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

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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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