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**Exam** : **PW0-100**

**Title** : Certified wireless network  
administrator(cwna)

**Version** : Demo

1. What factors affect the propagation distance of an RF signal?

- A. Antenna gain
- B. Receiving station sensitivity
- C. Fresnel zone blockage
- D. Power over Ethernet (PoE) usage
- E. Antenna polarization
- F. Link budget calculations

Answer: AC

2. Given: XYZ Corporation is experiencing connectivity problems with their existing building-to-building bridge link. A brick wall on the roof of one building is partially blocking the Fresnel Zone, and the connection is dropping many frames. The administrator moves the antenna to an area not obstructed by the brick wall and then realizes the RF cable cannot reach the new location.

If an RF extension cable is used, what are the likely results?

- A. The data throughput rate will increase because VSWR will decrease.
- B. The Equivalent Isotropically Radiated Power (EIRP) will decrease.
- C. The antenna coverage area will decrease.
- D. The return loss will increase unless the impedance of the RF extension cable is equal to 50% of the antenna impedance.
- E. The likelihood of a direct lightning strike will increase, placing the entire WLAN system at risk.

Answer: BC

3. While working on a presentation document in a conference room equipped with a wireless network, you notice that, as you turn your laptop in different directions, your wireless signal strength changes. What RF signal property is primarily responsible for this change in signal strength?

- A. The RF signal's amplitude is changing due to a change in the visual line-of-sight.
- B. The RF signal's wavelength is being affected by varying antenna gain.
- C. The RF signal's multipath is changing the amount of RF absorbed by nearby objects.
- D. The RF signal's phase is oscillating due to electromagnetic interference (EMI).

E. The RF signal's polarization is different than the receiving antenna.

Answer: E

4. Which units of measure are used to describe a calculable power quantity?

A. dB

B. dBm

C. dBi

D. mW

E. RSSI

F. dBd

Answer: BD

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

A. Fade Margin is the amount of signal strength in addition to the Link Budget.

B. The Fade Margin of a long-distance RF link does not account for antenna gain.

C. Fade Margin is rarely taken into account on a long-distance RF link.

D. Fade Margin and Jamming Margin are synonymous, interchangeable terms.

Answer: A

6. What phrase describes the effect of increasing the distance that an RF wave travels when the RF antenna lobe is focused in a desired direction?

A. Polar Extension

B. Active Amplification

C. Beam Compression

D. Passive Gain

E. Phased Array Propagation

Answer: D

7. What is a valid type of lightning arrester used with 802.11 wireless LANs?

A. Coaxial arrester with a metal oxide varistor (MOV) input circuit

- B. Parallel tuned tank-circuit arrestor
- C. Coaxial arrestor with a gas discharge tube
- D. Inductor-based load-sensing arrestor

Answer: C

8. Given: ABC University provides wireless access to campus buildings from their Data Center building. ABC has installed a tower on the Data Center building with a sectorized omnidirectional antenna array using 90 of horizontal beamwidth per sector.

What is the next step in configuring the antenna array?

- A. Calculate Earth Bulge into the System Operating Margin (SOM).
- B. Configuring the downtilt of each antenna in the array.
- C. Providing DC power to each antenna in the array.
- D. Adjusting each antenna's beamwidths for optimal gain.

Answer: B

9. Given: A wireless LAN transmitter that emits a 100 mW signal is connected to a cable with a 3 dB loss. If the cable is connected to an antenna with a 10 dBi gain, what is the EIRP at the antenna element?

- A. 50 mW
- B. 250 mW
- C. 500 mW
- D. 750 mW
- E. 1000 mW

Answer: C

10. What causes an excessive Voltage Standing Wave Ratio (VSWR) in an 802.11a WLAN?

- A. Mismatched impedance between devices in series with the main RF signal
- B. Reflected DC current on the main RF signal line
- C. Scattered RF signal along the main signal path
- D. Inductance (crosstalk) between adjacent conductors

Answer: A

11. What are some common specifications for 802.11 WLAN antennas?

- A. Spectral Purity Rating
- B. Frequency Range in MHz
- C. Impedance in Ohms
- D. VSWR Rating E. Return Loss Rating
- F. Polarization

Answer: BCDF

12. What word describes an RF signal that bounces off a smooth or coated surface and changes direction?

- A. Diffraction
- B. Reflection
- C. Refraction
- D. Diffusion
- E. Scattering

Answer: B

13. What is the most common mount type for installing a wireless LAN antenna to an outdoor mast (pole)?

- A. Suction cups with threaded posts
- B. Perforated radome enclosure
- C. Magnetic mount with bulkhead adapter
- D. U-bolt with base clamp
- E. Tilt-n-swivel universal mount with ratchet adjustment

Answer: D

14. What determines the orientation of an RF wave as it leaves the antenna element?

- A. Propagation Pitch
- B. Polarization

C. Wave Front Trajectory

D. Signal Focus Angle

E. Acclimatization

Answer: B

15. In 802.11a WLANs, what statements are true concerning the use of Orthogonal Frequency Division Multiplexing (OFDM)?

A. Six (6) "pilot" sub-carriers are used as a reference to disregard frequency and phase shifts of the signal during transmission.

B. OFDM transmissions in the lower U-NII band are limited to 40 mW.

C. 16QAM modulation is used at the 54 Mbps data rate.

D. The OFDM PHY is divided into two sub-layers, the LLC and PLCP.

E. Forty-eight (48) sub-carriers are used as parallel symbol transmission paths.

Answer: BE

16. You have been hired by ABC Company to troubleshoot their 802.11abg-compliant, Wi-Fi-certified access point and wireless client devices. After completing a site survey, you identify five neighboring 802.11b access points belonging to XYZ Company; one on channel 1, three on channel 6, and one on channel 11. To best avoid co-channel and adjacent channel interference, what suggested change is most appropriate?

A. Configure ABC Company's access point to use channel 1, 802.11g OFDM-only mode, and to operate in PCF mode.

B. Configure ABC Company's access point to use channel 3, 802.11g-standard mode, and to use the RTS/CTS protection mechanism all the time.

C. Configure ABC Company's access point to use 802.11a with dynamic frequency selection (DFS).

D. There is no available configuration that would avoid co-channel or adjacent-channel interference in this situation.

Answer: C

17. What facts should you consider when choosing a spread spectrum technology for your wireless LAN network?

A. An 802.11b Direct Sequence Spread Spectrum (DSSS) signal offers higher data rates and is less susceptible to narrowband interference than an 802.11 Frequency Hopping Spread Spectrum system.

B. While 802.11g devices can use either DSSS or OFDM technology, 802.11a devices only support OFDM. Therefore 802.11g devices always use OFDM to communicate with 802.11a devices.

C. When 802.11b devices are present in an 802.11g BSS, the use of DSSS will diminish network throughput significantly over a purely OFDM environment.

D. An 802.11g system supporting only the data rates required by the 802.11g amendment can interoperate with 802.11b devices.

E. 802.11g systems use OFDM technology to obtain speeds equal to 802.11a systems and to communicate with 802.11b devices.

Answer: CD

18. What device feature is user configurable for 802.11i-compliant wireless LAN client devices?

A. 802.1Q Tagging

B. SNMP Community Strings

C. TKIP Configuration Parameters

D. RADIUS Server IP Port

E. EAP Authentication Type

Answer: E

19. What IEEE documents specify methodologies for seamless roaming between access points?

A. 802.11j

B. 802.11d

C. 802.11F

D. 802.11s

E. 802.11N

F. 802.11r

Answer: C

20. According to the 802.11g amendment, how much separation is required between the center frequencies of non-overlapping ERP channels?

A. 10 MHz



B. 11 MHz

C. 20 MHz

D. 22 MHz

E. 25 MHz

F. 30 MHz

Answer: E