

Chapter 1: Introduction to Computer Networks - 30 MCCQs

Chapter 2: LAN Technologies ? 30 MCCQs

1. Which IEEE standard defines Ethernet (wired LAN)?

- a) 802.11
- b) 802.3
- c) 802.16
- d) 802.15

? Answer: b) 802.3

? Hint: 802.3 is the standard for wired Ethernet.

2. What is the maximum data rate supported by traditional Ethernet (802.3)?

- a) 10 Mbps
- b) 100 Mbps
- c) 1 Gbps
- d) 10 Gbps

? Answer: a) 10 Mbps

? Hint: The original Ethernet standard supported 10 Mbps.

3. Which of the following is a wireless LAN technology?

- a) Ethernet
- b) Token Ring
- c) Wi-Fi
- d) FDDI

? Answer: c) Wi-Fi

? Hint: Wi-Fi is the common name for IEEE 802.11.

4. Bluetooth is defined under which IEEE standard?

Chapter 1: Introduction to Computer Networks - 30 MCCQs

- a) 802.11
- b) 802.3
- c) 802.15.1
- d) 802.16

? Answer: c) 802.15.1

? Hint: Bluetooth uses the IEEE 802.15.1 standard.

5. Which technology is designed for MANs and offers high-speed broadband?

- a) Wi-Fi
- b) WiMAX
- c) Bluetooth
- d) Ethernet

? Answer: b) WiMAX

? Hint: WiMAX (802.16) provides broadband wireless access over long distances.

6. Token Ring uses what method to control access to the network?

- a) CSMA/CD
- b) TDMA
- c) Polling
- d) Token passing

? Answer: d) Token passing

? Hint: In Token Ring, a token is passed to control access.

7. Which of the following provides high-speed optical token passing?

- a) Token Ring
- b) FDDI
- c) Wi-Fi

Chapter 1: Introduction to Computer Networks - 30 MCCQs

d) X.25

? Answer: b) FDDI

? Hint: FDDI uses fiber optics and token passing for fast data transmission.

8. What is the full form of RFID?

a) Radio Frequency Identity

b) Random Frequency Identification

c) Radio Frequency Identification

d) Real Fast Identification

? Answer: c) Radio Frequency Identification

? Hint: RFID uses electromagnetic fields to automatically identify and track tags.

9. In a CSMA/CD network, what happens when a collision is detected?

a) Transmission is stopped

b) Frame is retransmitted

c) A jamming signal is sent

d) All of the above

? Answer: d) All of the above

? Hint: All steps occur after a collision in CSMA/CD.

10. Which standard is known for Personal Area Networks (PAN)?

a) 802.11

b) 802.3

c) 802.15.1

d) 802.16

? Answer: c) 802.15.1

? Hint: Bluetooth (802.15.1) is for short-range personal area networks.

Chapter 1: Introduction to Computer Networks - 30 MCCQs

11. Which LAN technology uses a physical star but logical ring topology?

- a) Ethernet
- b) Token Ring
- c) FDDI
- d) Wi-Fi

? Answer: b) Token Ring

? Hint: Physical star, but token circulates in a logical ring.

12. Frame Relay is an example of which type of network?

- a) Circuit-switched
- b) Message-switched
- c) Packet-switched
- d) None of the above

? Answer: c) Packet-switched

? Hint: Frame Relay is used for efficient packet transmission.

13. Which of the following uses dual-ring topology?

- a) Token Ring
- b) Ethernet
- c) FDDI
- d) Wi-Fi

? Answer: c) FDDI

? Hint: FDDI uses dual rings for fault tolerance.

14. What does CSMA/CD stand for?

- a) Carrier Signal Multiple Access / Collision Delivery
- b) Carrier Sense Multiple Access / Collision Detection

Chapter 1: Introduction to Computer Networks - 30 MCCQs

- c) Centralized System MAC Access / Channel Division
- d) None of the above

? Answer: b) Carrier Sense Multiple Access / Collision Detection

? Hint: Used in Ethernet.

15. Which is **not** a feature of Ethernet?

- a) Collision detection
- b) Token passing
- c) Broadcast transmission
- d) Shared medium

? Answer: b) Token passing

? Hint: Token passing is used in Token Ring, not Ethernet.

16. Which wireless technology is best suited for short-range communication?

- a) WiMAX
- b) Wi-Fi
- c) Bluetooth
- d) LTE

? Answer: c) Bluetooth

? Hint: Bluetooth = PAN = 10 meters or less.

17. The IEEE standard for Wi-Fi is:

- a) 802.3
- b) 802.15
- c) 802.11
- d) 802.16

? Answer: c) 802.11

Chapter 1: Introduction to Computer Networks - 30 MCCQs

? Hint: Wi-Fi = Wireless LAN.

18. What is the purpose of a MAC address?

- a) Logical addressing
- b) Encryption
- c) Physical addressing
- d) Routing

? Answer: c) Physical addressing

? Hint: MAC address = hardware address (layer 2).

19. Which technology uses baseband transmission?

- a) Ethernet
- b) DSL
- c) Wi-Fi
- d) WiMAX

? Answer: a) Ethernet

? Hint: Ethernet typically uses baseband signaling.

20. In WiMAX, the coverage range is approximately:

- a) 10 meters
- b) 50 meters
- c) 10 kilometers
- d) 100 kilometers

? Answer: c) 10 kilometers

? Hint: WiMAX = Metropolitan range.

21. In Token Ring, the token is:

Chapter 1: Introduction to Computer Networks - 30 MCCQs

- a) A time slot
- b) A control frame
- c) A data packet
- d) A jamming signal

? Answer: b) A control frame

? Hint: It grants permission to transmit.

22. What is the primary function of RFID?

- a) Transmitting data
- b) Storing documents
- c) Object identification
- d) Internet access

? Answer: c) Object identification

? Hint: Used in inventory tracking, cards, etc.

23. Ethernet frame includes which of the following fields?

- a) Token
- b) Destination and Source MAC
- c) Frame Sequence Number
- d) Slot Time

? Answer: b) Destination and Source MAC

? Hint: Basic addressing fields in Ethernet.

24. FDDI operates at what speed?

- a) 10 Mbps
- b) 100 Mbps
- c) 1 Gbps

Chapter 1: Introduction to Computer Networks - 30 MCCQs

d) 2.4 Gbps

? Answer: b) 100 Mbps

? Hint: Fast and fiber-based LAN.

25. Which access method is used in Wi-Fi?

a) Token passing

b) CSMA/CD

c) CSMA/CA

d) TDMA

? Answer: c) CSMA/CA

? Hint: Wi-Fi uses collision avoidance, not detection.

26. What is the primary difference between CSMA/CD and CSMA/CA?

a) CD avoids collision; CA detects collision

b) CA avoids collision; CD detects collision

c) Both detect collisions

d) Both avoid collisions

? Answer: b) CA avoids collision; CD detects collision

? Hint: Wi-Fi uses CA due to shared medium limitations.

27. Which network uses polling for communication?

a) FDDI

b) Ethernet

c) Token Ring

d) Frame Relay

? Answer: d) Frame Relay

? Hint: Polling or DLCI are used in virtual circuits.

Chapter 1: Introduction to Computer Networks - 30 MCCQs

28. Bluetooth operates in which frequency range?

- a) 900 MHz
- b) 1.2 GHz
- c) 2.4 GHz
- d) 5 GHz

? Answer: c) 2.4 GHz

? Hint: Same as Wi-Fi (b/g/n) range.

29. Which LAN technology supports full-duplex communication?

- a) Ethernet
- b) Token Ring
- c) FDDI
- d) All of the above

? Answer: d) All of the above

? Hint: Modern versions of all support full-duplex.

30. Which wireless standard offers the longest range?

- a) Bluetooth
- b) Wi-Fi
- c) WiMAX
- d) Zigbee

? Answer: c) WiMAX

? Hint: WiMAX can cover entire cities.