

**A-1144**

Total Pages : 3

Roll No. ....

**BCA(N)-203**  
**Computer Network**

Examination, June 2025

Time : 2:00 Hrs.

Max. Marks : 70

**Note :-** This paper is of Seventy (70) marks divided into two (02) Sections 'A' and 'B'. Attempt the questions contained in these sections according to the detailed instructions given therein. *Candidates should limit their answers to the questions on the given answer sheet. No additional (B) answer sheet will be issued.*

**Section-A**

**Long Answer Type Questions**      2×19=38

**Note :-** Section 'A' contains Five (05) Long-answer type questions of Nineteen (19) marks each. Learners are required to answer any *two* (02) questions only.

1. What is Computer Network ? Explain the different types of computer network.
2. Explain TCP/IP reference model with diagram.
3. Explain, OSI reference model. Describe the function performed by each layer.
4. Define CSMA/CD Protocol ? In which network is it used. Which algorithm is used to avoid collisions in CSMA/CD ? Explain.
5. Define transmission media. Explain guided and unguided transmission media with an example.

### **Section–B**

#### **Short Answer Type Questions**      4×8=32

**Note** :– Section ‘B’ contains Eight (08) Short-answer type questions of Eight (08) marks each. Learners are required to answer any *four* (04) questions only.

1. What is Internet ? Explain the applications of internet.
2. What is Network topology ? Discuss various types of networks topologies in computer network.
3. What is the difference between ALOHA and Slotted ALOHA ?
4. What is Public key Cryptography ? What are the advantages and disadvantages of Public key Cryptography ?

5. Highlight the difference between routers, switches, and hubs along with their Key Features.
6. What is IP address? Explain IP address classes.
7. Compare and Contrast the following :
  - (i) Multiplexing Vs. Demultiplexing
  - (ii) Repeater and Router
  - (iii) TCP and UDP
8. Explain the following terms :
  - (i) Virtual Private Network (VPN)
  - (ii) Firewall
  - (iii) Network Address Translation
  - (iv) Data Encryption Standard(DES)

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