, selecting at least *one* question from each unit.

UNIT-I

1. Express the following BCD numbers :
 - (i) Straight binary form and
 - (ii) Excess-3 code-10010011, 01100111. (15)

2. Simplify the Boolean function using K-Map
$$F(W, X, Y, Z) = \sum (1, 3, 7, 11, 15) + d(0, 2, 5)$$
Also simplify the same using QMC method. (15)

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UNIT-II

3. What is Encoder? Explain with logic circuit. Also explain how encoders with decoders can be used as code converters. (15)

4. Explain BCD adder and subtractor in detail. (15)

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UNIT-III

5. What is different between JK flip-flop and JK master slave flip-flop? Which *one* is better and why? (15)
6. Explain synchronous and asynchronous counters. (15)

UNIT-IV

7. Discuss D/A and A/D converter. (15)
8. What are programmable logic devices? Differentiate PLA and PAL. (15)

