

CWNA

Exam PW0-105

Certified Wireless Network Administrator (CWNA)

Version: 6.0

[Total Questions: 120]

Question No : 1

Given: Your consulting firm has recently been hired to complete a site survey for ABC Company. Your engineers use predictive modeling software for surveying, but ABC Company insists on a pre-deployment site visit.

What tasks should be performed as part of the pre-deployment visit to prepare for a predictive survey? (Choose two)

- A.** With a spectrum analyzer, identify the type, amplitude, and location of RF interference sources, if any are present.
- B.** Evaluate the building materials at ABC's facility and confirm that the floor plan documents are consistent with the actual building.
- C.** Validate that the AP transmit power and antenna type is identical for each AP in ABC's existing deployment.
- D.** Collect information about ABC Company's security requirements and the current configuration of their RADIUS and user database servers.
- E.** Simultaneously capture and analyze data on each 802.11 channel to establish a baseline for potential network capacity and throughput.

Answer: A,B

Question No : 2

What 802.11n technologies require MIMO support on both the transmitter and receiver? (Choose 2)

- A.** Spatial multiplexing
- B.** Transmit beamforming
- C.** Maximal ratio combining
- D.** Space-time block coding
- E.** Cyclic shift diversity
- F.** Short guard intervals

Answer: A,D

Question No : 3

What statement describes the authorization component of a AAA implementation?

- A. Verifying that a user is who he says he is
- B. Validating client device credentials against a database
- C. Logging the details of user network behavior in order to review it at a later time
- D. Granting access to specific network services according to a user profile
- E. Implementing a WIPS as a full-time monitoring solution to enforce policies

Answer: D

Question No : 4

What facts are true regarding controllers and APs in a Split MAC architecture? (Choose 2)

- A. An IP tunnel is established between the AP and controller for AP management and control functions.
- B. Using centralized data forwarding, APs never tag Ethernet frames with VLAN identifiers or 802.1p CoS.
- C. With 802.1X/EAP security, the AP acts as the supplicant and the controller acts as the authenticator.
- D. Management and data frame types must be processed locally by the AP, while control frame types must be sent to the controller.
- E. In a distributed (local bridging) data forwarding model, the AP handles frame encryption and decryption.

Answer: A,E

Question No : 5

What feature(s) are most likely to be supported by 802.11 enterprise-class WLAN controllers? (Choose 4)

- A. Link aggregation / port trunking
- B. 802.1p and DSCP QoS
- C. BGP and Frame Relay
- D. Captive web portals
- E. IGMP snooping

Answer: A,B,D,E

Question No : 6

Given: You are the network administrator for ABC Company. Your manager has recently attended a wireless security seminar. The seminar speaker taught that a wireless network could be hidden from potential intruders if you disabled the broadcasting of the SSID in Beacons and configured the access points not to respond to Probe Request frames that have a null SSID field.

Your manager suggests implementing these security practices. What response should you give to this suggestion? (Choose two)

- A.** Any 802.11 protocol analyzer can see the SSID in clear text in frames other than Beacons and Probe Response frames. This negates any security benefit of trying to hide the SSID in Beacons and Probe Response frames.
- B.** This security practice prevents manufacturers' client utilities from detecting the SSID. As a result, the SSID cannot be obtained by attackers, except through social engineering, guessing, or use of a WIPS.
- C.** Although it does not benefit the security posture, hiding the SSID in Beacons and Probe Response frames can be helpful for preventing some users (such as guests) from attempting to connect to the corporate network.
- D.** Any tenants in the same building using advanced penetration testing tools will be able to obtain the SSID by exploiting WPA EAPOL-Key exchanges. This poses an additional risk of exposing the WPA key.
- E.** To improve security by hiding the SSID, the AP and client stations must both be configured to remove the SSID from association request and response frames. Most WLAN products support this.

Answer: A,C

Question No : 7

What component of the 802.11 standard allows stations to reserve access to the RF medium for a specified period of time?

- A.** Long slot times
- B.** DTIM Interval
- C.** Listen Interval
- D.** Probe Request frames
- E.** RTS or CTS frames

Answer: E

Question No : 8

Given:

Network users and IT personnel at a large machinery manufacturer have been discussing the potential uses and benefits of implementing an indoor WLAN. The network administrator and network manager have requested a meeting of senior management personnel to discuss a WLAN implementation before taking any site survey or implementation steps. The first order of discussion in the meeting is corporate policy concerning implementation and use of WLAN technology.

What specific topics are appropriate in this policy meeting? (Choose two)

- A. Vendor hardware recommendations
- B. Business justification
- C. User productivity impact
- D. Antenna types
- E. Obtaining permits and zoning requirements

Answer: B,C

Question No : 9

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

- A. Fade Margin is an additional pad of signal strength designed into the RF system to compensate for unpredictable signal fading.
- B. The Fade Margin of a long-distance radio link should be equivalent to the receiver's antenna gain.
- C. A Fade Margin is unnecessary on a long-distance RF link if more than 80% of the first Fresnel zone is clear of obstructions.
- D. The Fade Margin is a measurement of signal loss through free space, and is a function of frequency and distance.

Answer: A

Question No : 10

What statement best describes the manual RF site survey report?

- A. It is a series of notes taken during the interview with the network manager and given to the site survey project manager.
- B. It is a one-page network inspection summary used to create a certificate of network compliance.
- C. It contains the results from the RF coverage, capacity, and interference analysis.
- D. It is an internal document used by the site surveying firm for network deployment, and is not usually shown to the client.
- E. It states the customer requirements, business justification, and a detailed budget for the WLAN.

Answer: C

Question No : 11

Why is it recommended for a wireless network administrator to disable 1 Mbps and 2 Mbps data rates on the WLAN infrastructure? (Choose two)

- A. To improve capacity in the BSS
- B. To reduce the size of the AP's effective service area
- C. To prevent 802.11b devices from associating
- D. To maximize the range of the highest data rates
- E. To prevent VoWiFi multicast frames
- F. To enable support for long preambles

Answer: A,B

Question No : 12

When replacing the antenna of a WLAN device with a similar antenna type that has a higher passive gain, what antenna characteristic will decrease?

- A. Beamwidth
- B. Range
- C. Active gain
- D. Receive sensitivity
- E. Fresnel Zone size

Answer: A

Question No : 13

What word describes the bending of an RF signal as it passes from one medium to another medium of a different density?

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

Answer: C

Question No : 14

Given:

ABC Company performs top-secret government contract work and has recently purchased an 802.11 Wireless Intrusion Prevention System (WIPS) to enforce their "NO WIRELESS" network security policy.

What attack type cannot be recognized by the WIPS?

- A. Deauthentication
- B. MAC Spoofing
- C. Protocol Jamming
- D. Eavesdropping
- E. RF Jamming

Answer: D

Question No : 15

What answers correctly complete the following sentence?

_____ and _____ carrier sense functions are used to determine whether the wireless medium is idle or busy. (Choose 2)

- A. Passive
- B. Pseudo-random
- C. Virtual
- D. Active
- E. Physical
- F. Interframe
- G. Vector

Answer: C,E

Question No : 16

What WLAN system feature is required to produce a scenario with the following configuration on a single access point? (Choose 2)

1. SSID = Guest / BSSID = AA:AA:AA:AA:AA:AA /

VLAN = 22 / Subnet = 192.168.22.0 / RF Channel = 6

2. SSID = Corporate / BSSID = BB:BB:BB:BB:BB:BB /

VLAN = 33 / Subnet = 192.168.33.0 / RF Channel = 6 / User Type A

3. SSID = Corporate / BSSID = BB:BB:BB:BB:BB:BB /

VLAN = 44 / Subnet = 192.168.44.0 / RF Channel = 6 / User Type B

- A. Multiple WLAN Profiles
- B. Call Admission Control
- C. Virtual Cell with SCA
- D. Access Categories
- E. User-based authentication
- F. Dual-radio AP hardware
- G. Integrated DHCP server

Answer: A,E

Question No : 17

Given: You are an independent contractor, hired to perform an indoor site survey and network design for ABC Hotel. The network will support both hotel staff and guest users. You are interviewing the network manager to determine business, performance, and security requirements for the future 802.11 WLAN.

What questions should you ask the IT manager? (Choose two)

- A. What data cabling is currently installed in the rooms and throughout the hotel?
- B. How much RF loss do you expect between hotel rooms?
- C. Where are the RF dead zones located within the facility?
- D. What types of applications will be used by the hotel staff?
- E. Are there any radar systems in use at the hotel that would conflict with the WLAN?

Answer: A,D

Question No : 18

During the discovery and connectivity process, client and AP stations exchange information about their supported data rates. After the association, how do client and AP stations select the supported data rate that will be used to send an 802.11 data frame?

- A. During the association, the client and AP agree to use the same transmit rate, but either station can request a change at any time after the association.
- B. The client and AP each choose the optimal data rate to use independently of one another, based on their own experience of the RF link.
- C. The client and AP may use different transmit rates, but the AP determines the data rate that will be used by each client station in the BSS.
- D. The client and AP may use different transmit rates, but the client determines the data rate that it will use and the data rate that the AP will use when communicating to the client.
- E. The client and AP may use a different transmit rates, but the transmit rate is determined by the peer station, based on the peer's experience of the RF link.

Answer: B

Question No : 19

ABC Company has a 2.4 and 5 GHz WLAN deployment supporting four bands in the 5

GHz range (UNII 1, UNII 2, UNII 2e, and UNII 3). DFS functionality is enabled as required by the regulatory domain. Band steering is also enabled to encourage dual-band clients to use frequency bands with more capacity.

Your performance analysis shows that many dual-band VoWiFi client devices will move back and forth between 2.4 and 5 GHz as the user roams throughout the building. All APs have 2.4 and 5 GHz radios enabled.

This "band hopping" behavior is viewed by network staff to be undesirable. What is the most likely cause of the unpredictable client band selection behavior?

- A. Interference from 5 GHz radar sources has increased frame corruption and retries on channels 36-48 in UNII 1.
- B. 5 GHz frequencies offer better RF penetration than 2.4 GHz, but 2.4 GHz offers more voice call capacity and lower latency than 5 GHz.
- C. The voice client does not support DFS, and therefore experiences some 5 GHz coverage holes as it moves through the network.
- D. The client's band selection algorithm prefers 5 GHz, but band steering behavior usually steers 75-85% of client devices to 2.4 GHz.

Answer: C

Question No : 20

Given:

You were previously on-site at ABC's facility to conduct a pre-deployment RF site survey. The WLAN has been deployed according to your recommendations and you are on-site again to perform a network validation.

When performing this type of post-deployment RF site survey for VoWiFi, what are two steps that must be performed? (Choose two)

- A. Coverage analysis to verify appropriate coverage and roaming boundaries
- B. Spectrum analysis to locate and identify RF interference sources
- C. Hidden node analysis to identify and relocate existing hidden nodes
- D. Protocol analysis to discover channel use on neighboring APs
- E. Application analysis with an active phone call on a VoWiFi handset

Answer: A,E