⬛ EASY (10 Questions)

Q1. Which term best describes connecting multiple networks together?

A. Switching
B. Routing
C. Internetworking
D. Bridging

Q2. How many layers are there in the OSI model?

A. 5
B. 6
C. 7
D. 8

Q3. Which OSI layer is responsible for MAC addressing?

A. Network
B. Transport
C. Data Link
D. Physical

Q4. Ethernet primarily operates at which OSI layers?

A. Layer 1 only
B. Layer 2 only
C. Layer 1 and Layer 2
D. Layer 3

Q5. Which device works at the Data Link layer?

A. Hub
B. Switch
C. Router
D. Gateway

Q6. IEEE 802.11 standards are related to:

A. Ethernet
B. Bluetooth
C. Wireless LAN
D. WAN

Q7. Which address is globally unique in Ethernet?

A. IP address
B. Port number
C. MAC address
D. VLAN ID

Q8. Which medium is commonly used in Ethernet LANs?

A. Fiber only
B. Wireless only
C. Twisted pair cable
D. Coaxial only

Q9. Which OSI layer ensures reliable delivery?

A. Network
B. Transport
C. Session
D. Presentation

Q10. Which technology enables wireless communication?

A. CSMA/CD
B. CSMA/CA
C. Token Passing
D. Frame Relay

☐ MEDIUM (15 Questions)

Q11. Internetworking mainly enables:

A. File sharing only
B. Communication between heterogeneous networks
C. Signal amplification
D. Physical layer connectivity

Q12. Which OSI layer performs routing decisions?

A. Data Link
B. Network
C. Transport
D. Session

Q13. Ethernet collision detection is handled by:

A. CSMA/CA
B. Token Ring
C. CSMA/CD
D. ARP

Q14. In wireless networks, CSMA/CD is replaced by CSMA/CA because:

A. Wireless is faster
B. Collision detection is impossible
C. Wireless uses switches
D. MAC addresses change

Q15. Which layer converts data into signals?

A. Physical
B. Network
C. Session
D. Transport

Q16. Which IEEE standard defines Fast Ethernet?

A. 802.3u
B. 802.3z
C. 802.11g
D. 802.1Q

Q17. Which OSI layer handles encryption?

A. Application
B. Presentation
C. Session
D. Transport

Q18. A wireless access point primarily acts as:

A. Router
B. Bridge
C. Repeater
D. Gateway

Q19. Which device separates broadcast domains?

A. Hub
B. Switch
C. Router
D. Repeater

Q20. Which Ethernet frame field identifies the protocol?

A. FCS
B. Preamble
C. Type/Length
D. Destination MAC

Q21. Which wireless issue is caused by overlapping channels?

A. Attenuation
B. Interference
C. Reflection
D. Refraction

Q22. The OSI model was developed by:

A. IEEE
B. ISO
C. IETF
D. ITU

Q23. Which layer establishes, manages, and terminates sessions?

A. Transport
B. Session
C. Network
D. Presentation

Q24. Which Ethernet topology is most common today?

A. Bus
B. Ring
C. Star
D. Mesh

Q25. Which wireless frequency band is used by 802.11b?

A. 900 MHz
B. 2.4 GHz
C. 5 GHz
D. 60 GHz

🌐 HARD (15 Questions)

Q26. Which internetworking device performs protocol translation?

A. Switch
B. Router
C. Gateway
D. Bridge

Q27. In the OSI model, segmentation and reassembly occur at:

A. Network layer
B. Transport layer
C. Session layer
D. Presentation layer

Q28. Ethernet frame minimum size is required to:

A. Increase speed
B. Reduce latency
C. Detect collisions
D. Support VLANs

Q29. Which OSI layer is responsible for flow control?

A. Data Link
B. Transport
C. Network
D. Session

Q30. Wireless hidden node problem occurs due to:

A. Signal amplification
B. Nodes out of radio range
C. High bandwidth
D. Encryption overhead

Q31. Which Ethernet feature prevents data corruption?

A. CRC in FCS
B. MAC learning
C. VLAN tagging
D. CSMA/CA

Q32. Which OSI layer provides logical addressing?

A. Data Link
B. Network
C. Transport
D. Application

Q33. In WLANs, RTS/CTS is used to:

A. Increase throughput
B. Prevent hidden node collisions
C. Encrypt frames
D. Assign IP addresses

Q34. Which Ethernet standard supports full-duplex communication?

A. 10BASE-2
B. 10BASE-5
C. Switched Ethernet
D. Coax Ethernet

Q35. Which OSI layer ensures syntax and semantics of data?

A. Application
B. Presentation
C. Session
D. Transport

Q36. In internetworking, encapsulation occurs when:

A. Data moves up the OSI stack
B. Data moves down the OSI stack
C. Data is encrypted
D. Data is routed

Q37. Which wireless topology allows peer-to-peer communication?

A. Infrastructure
B. ESS
C. Ad-hoc
D. BSS

Q38. Which factor most affects wireless signal attenuation?

A. Frame size
B. Distance
C. MAC address
D. VLAN ID

Q39. Which OSI layer interacts directly with end-user applications?

A. Presentation
B. Session
C. Application
D. Transport

Q40. Which statement best describes internetworking?

A. Connecting identical LANs only
B. Using switches exclusively
C. Enabling communication across diverse networks
D. Eliminating routing