97679

B.C.A. Vth Semester (New)
Examination, March–2021
(Full & Reappear)

DATA COMMUNICATION AND NETWORKING

Paper–BCA–303

Time : **Three Hours**]   [*Maximum Marks* : **80**

Note :– Question No. 1 is compulsory. Attempt *four* more questions, selecting *one* question from each Unit. All questions carry equal marks.

1. Answer the following questions briefly :

   (a) What is computer networking ?

   (b) Describe analog communication.

   (c) Explain Repeater and its use briefly.

Unit–IV

8. (a) Define Routing. How is it used and useful ? Discuss routing algorithms with examples.

   (b) Explain congestion control and its algorithms with suitable examples.   8,8

9. Explain the following briefly with examples :

   (a) Network layer and its advantages

   (b) Network security threats

   (c) Encryption methods   6,6,4

(d) Define switch and gateway.

(e) What is Datagram ?

(f) Explain shortest path routing.

(g) Describe role of wireless protocols in networking.

(h) Explain frame relay and X.25. 2×8=16

Unit-I

2. (a) What is TCP/IP Reference Model ? Discuss its working and advantages with examples.

(b) Explain use and importance of client/ server model briefly. 9,7

3. Explain the following briefly with suitable examples :

(a) Network topologies and their relative merits and demerits.

(b) Distributed system and its advantages.

(c) Types of computer networks. 7,4,5

Unit-II

4. (a) What is Modulation ? How is it used ? Explain its techniques and advantages with examples.

(b) Describe switching and multiplexing and their advantages with examples. 9,7

5. Describe the following with examples :

(a) Data encoding and its techniques and advantages

(b) Digital carrier systems and their uses 10,6

Unit-III

6. (a) What is Ethernet ? How is it useful and used ? Explain its types with examples.

(b) Describe use and role of connector, hub, network interface card and bridge in networking with examples. 8,8

7. Explain the following with examples :

(a) Token passing protocols and their uses

(b) Network software and Hardware components

(c) Wireless LANs 6,6,4