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GSQ/D-24

COMPUTER NETWORKS

BCA-354

1071

Time : Three Hours]

[Maximum Marks : 80

Note : Attempt *Five* questions in all, selecting *one* question from each Unit. Q. No. 1 is compulsory. All questions carry equal marks.

(Compulsory Question)

1. Define the following terms :

    8×2=16

    (a) Protocol

    (b) Frame

    (c) Packet

    (d) Segment

    (e) Flooding

    (f) NIC

    (g) Choke Packet

    (h) Cable Modem.

Unit I

2. (a) Explain various design issues of layers in network architecture. 10

    (b) Why Network Architecture is organized in layers ? 6

3. Differentiate between the following :
   (a) Connection Oriented *vs.* Connection Less Services 6
   (b) Client Server *vs.* Distributed Networking Models 6
   (c) Hub *vs.* Switch *vs.* Router. 6

Unit II

4. Describe Modulation and its need. Explain various types of analog modulation techniques in detail. 16

5. (a) How Guided transmission media differs from unguided transmission media ? Which one of the two is most popular and why ? 10
   (b) Explain communication satellite media in detail. 6

Unit III

6. Write short notes on the following : 4×4=16
   (a) CRC
   (b) Hamming code
   (c) Bluetooth
   (d) VLAN.

7. What do you mean by media access control protocols ? How many types of media access control protocols exists ? Explain any one of them in detail. 16

Unit IV

8. Explain Link State Routing in detail. Why LSR is better than DVR ? 16

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9. (a) Define Congestion in computer network. Why congestion occurs ? What is the impact on computer network ? How the problem of congestion can be handled in data communication ?   5

   (b) Explain traffic shaping algorithms in detail.   11