

Chapter 1 - Introduction to Wireless Communications

1. Which scenario is more likely to use RFID instead of NFC?
- Conduct inventory of products located up to 330 feet (100 m) away.
 - Devices transmit commands to each other.
 - Tag contents are reconfigured as needed.
 - Use credit cards without inserting or swiping them through a card reader.

ANSWER: a

2. This technology is used to create WPANs:
- Bluetooth
 - USB
 - WiMAX
 - Wi-Fi

ANSWER: a

3. You bring a smartphone and laptop computer to a coffee shop. Both devices support Wi-Fi. Which situation would benefit from wireless tethering?
- The coffee shop provides free Wi-Fi.
 - You connect your wireless headphones to either device.
 - You use your smartphone to pay for your order.
 - Wi-Fi isn't available in the coffee shop, but your smartphone can pick up a cellular signal.

ANSWER: d

4. It's possible to check email from our smartphones, use the Internet to place voice calls, and connect to the company network from home. All these are examples of:
- Bluetooth communication
 - Digital convergence
 - Fixed broadband wireless communication
 - Near field communication

ANSWER: b

5. What is an advantage of wireless networking?
- The health effects of wireless signals are well understood.
 - Users can connect to a network without being tethered by wires.
 - Wireless signals are free of interference that can corrupt data.
 - Wireless signals are inherently protected from eavesdropping.

ANSWER: b

6. How can wireless communications be made more secure?
- Eliminate or move interfering devices such as photocopiers or microwave ovens.
 - Encrypt data transferred between the access point and wireless device.
 - Use RFID interrogators to verify the identity of all wireless signals.
 - Use headsets when talking on a cellular device so you can keep the device away from your head.

ANSWER: b

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7. You're responsible for setting up Internet access for your company's newest office in a remote rural area. The location has basic utilities such as electricity and water, but there are no service providers offering wired Internet connections in the area yet. What technology will allow you to connect the new office to the Internet without running additional cables to the location?

- a. GPS
- b. T1
- c. WiGig
- d. WiMAX

ANSWER: d

8. Where would WiGig be a better fit than Wi-Fi?

- a. Connecting your desktop printer to the network
- b. Connecting your family's laptops, smartphones, and tablets to your home's Internet connection
- c. Setting up VoIP cordless phones so you can make phone calls without traditional landline telephone service
- d. Transmitting high-quality audio and video to a powered device less than 2 meters away

ANSWER: d

9. A local toll road uses electronic tolling. Car owners who use the toll road attach a special electronic sticker to the windshield. Devices mounted at various points along the highway read the number on the electronic sticker. Which wireless technology is most likely being used?

- a. Bluetooth
- b. NFC
- c. RFID
- d. WiGig

ANSWER: c

10. Each member of a family has at least one mobile device—laptop, smartphone, and/or tablet. The family has Internet service through a wired connection from a local Internet service provider (ISP). The smartphones can connect to the cellular carrier's network, but the other devices do not have cellular access. How can the family use the ISP connection from all their mobile devices?

- a. Set up one of the smartphones as a Wi-Fi hotspot.
- b. Use a wireless router to set up a Wi-Fi network.
- c. Use a wireless router to set up a WiMAX network.
- d. Use a wireless router to set up a ZigBee network.

ANSWER: b

11. WLANs connect to wired LANs through this device:

- a. RFID reader
- b. Smartwatch
- c. Wireless access point
- d. Wireless network interface card

ANSWER: c

12. This allows you to make calls over the Internet instead of the cellular network:

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- a. Bluetooth headphones
- b. NFC
- c. Thread
- d. VoIP

ANSWER:

d

13. This allows digital devices to combine voice, video, and text-processing capabilities, as well as to be connected to business and home networks via the Internet.

- a. AES
- b. Digital convergence
- c. IoT
- d. Thread

ANSWER:

b

14. WMANs use standards such as:

- a. DSL
- b. IEEE 802.11
- c. IEEE 802.16
- d. Optical fiber

ANSWER:

c

15. You're hungry, really hungry, and you're craving something from your favorite restaurant. How can advances in wireless technology get you fed more quickly?

- a. Instead of pulling out a card or cash, use your phone's wallet app to pay for your meal.
- b. Use your favorite mapping/GPS app to find the best route to the restaurant.
- c. Use your favorite restaurant's mobile app to place an order so it's ready when you arrive.
- d. All of the above.

ANSWER:

d

16. WiGig uses this type of transmission technology:

- a. Cable modem
- b. Fixed broadband wireless
- c. RFID
- d. UWB

ANSWER:

d

17. The fastest cellular technology is:

- a. 5G
- b. 802.11
- c. LTE Advanced
- d. WiMAX

ANSWER:

a

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18. You are planning a new office. How can digital convergence and wireless networking simplify the planning and construction of the office?

- a. Cellular service providers are making it possible to watch live TV programming from anywhere where you have cellular access.
- b. Different wireless technologies operate at different frequencies, so interference isn't an issue.
- c. VoIP and wireless networking reduce the need for additional wiring.
- d. Wireless networks reduce the need for network security technologies.

ANSWER:

c

19. Which scenario is more likely to use NFC?

- a. Conduct inventory of products located up to 330 feet (100 m) away.
- b. Connect an inkjet printer to a home LAN so everyone in the household can print documents.
- c. Use credit cards without inserting or swiping them through a card reader.
- d. Use your bank's app on your smartphone to deposit a check.

ANSWER:

c

20. Your office's Wi-Fi network isn't performing as well as it should, and users have suggested several possible reasons. Which reason is LEAST likely to cause the Wi-Fi network issues?

- a. A microwave oven was installed in the breakroom adjacent to the wireless access point.
- b. Far more people are using the Wi-Fi network.
- c. Your office is next door to a local radio station's transmission tower.
- d. Your office uses multiple wireless technologies such as Bluetooth, Wi-Fi, and ZigBee.

ANSWER:

c

21. Which IEEE standard does ZigBee use?

- a. 802.1.4
- b. 802.11
- c. 802.15.4
- d. 802.16

ANSWER:

c

22. Your headphones connect wirelessly to your smartphone. Which technology is most likely to be used?

- a. 5G
- b. Bluetooth
- c. Wi-Fi
- d. WiMAX

ANSWER:

b

23. The COVID-19 pandemic required rapid changes in the way businesses operated. How did wireless networking contribute to those changes?

- a. COVID-19 statistics were readily available online.
- b. Multiple devices can easily connect to the same Wi-Fi network. This allowed multiple people to work or do schoolwork from home without the installation of network cables.
- c. Wireless networks are inherently more secure than the wired networks commonly seen in the office

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environment.

- d. Wireless home networks provided stronger signals with less interference than wired office networks.

ANSWER:

b

24. How can wireless networking be useful during disaster recovery?

- a. Company servers can be relocated to the cloud.
- b. Disaster recovery plans can be made available online.
- c. Recovery updates can be quickly posted online.
- d. The office can be relocated without the need to install new network wiring.

ANSWER:

d

25. What does a link manager do?

- a. It combines voice, video, and data over a single network.
- b. It helps Bluetooth devices identify other Bluetooth devices, create a link between them, and send and receive digital data.
- c. It keeps track of the connection links between a wireless access point and its client devices.
- d. It transmits data and video signals over a television cable connection.

ANSWER:

b