

**MASTER OF COMPUTER APPLICATION**  
**Second Semester**  
**COMPUTER NETWORKS**  
**(MCA-08)**

**Duration: 3Hrs.**

**Full Marks: 70**

**(PART-B: Descriptive)**

**Duration: 2 hrs. 40 mins.**

**Marks: 50**

**I. Answer the following questions :( any five)**

**2×5=10**

1. What is modulating wave?
2. Explain serial and parallel communication types.
3. Explain any two advantages of cell network.
4. What is a router? In which layer of ISO-OSI reference model does it works?
5. Give example of any two guided media.
6. Give one example each of IPv4 Class B and IPv4 Class C address.
7. What is an URL? Give an example.

**II. Answer the following questions :( any five)**

**3×5=15**

1. Differentiate LAN, MAN and WAN.
2. Explain the IEEE 802.3.
3. What is a bridge? How do bridges learn?
4. Explain the limitations of firewall.
5. Explain the TCP Connection establishment.
6. Explain the different communication modes with examples.
7. What is a peer-to-peer network? Explain with suitable diagram.

**III. Answer the following questions :( any five)**

**5×5=25**

1. Differentiate baseband and broadband.
2. Discuss star topology along with its advantages and disadvantages.
3. Explain the frequency division multiplexing.
4. Explain coaxial cable in terms of physical make, applications and transmission characteristics.
5. What is FDDI? Explain its advantages and disadvantages.
6. Explain the working of packet switching.
7. Explain the ISO/OSI reference model.

Or

Explain TCP/IP model.

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11. A layer-4 firewall cannot:
- a) Block entire HTTP traffic.
  - b) Block all ICMP traffic.
  - c) Stop incoming traffic from a specific IP address but allow outgoing traffic to the same IP address.
  - d) All of above.
12. Hub is a \_\_\_\_\_ device.
- a) Layer 2.
  - b) Layer 3.
  - c) Layer 4 .
  - d) None.
13. The Address Resolution Protocol (ARP) is used for:
- a) Finding the IP address from the DNS.
  - b) Finding the IP address of the default gateway.
  - c) Finding the IP address that corresponds to a MAC address.
  - d) Finding the MAC address that corresponds to an IP address.
14. Multicast systems generally allow the possibility of addressing a packet to:
- a) One destination.
  - b) Many destinations.
  - c) All destinations.
  - d) None of above.
15. Message Integrity means:
- a) that the content of a message when transmitted across a network must remain confidential.
  - b) that the entity or user is verified prior to access to the system resources.
  - c) that the receiver needs to be sure of the sender's identity.
  - d) that the data must reach the destination exactly as it was sent.
16. Broadcasting of multiple radio signals through the air at the same time is an example of:
- a) FDM.
  - b) TDM.
  - c) ATM.
  - d) None.
17. Internet is an example of:
- a) LAN.
  - b) MAN.
  - c) PAN.
  - d) WAN.
18. Which layer is also known as Host to Host Protocol Layer?
- a) Data link layer.
  - b) Network layer.
  - c) Transport layer.
  - d) None of above.
19. Which IPv4 class is used for multicasting purpose?
- a) A.
  - b) B.
  - c) D.
  - d) E.
20. Which of the following is a not a client-server application?
- a) Internet chat.
  - b) Web browsing.
  - c) E-mail.
  - d) Ping.

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