

Certified Wireless Network Administrator

1. An RF signal sometimes bends as it passes through some material other than free space. What is the term that describes this behavior?

A. Refraction

B. Warping

C. Scattering

D. Reflection

Answer(s): A

2. What can an impedance mismatch in the RF cables and connectors cause?

A. Increased range of the RF signal

B. Fewer MCS values in the MCS table

C. Increased amplitude of the RF signal

D. Excessive VSWR

Answer(s): D

3. What factor does not influence the distance at which an RF signal can be effectively received?

A. Receiving station's radio sensitivity

B. Receiving station's output power

C. Transmitting station's output power

D. Free Space Path Loss

Answer(s): A

4. A WLAN transmitter that emits a 50 mW signal is connected to a cable with 3 dB loss. If the cable is connected to an antenna with 9dBi gain, what is the EIRP at the antenna element?

A. 26 dBm

B. 13 dBm

C. 23 dBm

D. 10 dBm

Answer(s): C

5. In a long-distance RF link, what statement about Fade Margin is true?

A. A Fade Margin is unnecessary on a long-distance RF link if more than 80% of the first Fresnel zone is clear of obstructions.

B. The Fade Margin is a measurement of signal loss through free space and is a function of frequency and distance.

C. Fade Margin is an additional pad of signal strength designed into the RF system to compensate for unpredictable signal fading.

D. The Fade Margin of a long-distance radio link should be equivalent to the receiver's low noise filter gain.

Answer(s): C

6. What wireless networking term describes the increase of RF energy in an intentional direction with the use of an antenna?

A. Directed Radiation

B. Beam Digression

C. Passive Gain

D. Active Amplification

Answer(s): C

7. Which directional antenna types are commonly used by indoor Wi-Fi devices in a MIMO multiple spatial stream implementation?

A. Dipole and yagi

B. Grid and sector

C. Patch and panel

D. Dish and grid

Answer(s): C

8. What statement about the beamwidth of an RF antenna is true?

A. Horizontal and vertical beamwidth are calculated at the points where the main lobe decreases power by 3 dB.

B. The beamwidth patterns on an antenna polar chart indicate the point at which the RF signal stops propagating.

C. When antenna gain is lower, the beamwidth is also lower in both the horizontal and vertical dimensions.

D. Vertical beamwidth is displayed (in degrees) on the antenna's Azimuth chart.

Answer(s): A

9. Which one of the following is not a factor considered when calculating the Link Budget for an outdoor point-to-point WLAN bridge link?

A. Operating frequency

B. MU-MIMO capabilities of the bridges

C. Receive antenna gain

D. Transmit power

Answer(s): B

10. What best describes WPA2 in relation to 802.11 wireless networks?

A. WPA2 is the standard that defines security for WLANs.

B. WPA2 is a certification created by the Wi-Fi Alliance that validates devices correctly implement CCMP/AES.

C. WPA2 is the second version of WPA and it enhances security through the use of TKIP instead of WEP.

D. WPA2 is specified in the 802.11 standard as implementing CCMP/AES.

Answer(s): A

11. An IEEE 802.11 amendment is in the draft state. What impact does this draft amendment have on the 802.11 standard?

A. Devices will be released based on the draft amendment and the draft amendment features are part of the standard.

B. No impact: Until an amendment is ratified, it does not become part of the standard

C. No impact: Draft amendments do not become part of the standard until a working group is formed

D. The standard is changed to reflect the new capabilities as soon as an amendment enters the draft stage.

Answer(s): B

12. You are implementing a VHT-capable AP. Which one of the following channels is available in the 802.11-2016 standard that was not available before the ratification of 802.11 ac?

A. 56

B. 161

C. 153

D. 144

Answer(s): D

13. What statement is true concerning the use of Orthogonal Frequency Division Multiplexing (OFDM) modulation method in IEEE 802.11 WLANs?

A. OFDM implements BPSK modulation to allow for data rates up to 7 Gbps.

B. OFDM was first introduced in 802.11a and is used by the ERP, HT and VHT PHYs as well.

C. OFDM modulation is used only in 5 GHz 802.11 transmissions.

D. OFDM was used by Frequency Hopping Spread Spectrum (FHSS) PHY devices.

Answer(s): B

14. Which IEEE 802.11 physical layer (PHY) specification includes support for and compatibility with both ERP and HR/DSSS?

A. DSSS (802.11-Prime)

B. OFDM (802.11a)

C. HT (802.11n)

D. VHT (802.11ac)

Answer(s): C

15. An 802.11-based network uses an AP and has several connecting clients. The clients include iPhones, iPads, laptops and one desktop. What WLAN use case is represented?

A. Ad-hoc

B. WPAN

C. BSS

D. IBSS

Answer(s): C

16. What factor is likely to cause the least impact on the application layer throughput of an 802.11n client station in a 2.4 GHz HT BSS?

A. Increasing or decreasing the number of spatial streams in use by the client station and AP

B. Implementing Fast BSS Transition (FT) for roaming

C. Implementation of several other clients in the same BSS using 802.11g radios

D. RF interference from more than 10 nearby Bluetooth transmitters

Answer(s): B

17. What ID is typically mapped to an AP's MAC address if a single BSS is implemented?

A. SSID

B. Device ID

C. VLAN ID

D. BSSID

Answer(s): D

18. What is appended to the end of each 802.11 data frame after the payload?

A. Preamble

B. MAC header

C. PHY header

D. FCS

Answer(s): D

19. When an ACK frame is not received by the transmitting STA, what is assumed?

A. The receiver processed the frame, but did not respond with an ACK frame because 802.11w is enabled

B. The frame was correctly delivered

C. The frame was not delivered and must be retransmitted

D. The receiver is offline

Answer(s): C

20. When a client station sends a broadcast probe request frame with a wildcard SSID, how do APs respond?

A. Each AP responds in turn after preparing a probe response and winning contention.

B. For each probe request frame, only one AP may reply with a probe response.

C. Each AP checks with the DHCP server to see if it can respond and then acts accordingly.

D. After waiting a SIFS, all APs reply at the same time with a probe response.

Answer(s): A
