

APRIL 2022

51335/SZ24A

Time : Three hours

Maximum : 75 marks

PART A — (10 × 2 = 20 marks)

Answer any TEN questions.

1. What is a topology?
2. Name the two major categories of transmission media.
3. Why are protocols needed?
4. Define: "Checksum".
5. What is routing?
6. Mention the responsibilities of data link layer.
7. What are the services provided by the network layer?
8. Write a short note on error correction.
9. Define: "Reliable Flooding".
10. What is the function of gateway?
11. What do you mean by redundancy?
12. Define: "ICMP".

ii. BCA → Computer network.

PART B — (5 × 5 = 25 marks)

Answer any FIVE questions.

13. Describe the TCP/IP reference model with a diagram.
14. Write down the characteristics of twisted-pair wiring.
15. Explain the different types of error-correcting codes.
16. Write down the design issues of network layer.
17. Summarize the advantages of distance vector routing.
18. What are the services provided to the upper layers in transport layer? Explain.
19. Elaborate the two fundamental cryptographic principles.
22. Illustrate the simplex stop-and-wait protocol for an error-free channel.
23. What is congestion control? Describe the principles of congestion control algorithms.
24. Explain the connection establishment and connection release in transport protocol.

PART C — (3 × 10 = 30 marks)

Answer any THREE questions.

20. What are the categories of coaxial cables? Explain.
21. Discuss the major components of telephone network.