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- 1. To transmit and receive signals to and from multiple nodes in a three-story office building, what type of antenna should an access point use?
  - a. Omnidirectional
  - b. Unidirectional
  - c. Bidirectional
  - d. Tridirectional
- 2. Which of the following is not true about multipath signaling?
  - a. The more obstacles a wireless signal reflects or diffracts off, the better chance it has of reaching its destination.
  - b. Multipath signaling uses less energy and results in clearer reception than line of-sight signaling.
  - c. Given that they follow multiple paths to their destination, signals will arrive at the same destination at slightly different times.
  - d. The more obstacles between a wireless transmitter and receiver, the more signal fading will occur.
- 3. You are setting up a WLAN for an insurance agency. The network includes 32 clients, three printers, two servers, and a DSL modem for Internet connectivity. What type of WLAN architecture would best suit this office?
  - a. Ad hoc
  - b. Interstitial
  - c. Infrastructure
  - d. Round robin
- 4. Which of the following 802.11 transmission requirements contributes to its inefficiency?
  - a. Before it can associate, a station must listen for an access point's beacon on every channel within its frequency range.
  - b. A source node must regularly ping the access point to ensure it is still available for transmitting data to the rest of the stations.
  - c. A destination node must issue an acknowledgment for every packet that is received intact.
  - d. Before transmitting, a source node must check to ensure the access point has not changed its SSID.
- 5. In the 802.11 standard, IEEE specifies what type of access method?
  - a. Beacon passing
  - b. Demand priority
  - c. CSMA/CD
  - d. CSMA/CA
- 6. Suppose a user on your office network has changed the channel on which his wireless NIC communicates. Assuming the wireless connection is his only access to the LAN, what will happen when he next tries to send an e-mail?
  - a. The e-mail program will take longer than usual to send his message.
  - b. The e-mail program will respond with a message indicating it could not connect to the mail server.
  - c. The e-mail program will send the message without problems.
  - d. The e-mail program will request the user to supply his logon credentials again before sending the message.

- 7. What frequency band is used by 802.11b, 802.11g, and 802.11n?
  - a. 1.5 GHz
  - b. 2.4 GHz
  - c. 5 GHz
  - d. 11 GHz
- 8. Your office currently runs a mix of 802.11b and 802.11g clients. Rumor has it that your company is about to merge with another company that uses a different wireless technology. Which of the following would be compatible with what your WLAN currently runs?
  - a. 802.11a
  - b. 802.11n
  - c. Bluetooth
  - d. WiMAX
- 9. If your wireless stations are configured to perform passive scanning, what do they need from an access point to initiate association?
  - a. A request to send
  - b. An alert frame
  - c. A beacon frame
  - d. Nothing; they will find the access point on their own
- 10. You're working on a school district's 802.11n WLAN. Within each school, several access points serve students, teachers, and administrators. So that users can move about the school with their laptops and not lose network connectivity, each of the access points must share which of the following?
  - a. The same ESSID
  - b. The same make and model
  - c. The same average distance to the client
  - d. The same location
- 11. When a mobile WLAN user roams from access point A's range into access point B's range, what does it do automatically to maintain network connectivity?
  - a. Associate with access point B in order to communicate with access point A
  - b. Reassociate with access point B
  - c. Reestablish its connection with access point A on another channel
  - d. Nothing; the user must reestablish network connectivity manually
- 12. Which two of the following techniques help to reduce overhead in 802.11n wireless transmission?
  - a. CSMA/CA
  - b. Asynchronous communication
  - c. Frame aggregation
  - d. Spread-spectrum signaling
  - e. Channel bonding
- 13. Your organization is expanding and plans to lease 3000 square feet of space in a nearby building. Your supervisor asks you to conduct a site survey of the space. If conducted properly, which of the following will your site survey reveal?
  - a. The optimal quantity and locations of access points for the WLAN
  - b. All potential sources of EMI
  - c. The distance between each workgroup area and telco room
  - d. All of the above

- 14. Which of the following wireless technologies boasts the highest maximum theoretical throughput?
  - a. LTE
  - b. HSPA+
  - c. 802.11g
  - d. 802.11n
- 15. Which of the following will help an access point's transmissions reach farther?
  - a. Limiting the number of stations that may associate with the access point
  - b. Boosting its signal strength
  - c. Using the highest possible channel in the frequency band
  - d. Configuring it to use 802.11n only
- 16. What part of a cellular network manages handoff?
  - a. The client
  - b. The base station
  - c. The MSC
  - d. The central office
- 17. Suppose you work for a telecommunications carrier that is looking into providing WiMAX in a suburb of a large city. A colleague suggests that your company reserve licensed frequencies from the FCC for your service. Why?
  - a.Licensed frequencies will suffer less interference than unlicensed frequencies.
  - b. Licensed frequencies allow users to roam farther than unlicensed frequencies.
  - c. Licensed frequencies can use multiple areas of the wireless spectrum at once, thus increasing potential throughput.
  - d. Licensed frequencies require less-expensive equipment to transmit and receive than unlicensed frequencies.
- 18. On your Linux workstation, you open a terminal window and type at the command prompt iwconfig eth0 key 5c00951b22. What have you done?
  - a. Established the wireless interface's mode of transmission
  - b. Established the strength with which the wireless interface will transmit data
  - c. Established the credentials the wireless interface will use to communicate securely with the access point
  - d. Established the SSID with which the wireless interface will attempt to associate
- 19. As the network manager for a small business, you have been asked to evaluate highspeed, packet-switched wireless data services that your company's users can use at their desks, in their cars, and at their homes within your metropolitan area. Which two of the following meet those criteria and are, therefore, candidates for evaluation?
  - a. 802.11g
  - b. 802.11n
  - c. WiMAX 2
  - d. HSPA+
- 20. Which of the following types of satellites is used to provide satellite data services?
  - a. Geosynchronous earth orbit
  - b. Low earth orbit
  - c. Medium earth orbit
  - d. High earth orbit