

Roll No.

Total Pages : 02

BT-3/D-19

33109

DIGITAL ELECTRONICS AND LOGIC

DESIGN

IT-207N

Time : Three Hours]

[Maximum Marks : 75

Note : Attempt any five questions in all, selecting one from each unit.

Unit-I

1. Design the circuit using NOR gates only for the given equation $f(A, B, C, D) = \Pi M(1, 2, 3, 4, 6, 9, 11, 13)$ after minimizing using K-map. (15)
2. Compute :
 - (a) $(11010101)_2 = (\dots\dots\dots)_{10}$
 - (b) $(256)_{10} = (\dots\dots\dots)_{Hex}$
 - (c) $(11010101)_2 = (\dots\dots\dots)_{BCD}$
 - (d) 2's Complement of (110101001)
 - (e) Minimize $A + A'B$ using Boolean algebra. (15)

Unit-II

3. Design the circuit of 1-bit full Adder and subtractor. (15)

4. Design encoder for 7-Segment Display Unit. (15)

5. Discuss the S-R flip-flop with its characteristic equation and excitation table. Design D-flip-flop using J-K flip-flop. (15)

6. Design mod-5 synchronous counter. (15)

Unit-IV

7. Discuss sample and hold circuit and explain the working of weighted resistor D/A convertor. (15)

8. Design $F(A, B, C) = \Sigma m(0, 1, 3, 5, 7)$ using PAL.

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INTERNET AND WEB TECHNOLOGY

IT-205N

Time : Three Hours]

[Maximum Marks : 75

Note : Attempt Five questions in all, selecting at least one question from each Unit.

Unit I

1. (a) Discuss the working of Internet. List major components used in Internet. 7½
(b) Make header diagram of IPv6. What is the significance of each field in IPv6 header ? 7½
2. (a) Discuss different classes of IP address. 7½
(b) Discuss the role of ISP in internet. 7½

Unit II

3. (a) Discuss the working of search engines. 7½
(b) Discuss e-Mail management in detail. 7½

4. (a) Discuss different types of Modems used for networking. 7½
(b) Explain the working of IMAP. 7½

Unit III

5. (a) How will you explain closures in JavaScript ? 7½
(b) Discuss different types of frames using HTML. 7½
6. (a) Explain different types of style sheets used in CSS. 7½
(b) Write syntax for CSS color, margin, position and border. 7½

Unit IV

7. (a) Discuss different types of encryption mechanisms. 7½
(b) Explain the working of Apache server in detail. 7½
8. Write short notes on the following :
(a) Types of Network Attacks
(b) Different types of firewall. 2×7½=15