

Wireless Site Survey Quiz

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This quiz consists of 25 multiple choice questions that test you on performing wireless site surveys.

The answers to the questions are posted on the last page of the quiz.



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1. What is the EIRP (effective isotropic radiated power) of an access point with the following configuration?

Transmit power = 21dBm

Antenna cable loss = 1dB

Antenna gain = 6dB

- a. 27dBm
 - b. 16dBm
 - c. 14dBm
 - d. 26dBm
2. What minimum signal level do you need if the average noise level is -85dBm and the minimum SNR requirement is 20dB?
 - a. -105dBm
 - b. 65dBm
 - c. -65dBm
 - d. -75dBm
 3. Why does the presence of RF interference lower wireless LAN user performance?
 - a. RF interference makes data frames longer
 - b. Wireless LAN user devices hold off transmissions when interference is present
 - c. RF interference has no impact on wireless LAN user performance
 4. How can someone deny services of a wireless LAN?
 - a. Receive some beacons
 - b. Associate with the access point
 - c. Monitor data traffic
 - d. Transmit an interfering RF signal
 5. Which 802.11 physical layer offers the higher capacity?
 - a. 802.11a
 - b. 802.11b
 - c. 802.11g

6. All 802.11-compliant radio cards will interoperate with any 802.11-compliant access point.
 - a. True
 - b. False

7. What parts of a facility are difficult to provide signal coverage?
 - a. Elevators
 - b. Office cubicles
 - c. Fire escape stairwells
 - d. Answers a and c

8. Why is it difficult to install wireless LANs?
 - a. Propagation of radio waves is irregular
 - b. Wireless LANs offers health risks
 - c. Products are proprietary, which causes support issues
 - d. End users must receive special licensing for each installation location

9. What RF channel are most residential and small office wireless LAN access points set to?
 - a. 1
 - b. 6
 - c. 11

10. What typical average noise levels are found in most facilities?
 - a. 24dBm
 - b. -55dBm
 - c. -95dBm
 - d. 100dBm

11. When will a neighboring wireless LAN offer a significant source of RF interference?
- Any time the neighboring wireless LAN is operating.
 - When there is significant usage of the neighboring wireless LAN and it is set to RF channels that conflict with your wireless LAN.
 - Only when users of the neighboring wireless LAN are roaming.
 - Any time the neighboring wireless LAN is set to RF channels that conflict with your wireless LAN.
12. Which of the following is true regarding both 802.11a and 802.11g?
- They operate at up to 54Mbps
 - They utilize OFDM
 - An 802.11g radio card can interface directly with an 802.11a access point
 - Answers a and b
13. What frequency band does 802.11g operate in?
- 900Mhz
 - 2.4GHz
 - 5GHz
 - Answers b and c
14. What is an advantage of 802.11g compared to 802.11a?
- 802.11g has mostly worldwide regulatory acceptance
 - 802.11g has greater capacity
 - 802.11g operates in the 5GHz band
 - 802.11g uses spread spectrum
15. How can you most likely counter the RF interference originating from a microwave oven?
- Move the access point closer to the microwave oven
 - Switch the microwave oven to a different frequency
 - Tune the access point to a channel that doesn't conflict with the microwave oven

16. A wireless LAN repeater extends the range of a wireless LAN.
- True
 - False
17. What are the primary radio configuration settings in an access point that significantly impact signal coverage (range)?
- Power management and antenna type
 - SSID and transmit power
 - Transmit power and antenna type
18. Which of the following applies to an omni-directional antenna?
- Radio waves propagate equally in all horizontal directions
 - Radio waves propagate more in one direction than others
 - They offer the highest gain as compared to other antenna types
 - They are used primarily in point-to-point radio links
19. How does the radio card in an end user device determine which access point to associate with?
- The radio card associates to each access point according to a pre-determined order
 - The radio card listens to the beacons coming from all access points within range and associates with the access point having the strongest beacon
 - The master access point always informs the radio card which access point to associate with
 - None of the above
20. What technology saves the cost of running electrical wires to each access point?
- FHSS
 - Power-over-Ethernet
 - Antenna diversity
 - Optical transmission

21. Which non-overlapping RF channels should you use when installing three 802.11b access points in the same area (assuming FCC channels)?
- a. 1, 2, and 3
 - b. 9, 10, and 11
 - c. 1, 6, and 11
 - d. 4, 5, and 6
22. If a wireless client must operate from a specific location, but signal coverage at this location is not adequate, how can you most likely improve signal coverage for the client?
- a. Increase the transmit power of the access point.
 - b. Reconfigure the SSID in the access point.
 - c. Move the access point closer to the client.
 - d. None of the above.
23. Given the following scenario, is there likely adequate signal coverage for the client?

Typical office applications (email and web browsing)

Access point received signal strength = -85dBm

Client received signal strength = -70dBm

Average noise = -90dBm

- a. Yes
- b. No

24. Given the following scenario, is there likely adequate signal coverage for the client?

Typical office applications (email and web browsing)

Access point received signal strength = -70dBm

Client received signal strength = -65dBm

Average noise = -95dBm

- a. Yes
- b. No

25. Given the following scenario, there will likely be no significant impact on the wireless client browsing the web if the microwave oven interference is in the upper part of the 2.4GHz band:

Microwave oven operating within three feet of the wireless client

Access point RF channel = 1

Client received signal strength = -65dBm

- a. True.
- b. False.

The answers to this quiz follow on the next page.

Answers to the Wireless Site Survey Quiz

1. d
2. c
3. b
4. d
5. a
6. b
7. d
8. a
9. b
10. c
11. b
12. d
13. b
14. a
15. c
16. a
17. c
18. a
19. b
20. b
21. c
22. c
23. b
24. a
25. a