

**DATA COMMUNICATION AND COMPUTER  
NETWORKS**

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Time : Three hours

Maximum : 75 marks

**PART A — (10 × 1 = 10 marks)****Answer ALL the questions.**

Choose the correct answer :

1. The \_\_\_\_\_ between two words is the number of differences between the corresponding bits.  
(a) Hamming Distance (b) Minimum distance  
(c) Maximum distance (d) Network distance
2. Transmission media are usually categorized as \_\_\_\_\_  
(a) fixed or unfixed  
(b) determinate or indeterminate  
(c) guided or unguided  
(d) metallic or nonmetallic
3. Which of the following architecture uses CSMA/CD access method?  
(a) ARCnet (b) Ethernet  
(c) ARPANET (d) NSFNET



4. Which of the following device copies electrical signals from one Ethernet to another?
- (a) Bridge (b) Repeater  
(c) Hub (d) Passive hub
5. Frame relay operates in the \_\_\_\_\_
- (a) application, presentation  
(b) session, transport  
(c) physical, data link  
(d) data link, network
6. ISDN is an example of \_\_\_\_\_ network.
- (a) packet switched  
(b) circuit switched  
(c) frame relay  
(d) ring based
7. IPV4 uses \_\_\_\_\_ bit value to represent address.
- (a) 128 (b) 64  
(c) 32 (d) 16
8. \_\_\_\_\_ deals with the issues of creating and maintaining routing tables.
- (a) Forwarding (b) Routing  
(c) Directing (d) None directing



9. SNMP stands for \_\_\_\_\_
- (a) Simple Network Management Protocol
  - (b) Standard Network Management Protocol
  - (c) Small Network Management Protocol
  - (d) Scalable Network Management Protocol
10. UDP is called a \_\_\_\_\_ transport protocol.
- (a) connectionless, reliable
  - (b) connection-oriented, unreliable
  - (c) connectionless, unreliable
  - (d) connection, reliable

PART B — ( $5 \times 7 = 35$  marks)

Answer ALL questions, choosing either (a) or (b)

11. (a) Distinguish between LAN and WAN.

Or

- (b) How are synchronous protocols classified? Explain.

12. (a) Discuss LAN operating systems and protocols.

Or

- (b) Write a short note on IEEE standard 802.4.



13. (a) What is ATM and what are its services?

Or

(b) Explain the architecture of IEEE 802.11.

14. (a) What are the principles of internetworking? Explain.

Or

(b) Explain the importance of transport protocol.

15. (a) Explain about the client-server model.

Or

(b) Describe the network management standards.

PART C — ( $3 \times 10 = 30$  marks)

Answer any THREE questions.

16. Explain the architecture of TCP/IP.

17. What are the common switching techniques used in WAN? Explain.

18. Compare the ISDN, ATM and frame relay.

19. Describe the Dijkstra algorithm.

20. Discuss about the SNMP architecture.