- 1. What is the transmission medium commonly used in Wireless LANs (WLANs)?
- a) Fiber optics
- b) Coaxial cable
- c) Radio waves
- d) Twisted pair cable

Answer: c) Radio waves

Explanation: WLANs typically use radio waves as the transmission medium for communication between devices.

- 2. What are some MAC (Media Access Control) problems commonly encountered in WLANs?
- a) Congestion
- b) Collisions
- c) Interference
- d) All of the above

Answer: d) All of the above

Explanation: MAC problems in WLANs include congestion, collisions, and interference, which can degrade network performance.

- 3. What term is used to describe terminals that are unable to directly communicate due to obstacles or distance?
- a) Hidden terminals
- b) Exposed terminals
- c) Near terminals
- d) Far terminals

Answer: d) Far terminals

Explanation: Far terminals refer to devices that are distant from each other, making direct communication difficult.

- 4. Which type of network infrastructure utilizes centralized access points for device connectivity?
- a) Infrastructure network
- b) Ad hoc network
- c) Peer-to-peer network
- d) Mesh network

Answer: a) Infrastructure network

Explanation: Infrastructure networks rely on centralized access points for device connectivity, unlike ad hoc networks where devices communicate directly with each other.

- 5. Which IEEE standard is commonly associated with wireless LANs?
- a) IEEE 802.3
- b) IEEE 802.5
- c) IEEE 802.11
- d) IEEE 802.15

Answer: c) IEEE 802.11

Explanation: IEEE 802.11 is the standard for wireless LANs, specifying protocols for communication.

- 6. What is the concept of spread spectrum in wireless communication?
- a) Transmitting data over a broad range of frequencies
- b) Narrowing the frequency spectrum for more efficient transmission
- c) Increasing the power of transmitted signals
- d) Limiting the range of frequencies used for transmission

Answer: a) Transmitting data over a broad range of frequencies

Explanation: Spread spectrum involves transmitting data over a wide range of frequencies to improve resistance to interference and jamming.

- 7. Which aspect of MAC management involves regulating the power consumption of network devices?
- a) Power management
- b) Congestion control
- c) Security management
- d) Quality of Service (QoS) management

Answer: a) Power management

Explanation: Power management in MAC involves regulating the power consumption of network devices to conserve energy.

- 8. What is the primary goal of Mobile IP?
- a) To improve internet speed
- b) To provide secure communication
- c) To enable seamless mobility for devices
- d) To enhance network scalability

Answer: c) To enable seamless mobility for devices

Explanation: The primary goal of Mobile IP is to allow mobile devices to maintain connectivity and seamlessly roam between different networks without losing connectivity.

- 9. What does the term "Agent advertisement and discovery" refer to in Mobile IP?
- a) Advertising mobile devices' availability to agents on foreign networks
- b) Discovering agents responsible for managing mobility on foreign networks
- c) Advertising available network agents to mobile devices
- d) Discovering available networks for device roaming

Answer: a) Advertising mobile devices' availability to agents on foreign networks Explanation: Agent advertisement and discovery involve mobile devices advertising their availability to agents on foreign networks, facilitating seamless handoff.

- 10. Which type of network routing is typically used in traditional IP networks?
- a) Ad hoc network routing
- b) Peer-to-peer routing
- c) Static routing
- d) Dynamic routing

Answer: c) Static routing

Explanation: Traditional IP networks commonly use static routing, where routing tables are manually configured.

- 11. Which type of routing protocol is specifically designed for ad hoc networks?
- a) OSPF
- b) RIP
- c) AODV
- d) BGP

Answer: c) AODV (Ad hoc On-Demand Distance Vector)

Explanation: AODV is a routing protocol specifically designed for ad hoc networks, enabling dynamic route discovery.

- 12. Which routing protocol maintains routes to all destinations in the network proactively?
- a) DSR (Dynamic Source Routing)
- b) DSDV (Destination-Sequenced Distance Vector)
- c) OLSR (Optimized Link State Routing)
- d) ZRP (Zone Routing Protocol)

Answer: b) DSDV (Destination-Sequenced Distance Vector)

Explanation: DSDV maintains routes to all destinations proactively by periodically updating routing tables.

- 13. What does the acronym DSR stand for in ad hoc network routing?
- a) Dynamic Source Routing
- b) Distance Sequence Routing
- c) Distributed Service Routing
- d) Demand-Sensitive Routing

Answer: a) Dynamic Source Routing

Explanation: DSR stands for Dynamic Source Routing, which is a routing protocol for ad hoc networks where nodes dynamically discover routes.

- 14. In Mobile IP, what process involves a mobile node registering its current location with a home agent?
- a) Agent advertisement
- b) Discovery
- c) Registration
- d) Tunneling

Answer: c) Registration

Explanation: Registration in Mobile IP involves a mobile node informing its home agent of its current location for routing purposes.

- 15. Which technique is commonly used in Mobile IP to encapsulate packets destined for a mobile node's home network?
- a) Agent advertisement
- b) Registration
- c) Tunneling
- d) Discovery

Answer: c) Tunneling

Explanation: Tunneling is used in Mobile IP to encapsulate packets destined for a mobile

node's home network, enabling them to be forwarded appropriately.

- 16. What is the primary purpose of Power Management in WLANs?
- a) To increase network speed
- b) To reduce interference
- c) To conserve energy
- d) To enhance security

Answer: c) To conserve energy

Explanation: Power Management in WLANs aims to conserve energy by regulating the power usage of network devices.

- 17. Which layer of the OSI model is responsible for defining the physical characteristics of the transmission medium in WLANs?
- a) Network Layer
- b) Transport Layer
- c) Data Link Layer
- d) Physical Layer

Answer: d) Physical Layer

Explanation: The Physical Layer of the OSI model defines the physical characteristics of the transmission medium, including aspects such as radio frequency and modulation techniques used in WLANs.

- 18. Which term describes the phenomenon where a station is unable to transmit because it senses that other stations are already transmitting?
- a) Hidden terminal problem
- b) Exposed terminal problem
- c) Congestion

d) Interference

Answer: b) Exposed terminal problem

Explanation: The Exposed Terminal Problem occurs when a station refrains from transmitting

even though it could because it incorrectly senses that other stations are already

transmitting

.

- 19. Which type of network is formed spontaneously by a group of devices without the need for centralized infrastructure?
- a) Infrastructure network
- b) Ad hoc network
- c) Mesh network
- d) Peer-to-peer network

Answer: b) Ad hoc network

Explanation: Ad hoc networks are formed spontaneously by devices without the need for centralized infrastructure, allowing direct communication between devices.

- 20. Which security mechanism is commonly used in WLANs to encrypt data transmission?
- a) WEP (Wired Equivalent Privacy)
- b) ARP (Address Resolution Protocol)
- c) TCP (Transmission Control Protocol)
- d) SSL (Secure Sockets Layer)

Answer: a) WEP (Wired Equivalent Privacy)

Explanation: WEP is a security protocol commonly used in WLANs to encrypt data transmission, although it has been largely replaced by more secure protocols due to vulnerabilities.

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