



Sl. No.
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**MCA I Semester Degree Examination, July - 2024**

**Computer Networks**

Time : 3 Hours

Maximum Marks : 70

**Note :** Answer *any five* questions (Question No. 1 is **compulsory**).

- 1. (A) Discuss the common communication problems encountered in computer networks. **7**  
(B) What is a network protocol ? List out and explain different types on network protocol. **7**
- 2. (A) What is IPv4 addressing ? Explain the different classes of an IPv4 address. **7**  
(B) Define MAC address. List out and explain types of MAC address. **7**
- 3. (A) List out and explain layers of TCP/IP model with neat diagram. **7**  
(B) Discuss client/server architecture with neat diagram. **7**
- 4. (A) Explain UDP header format with neat diagram. List out the advantages of UDP. **7**  
(B) Discuss the techniques of congestion control in computer network. **7**
- 5. (A) Explain the components of a Local Area Network (LAN). **7**  
(B) Differences between Store-and-forward and Cut-through Switching. **7**
- 6. (A) Define error detection and explain single bit and burst bit error with an example. **7**  
(B) Explain WAN encapsulation and its significance. **7**
- 7. (A) Differentiate between Static Routing and Dynamic Routing in WANs. **7**  
(B) Discuss ICMP Message Format list out the types of Error Reporting messages in ICMP (Internet Control Message Protocol). **7**
- 8. Write short notes on the following :
  - (A) HTTP (Hyper Text Transfer Protocol) **5**
  - (B) Internet Protocol **5**
  - (C) NIC Card **4**

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