713011
B.C.A. THIRD SEMESTER EXAMINATION
DECEMBER-2024
SUBJECT: MAJOR
PAPER – DATA COMMUNICATION AND COMPUTER NETWORKS

Time: 3hrs   Max. Marks: 60

Note: All sections are compulsory. Marks are indicated against each Section.

SECTION – A
Objective Type Questions

Q.1   Choose the correct answer: (1 x 5 = 5)

(i)   Which of the following is an example of Bluetooth?
    (a) Wide area network   (b) Virtual private network
    (c) Local area network   (d) Personal area network

(ii) How is a single channel shared by Multiple signals in a Computer Network?
    (a) Multiplexing   (b) Phase Modulation
    (c) Analog Modulation   (d) Digital Modulation

(iii) Which of the following devices forwards Packets between Network by processing the routing information included in the packet?
    (a) Firewall   (b) Bridge
    (c) Hub   (d) Router

(iv) What is the term for an endpoint of an inter Process Communication flow across a computer network?
    (a) Port   (b) Machine
    (c) Socket   (d) Pipe

(v) Which of the following maintains the Domain Name System?
    (a) A single server   (b) A single computer
    (c) Distributed Database system   (d) none of these

SECTION – B
Short Answer Type Questions

(5 x 4 = 20)

Q.2. Explain the Goals of Network and application of a data communication system.

OR

Write a short note on Bus and Star Topology with suitable diagram.

Q.3. Write a note on Twisted Pair and Coaxial Cable.

OR

Explain the any two Switching Techniques.

Q.4. Differentiate between LAN and WAN.

OR

Explain the Token Passing and Polling.

Q.5. Describe Physical Layer of OSI Model in brief.
OR
Describe Application Layer of OSI Model in brief.

Q.6. What do you understand by Routing in Network? Explain in brief.

OR

Explain the TCP/IP Model.

SECTION – C
Long Answer Type Questions

(5 x 7 = 35)

Q.7. Explain the Centralized, Distributed and Collaborative model of networking model.

OR

Discuss the Ring, Tree and Hybrid Topologies with suitable diagram.

Q.8. Discuss the concept of Fiber Optics of Transmission Media in brief.

OR

Explain functioning of connection oriented and connection less services in brief.

Q.9. Describe the Salient features and Terminal Handling of network.

OR

Explain IEEE Standards with their needs and Development.

Q.10. Explain the OSI Reference Model with suitable structure Diagram.

OR

Explain working concept of Session Layer and Presentation Layer in brief.

Q.11. Differentiate between OSI and TCP/IP Model.

OR

Explain the Structure of the Internet in brief.

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