ATMIC NETWORKS
YOUR GUIDE TO GLOBAL CERTIFIATION

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Question: 1

When designing a Wi-Fi-based WLAN to support voice in a large office, which design element is of the highest concern for performance?

A. AP enclosures
B. Roaming
C. AP vendor
D. Support for 900 MHz

Answer: B

Explanation:

Question: 2

What is the minimum PoE budget required to power 6 APs using IEEE 802.3at with no additional details provided?

A. 320 W
B. 60 W
C. 180 W
D. 240 W

Answer: C

Explanation:

Question: 3

In high-density environments like stadiums or convention centers, what additional factor must be considered that can attenuate Wi-Fi signals during events?

A. Thick walls
B. I-Beams
C. People
D. Fire doors

Answer: C

Explanation:

Question: 4

Which document outlines the objectives, scope, and key stakeholders, serving as the official authorization to begin a WLAN design and deployment project?

A. Bill of Materials
B. Project Charter
C. Work Breakdown Structure
D. Budget

Answer: B

Explanation:

Question: 5

When conducting information gathering for a WLAN design, which document ensures your customer's proprietary information remains confidential and protected from unauthorized disclosure?

A. NDA
B. SoW
C. BoM
D. Hold Harmless

Answer: A

Explanation:

Question: 6

In WLAN location-based services, which metric, despite being commonly used, offers the lowest accuracy when determining device positions?

A. Angle of Arrival (AoA)
B. Time of Arrival (ToA)
C. Time Difference of Arrival (TDoA)
D. Received Signal Strength Indicator (RSSI)

Answer: D

Explanation:

Question: 7

Your customer uses PSK authentication but needs a more secure, certificate-based solution requiring certificates on both the client and server. Which EAP method is the most appropriate?

A. EAP-FAST
B. EAP-TTLS
C. EAP-TLS

D. PEAP

Answer: C

Explanation:

Question: 8

When designing a wireless bridge to connect two offices 13 kilometers (approximately 8 miles) apart, which factor must the Wireless Engineer consider to account for Fresnel Zone clearance?

A. Earth bulge
B. Antenna gain
C. FSPL
D. Receive sensitivity

Answer: A

Explanation:

Question: 9

While conducting a site survey in a heavy machinery repair facility, what essential gear should you use for safety in this challenging environment?

A. Personal Protective Equipment (PPE)
B. Low gain antennas
C. Low power APs
D. Indoor APs

Answer: A

Explanation:

Question: 10

A North American business traveler connects to a hotel's 2.4 GHz SSID in Europe and notices low RSSI from an AP in the room, but experiences no issues with RSSI in the lobby. What is the most likely reason for the low RSSI in the room?

A. The AP in the room is using ZigBee instead of Wi-Fi
B. The AP in the room is transmitting on channel 13 and the traveler associated to an AP on channels 1 through 11 in the lobby
C. The switchport that the AP is connected to is only capable of transmitting at 10 Mbps
D. The AP in the room is using Bluetooth instead of Wi-Fi

Answer: B

Explanation:

Question: 11

A museum requires its wireless access points to be discreetly integrated into the environment without sacrificing performance. Which design choice best meets this requirement while maintaining optimal functionality?

A. Lock the AP inside of a metal box
B. Place the APs in between walls and I-beams
C. Use an 802.11b AP, so it looks old enough to be in a museum
D. Use a plastic cover that could blend in with the environment

Answer: D

Explanation:

Question: 12

An engineering firm upgraded from nine 802.11n APs to nine 802.11ac APs, retaining the same channel and power configuration. Despite this, throughput remains unchanged. What is the most likely reason for the lack of improvement?

A. APs are transmitting at a low transmit power
B. The clients were not upgraded
C. APs are mounted on the wall
D. The APs are still using the 5 GHz lower band

Answer: B

Explanation:

Question: 13

During a public Wi-Fi session with 10 other users, you run a ping sweep but cannot detect any devices on your subnet. What feature is likely enabled on the WLAN infrastructure to prevent local communication between clients?

A. Peer-to-peer blocking
B. OSPF external routes
C. Band steering
D. Load balancing

Answer: A

Explanation:

Question: 14

While implementing 802.11ax APs in the 6 GHz band, a consultant recommends using WPA2- Personal for VoIP support. Why is this approach technically inappropriate?

A. Because WPA2-Personal causes slower roams than WPA2-Enterprise
B. Because 802.11ax does not support WPA2-Personal in any band
C. Because 6 GHz WLANs cannot use WPA2-Personal
D. Because VoIP requires Opportunistic Wireless Encryption (OWE)

Answer: C

Explanation:

Question: 15

While planning for a VoWLAN deployment requiring 25 dB SNR, you measure the noise floor at -88 dBm. What is the minimum RSSI needed to meet the system's performance requirements?

A. -70 dBm
B. -67 dBm
C. -65 dBm
D. -63 dBm

Answer: D

Explanation:

Question: 16

When deploying an Enterprise-class VoWLAN infrastructure, which Access Category (AC) must be used to prioritize voice packets and ensure optimal performance?

A. AC_VI
B. AC_VO
C. AC_BE
D. AC_BK

Answer: B

Explanation:

Question: 17

When using a WLAN design tool with propagation modeling capabilities, what critical step must be performed before adding APs, antennas, and attenuation factors like walls?

A. Set the transmit power for all APs
B. Add pictures of the environment
C. Nothing; just begin by adding APs, antenna and attenuators
D. Calibrate the floor plan to increase accuracy

Answer: D

Explanation:

Question: 18

Your customer's 802.11n laptops cannot detect the SSID in the 5 GHz band in a conference room, but your 802.11ac laptop connects without issue. What is the most likely explanation for this discrepancy?

A. The AP is configured to use channel 36
B. The customer laptop does not support OFDM
C. The AP is on channel 144
D. Their laptops are SISO clients

Answer: C

Explanation:

Question: 19

When designing a static channel plan for an office using voice devices near an airport, which range of channels may be avoided to avoid channel switching when implemented in this environment?

A. 36-40
B. 44-48
C. 116-124

D. 1-11

Answer: C

Explanation:

Question: 20

Which vertically polarized antenna is best suited for a WLAN infrastructure with access points mounted on a ceiling over 6 meters high, where all client stations operate from the floor level?

A. Patch
B. Dish
C. Grid

D. Low-gain dipole

Answer: D

Explanation:

Question: 21

When using a predictive design tool, you have selected access points (APs) with an antenna gain of 3 dBi and set the transmit power to 25 mW. What is the EIRP (Effective Isotropic Radiated Power) of the APs in this design?

A. 11 dBm
B. 6.25 mW
C. 125 mW
D. 17 dBm

Answer: D

Explanation:

Question: 22

Your customer has selected switches that support 802.3bz MultiGig interfaces and 4x4:4 802.11ac Wave 2 APs with dual-5GHz capabilities. The APs have one MultiGig interface, and some cable runs will exceed 180.5 feet (55 meters). To support MultiGig speeds, which is the best cabling option?

A. Cat-5
B. Cat-6
C. Cat-5e
D. Cat-6a

Answer: C

Explanation:

Question: 23

When conducting a site survey for a possible WLAN redesign, you use two Wi-Fi USB adapters for RSSI data collection and two USB spectrum analysis adapters for RF spectrum dat
a. Since your laptop lacks enough USB ports, you connect them via a 4-port powered USB 3.0 hub.
What issue could the use of USB 3.0 cause that might impact your site survey?

A. It does not give you enough bandwidth to collect data coming from all of the adapters
B. No USB 3.0 hub provides enough power for all the adapters
C. It generates noise in the 2.4 GHz band, giving you a false perception of the noise floor
D. It generates noise in the 5 GHz band, giving you a false perception of the noise floor

Answer: C

Explanation:

Question: 24

What is the most cost-effective way to accurately measure the height of a ceiling when the use of a ladder is not permitted?

A. Estimate the height based on known object sizes
B. Gather measurements from other objects and do the math
C. Rent a lift-cart to lift you up to the ceiling
D. Use a laser measure to measure the distance from the floor to the ceiling

Answer: D

Explanation:

Question: 25

You conducted a site survey using two USB Wi-Fi adapters with a special driver designed for the site survey software. After deployment, the client devices show lower RSSI values compared to the results from your survey. What is the most likely reason for this discrepancy?

A. USB Wi-Fi adapters designed for site surveys may have better sensitivity than regular Wi-Fi cards installed in client devices
B. The transmit power on the APs is higher than needed
C. Regular Wi-Fi cards installed in client devices do not support the same protocols as survey adapters
D. All USB Wi-Fi adapters have a greater sensitivity than internal Wi-Fi adapters

Answer: D

Explanation:

Question: 26

When performing an active site survey in an existing WLAN infrastructure, in addition to gathering throughput data, what other important function are you typically testing simultaneously?

A. Application filtering
B. Internet bandwidth
C. Roaming
D. ACL configuration

Answer: C

Explanation:

Question: 27

Why should band steering algorithms allow stations to connect to the 2.4 GHz band after ignoring a certain number of Probe Requests?

A. Because the FCC requires it
B. Because some clients are persistent clients that will not move to the 5 GHz band
C. Because the 802.11 standard requires it
D. Because the AP will experience a buffer overflow if they do not eventually respond with a Probe Response

Answer: B

Explanation:

Question: 28

After designing a WLAN infrastructure using predictive design software, what is the best way to validate the predictive design in the physical space before deployment, assuming time and budget allow for it?

A. Deploy all of the APs as they're shown in the predictive design and perform an active site survey B. Deploy all of the APs as they're shown in the predictive design and perform a passive site survey C. Use a client device positioned where the APs will be installed and measure the signal from the client device

E. Perform an AP-on-a-Stick survey using AP locations based upon the predictive design to confirm each AP's placement

Answer: D

Explanation:

Question: 29

Your customer requires a security solution where client credentials are used, not a Protected Access Credential (PAC), and the authentication server must have a certificate with optional client certificate use. Which EAP (Extensible Authentication Protocol) method is the best fit for these requirements?

A. EAP-FAST
B. EAP-TTLS
C. EAP-TLS
D. LEAP

Answer: B

Explanation:

Question: 30

Your customer requires fast and secure roaming. Which two types of roaming are specified in 802.11 Fast Transition (FT) that

will help meet this goal?

A. Over-the-Air and Over-the-DS
B. Over-the-Air and Over-the-Wire
C. FT and OKC
D. FT and TKIP

Answer: A

Explanation:

Question: 31

Which advantage provided by 802.11n and 802.11ac is not usable in 1x1:1 low-end client devices?

A. Channel bonding
B. MCS data rates
C. Maximal Ratio Combining
D. Mandatory data rates

Answer: C

Explanation:

Question: 32

When deploying access points (APs) outdoors, which additional component needs to be used that is typically not required in most indoor office deployments?

A. Antennas
B. NEMA enclosures
C. Ethernet cables
D. PoE

Answer: B

Explanation:

Question: 33

Which document provided to your customer should include all devices and parts that will be used during the deployment of their WLAN infrastructure?

A. SoW (Statement of Work)
B. BoM (Bill of Materials)
C. Design report
D. Project plan

Answer: B

Explanation:

Question: 34

What limitation exists when WMM is not enabled on an 802.11 WLAN?

A. 802.11 QoS will not be available
B. The maximum channel-width will be 20 MHz
C. EDCA values will change
D. Only two ACs will be available

Answer: A

Explanation:

Question: 35

When designing for OFDMA, why might the same channel bandwidth result in greater efficiency than that available in 802.11n and 802.11ac?

A. The design will use MU-MIMO, which is not available in either 802.11n or 802.11ac.
B. The design will use transmit beamforming, which is not available in either 802.11n or 802.11ac.
C. The design will use RUs that allow for transmissions to multiple client devices concurrently without the use of MU-MIMO.
D. The clients will use UL MU-MIMO coupled with DSSS, which was not available in 802.11n or 802.11ac.

Answer: C

Explanation:

Question: 36

What service must be implemented on your customer's network to authenticate users against an LDAP database before granting access to the WLAN infrastructure?

A. SSH
B. RADIUS
C. SFTP
D. TLS

Answer: B

Explanation:

Question: 37

What is the best method of gathering attenuation measurements from wall materials?

A. After measuring the RSSI in free space 5 meters (16.5 feet) apart, put an AP 4 meters (13 feet) away from the wall on one side and your measuring device 1 meter (3.2 feet) away from the wall minus the width of the wall. Take measurements and compare the difference.

B. Use the pre-built attenuation values in the predictive design tools as they are more accurate than free-space metrics gathered with commercial devices.

C. After measuring the RSSI in free space 1 meter (3 feet) apart, put an AP 0.32 meters (1 feet) away from the wall on one side and your measuring device 0.67 meters (2 feet) away from the wall on the other side. Take measurements and compare the difference.

D. Look on the Internet for attenuation values for each one of the materials that might attenuate the Wi-Fi signal using the material providers' websites.

Answer: C

Explanation:

Question: 38

Which type of authentication and encryption method is mandatory for Voice Enterprise certified devices as specified by the Wi-Fi Alliance?

A. WPA2/AES Personal

B. WPA2/TKIP Enterprise

C. WPA2/AES Enterprise

D. WPA/TKIP Personal

Answer: C

Explanation:

Question: 39

Which document provides detailed instructions for installation technicians on how to properly mount and configure access points (APs)?

A. Hold Harmless

B. Statement of Work

C. Bill of Materials

D. Physical installation guide

Answer: D

Explanation:

Question: 40

In addition to a copy of your design, which tools should you provide to ensure the installation team correctly deploys access points (APs) in the specified locations within a multi-floor indoor design?

A. GPS and a map
B. RF spectrum analyzer and packet capturing software
C. Ladder and a pen
D. Camera and marking tools

Answer: C

Explanation:

Question: 41

When installing access points (APs) on high ceilings, what is the most common personal protective equipment (PPE) that should be used?

A. Hardhat, high visibility vest and body belt
B. Glasses, gloves and jacket
C. Clean suits, masks and glasses
D. Clean suits, gloves and jacket

Answer: A

Explanation:

Question: 42

You are preparing to perform a site survey for a company that processes meat, but some areas are restricted due to high security. What should you do in order to proceed with the site survey?

A. Gain appropriate access and clearance to perform the site survey
B. Gain meat processing access certification from the FDA
C. Ensure that you and your team are using food industry approved USB adapters for the survey
D. Just begin the survey, they will understand

Answer: A

Explanation:

Question: 43

Which DHCP option, when required, must be configured to help access points (APs) locate their wireless LAN controller (WLC)

during deployment?

A. 150
B. 62
C. 43
D. 22

Answer: C

Explanation:

Question: 44

When deploying a new WLAN infrastructure using Power over Ethernet (PoE) to power the access points (APs), you find that a known good AP is not powering up. You connect your laptop using the same cable without any issues. What is the most likely reason the AP did not power up?

A. Missing AP licenses on the controller
B. Spanning-tree convergence
C. Layer 3 routing
D. Lack of PoE budget on the switch

Answer: D

Explanation:

Question: 45

During your first pre-deployment meeting with the deployment team, you hand out the full design documentation to everyone. What is your primary goal during this meeting?

A. To explain design decisions and ensure understanding of design documents
B. To discuss AP functionality
C. To explain how Wi-Fi works
D. To justify the budget

Answer: A

Explanation:

Question: 46

A controller-based WLAN infrastructure has its controller on a different subnet than its access points (APs). What device must be used to enable communication between the controller and the APs?

A. NTP server

B. Router
C. PoE Layer 2 switch
D. Wireless bridge

Answer: B

Explanation:

Question: 47

What power management feature introduced in 802.11ax, but not available in 802.11ac or 802.11n, is designed to improve battery life for WLAN devices?

A. WMM-Power Save
B. Legacy Power Save
C. TWT
D. OFDMA

Answer: C

Explanation:

Question: 48

Aesthetics are critical in some environments. What common installation technique can best meet this requirement in a stadium while not voiding manufacturer warranties?

A. Painting to match team colors
B. Using enclosures under the seats
C. Mounting on a non-fixed pole
D. Mounting on the walls

Answer: B

Explanation:

Question: 49

What type of site survey helps determine if roaming is functioning as intended?

A. Passive
B. Predictive
C. Active
D. Spectrum analysis walkthrough

Answer: C

Explanation:

Question: 50

When performing a frame capture over the air during a voice call, you notice that frames in the downlink direction (from the AP to the client) are not being transmitted with the correct UP (User Priority) value for voice frames, but in the uplink direction (from the client to the AP), they are transmitted correctly. What is the likely cause of this issue?

A. Bad client driver
B. AP is not receiving enough PoE, thus not using QoS features
C. Somewhere on the wired network QoS markings aren't being trusted
D. Faulty antenna on the AP

Answer: C

Explanation:

Question: 51

You are validating client association capabilities to an 802.1X/EAP secure SSID. The RADIUS server's IP address is 10.100.50.25, and the default RADIUS authentication port is being used. None of the clients can associate with the SSID. After verifying that both the server and the RADIUS service are operational, you find that the authenticator (such as the AP or controller) is not communicating properly with the RADIUS server. What is your next troubleshooting step?

A. Verify that the shared secret between the authenticator and the RADIUS server is the correct
B. Reboot the clients to empty the shared secret cache
C. Reboot the server to empty the shared secret cache
D. Restart the RADIUS service to empty the shared secret cache

Answer: A

Explanation:

Question: 52

During lunch time in the break room of a company, Wi-Fi connectivity on the 2.4 GHz band becomes intermittent. At other times of the day, it works fine. What is the most likely cause of this issue?

A. Employees are using their cell data instead of using the Wi-Fi
B. The AP in the cafeteria keeps rebooting due to lack of PoE budget on the switch
C. Toasters and ovens are heating up the air, raising the noise floor with the Wi-Fi on the 2.4 GHz band
D. Microwaves in the cafeteria are interfering with the Wi-Fi on the 2.4 GHz band

Answer: D

Explanation:

Question: 53

After deploying a 5 GHz-only WLAN infrastructure in the USA, using 20 MHz channel widths and all 25 available channels, a manager tests the Guest SSID on his 802.11n tablet. During testing, he experiences several areas with poor RSSI (below -80 dBm) or no signal at all. Upon checking, all APs are operational, and coverage was validated post-deployment. What is the likely cause of this issue?

A. His tablet doesn't support the 5 GHz band
B. His tablet only supports a 40 MHz channel-width
C. His tablet does not support one or more of the 5 GHz channels
D. His tablet doesn't support MU-MIMO

Answer: C

Explanation:

Question: 54

After designing and deploying a WLAN infrastructure, you notice that co-channel interference (CCI) is causing poor performance in the 2.4 GHz band. Although the WLAN was primarily designed for 5 GHz, 2.4 GHz was included as a best-effort solution. You discover that the implementers did not follow your configuration guidelines. What can you do to minimize the impact of CCI in the 2.4 GHz band without adding adjacent-channel interference (ACI)?

A. Add more APs to the infrastructure
B. Increase the transmit power on all APs
C. Turn off 2.4 GHz radios on some APs
D. Use all channels available in the 2.4 GHz band

Answer: C

Explanation:

Question: 55

You have performed a validation site survey after deploying a WLAN infrastructure in an All-WirelessOffice. One specific application is experiencing delays after transitioning from wired to wireless connectivity. During validation, you discover that all APs are using 80 MHz channel widths instead of the designed 20 MHz on the 5 GHz band. What can be done to resolve the delay for this application?

A. APs should be using 160 MHz channel-widths to get more throughput
B. Reconfigure to use 20 MHz channel-widths, so reuse of the frequency is more effective
C. Power-off half of the APs to reduce CCI and keep 80 MHz channel-widths
D. Add more APs using 80 MHz channel-widths

Answer: B

Explanation:

Question: 56

What deliverables should be provided to the customer after successfully implementing a WLAN infrastructure?

A. Digital or physical assets, guides, floorplans with design information, and configuration documents
B. Project Charter, requirements specification, and software licenses
C. Facility blueprints, NDAs, and hold harmless documents
D. Nothing is required. The implemented WLAN was the deliverable.

Answer: A

Explanation:

Question: 57

Who should be present from the customer side during the final meeting after successfully implementing a WLAN infrastructure?

A. Acquirer and stakeholders
B. End-users
C. The customer's customers
D. Remote workers

Answer: A

Explanation:

Question: 58

During a validation site survey, you discover that some access points (APs) have been mounted above the ceiling due to an aesthetic request from the building architect. However, no aesthetics constraints were communicated during the requirements gathering from the main stakeholder of the project. What is the appropriate course of action?

A. Advise the stakeholder that WLAN performance requirements will not be met and a new design process will be needed to meet the requirements
B. Leave it as it is and allow automatic channel management to correct any issues
C. Increase the output power on all APs by 6 dB immediately to accommodate for the additional attenuation
D. Remove all external antennas and use only the internal antennas to reduce multipath and increase acquirer satisfaction

Answer: A

Explanation:

Question: 59

According to IEEE 29148-2018, which of the following is a characteristic of a requirements set that is not a characteristic of an individual requirement statement?

A. Comprehensible
B. Feasible
C. Necessary
D. Verifiable

Answer: A

Explanation:

Question: 60

In a convention center auditorium, you've received complaints about the WLAN performance. Currently, only two APs are installed, but they are supporting over 300 client devices simultaneously, which exceeds the original design. What action should you take to ensure the Wi-Fi works as expected?

A. Redesign the WLAN for the auditorium requirement area
B. Quickly add more APs to the auditorium requirement area
C. Upgrade the Ethernet connections to MultiGig
D. Turn up the output power on the APs so that they can handle more clients

Answer: A

Explanation:

Question: 61

In 802.11, clients are required to be calibrated for RSSI and SNR reporting to:

A. Within +/-5 dB
B. Within +/-3 dB
C. Within +/-1 dB
D. Within +/-0.5 dB
E. Within +/-0.25 dB
F. No specific value

Answer: F

Explanation:

Question: 62

You have determined the best mounting locations for APs in a given installation. The facilities manager has asked you to

change the locations for
several APs due to aesthetic concerns. You suggest mounting the APs in the ideal locations and painting them so they go unnoticed in the environment.
What is a valid recommendation or consideration when painting APs?

A. Always use paints with metallic dye in them to prevent potential RF propagation impact.
B. Painting APs will significantly reduce the output power.
C. Painting APs may void the product manufacturer's warranty.
D. Most AP models for indoor environments come in a variety of form factors and colors. Painting is never recommended.

Answer: C

Explanation:

Question: 63

When deploying long-distance 802.11 bridge links (10 miles / 16 km), what parameter may be critical for improving data flow by reducing retries caused by the long distances?

A. The sequence control field value
B. The acknowledgement timeout threshold
C. The minimum transmit data rate value
D. The CTS-to-self threshold

Answer: B

Explanation:

Question: 64

One of your customers plans on providing wireless coverage to a warehouse facility. After performing an initial walkthrough, you collect the following information:
The central part of the warehouse is between 400 and 600 feet (122 to 183 meters) from the warehouse switches mounted on the walls.
ˆ The warehouse storage is composed of metallic racks with varying inventory levels and contents, from electronics and plastic toys to food
pallets and juice bottles.
》 Workers need basic data coverage from their working location, and are not highly mobile. They usually work from one single aisle, and their
laptop is on a cart with wheels.
What would be your one recommendation to provide coverage to the central area of the warehouse?

A. Equip workers laptops with a directional antenna and install APs less than 328 feet (100m) away from the switch.
B. In this case, extend the cable length just beyond 328 feet (100 m) and position APs as close as possible to the central area of the warehouse.
C. Position APs along the walls, and equip the APs with Yagi antennas to cover the central area.
D. Install APs for client access in the central area and use a mesh backhaul link to connect to the DS.

Answer: B

Explanation:

Question: 65

Which definition correctly describes the "local MAC" variation of the centralized WLAN architecture?

A. All MAC functions are performed by the AP. A minimal subset of network control is ofloaded to the WLAN controller along with management and monitoring functions.

B. PHY functions are performed directly by the AP. MAC functions are divided almost equally between the WLAN controller and the AP, according to the time sensitivity of the feature or service.

C. The AP provides the RF termination point for the WLAN, but performs very few of the WLAN functions or services. The WLAN controller performs all MAC functions and the AP is very simple and lightweight.

D. All RF-, data-, and control-related WLAN functions are performed by the AP. APs coordinate network services with one another and are managed by a WNMS,

Answer: A

Explanation:

Question: 66

When a WLAN controller sends an 802.11 frame to a lightweight AP for transmission on the wireless medium, how does it mark the frame for 802.11 QoS priority?

A. The WLAN controller will place the user priority (UP) value in the QoS Control field of the 802.11 frame header before passing it to the lightweight AP.

B. The WLAN controller does not mark 802.11 frames with priority values only the APs can do this.

C. The WLAN controller does not mark the 802.11 frames with priority values only the Layer 3 switches can do this.

D. The WLAN controller does not mark the 802.11 frames with priority values only the Layer 3 routers can do this.

Answer: A

Explanation:

Question: 67

When selecting a centralized WLAN architecture, what new problem may arise when you change the data forwarding model from centralized to distributed?

A. APs that were designed for a centralized forwarding model may not support all features in distributed forwarding mode.

B. The router between the APs and the controller must be made aware of the APs as forwarding client STAs.

C. All RRM controls will also need to be distributed to a master AP that acts as a channel and transmit power arbiter for other

APs in the ESS.

D. Centralized control functions, such as key management and distribution, RRM, and load balancing will no longer be supported.

Answer: A

Explanation:

Question: 68

Which one of the following is an essential metric to measure when performing a survey and design for VoIP across WLANs?

A. Throughput rates above 50 Mbps
B. Data rates above 100 Mbps
C. Latency
D. PoE provided to wireless handsets

Answer: C

Explanation:

Question: 69

In a manufacturing facility with highly reflective materials, you are planning an upgrade to your existing 802.11b WLAN implementation. You have chosen a dual- band 802.11n infrastructure product for this purpose. Your client applications include:

^ Handheld scanners for inventory management
^ Toughbooks (laptops) mounted on forklifts for inventory and workflow management
^ VoWiFi phones used by select employees throughout the facility

You are evaluating all of the 802.11n enhancements and determining which features to enable for your environment and applications.

In this scenario, what 802.11n enhancement typically should NOT be enabled on the 2.4 GHz radio of the new APs?

A. Multiple streams
B. Short guard intervals
C. Block Acknowledgments
D. Frame aggregation

Answer: B

Explanation:

Question: 70

When implementing WLAN security according to common best practices, what feature should be enabled when configuring an EAP type?

A. The "Use WEP if RADIUS server unavailable" option
B. The "Validate server certificate" option
C. The "Trusted Root Certification Authorities" list
D. The "Do not prompt user to authorize new servers or trusted certification authorities" option

Answer: B

Explanation:

Question: 71

You are selecting external antennas for use in a bridge link deployment. What chart should you request from the antenna vendors to make an accurate selection?

A. mW to dBm conversion chart
B. dBm to dB conversion chart
C. Elevation chart
D. Antenna coating chart

Answer: C

Explanation:

Question: 72

When live video streaming solutions that transmit simultaneously to more than one recipient are used, what special capability should be considered and configured in all affected WLAN implementations?

A. IPSec
B. IPv6
C. Multicasting
D. Secure TCP

Answer: C

Explanation:

Question: 73

What VoWiFi implementations frequently require multicast packet delivery support by the WLAN infrastructure?

A. All VoWiFi implementations
B. Push-to-Talk VoWiFi phones
C. All VoWiFi soft phones
D. All VoWiFi hard phones

Answer: B

Explanation:

Question: 74

As you plan a WLAN upgrade, you have assessed the network requirements and data signatures of your applications. One of the popular
applications used on your network requires high bandwidth and low to medium Wi-Fi loss, but can tolerate moderate latency and jitter.
What application matches this description?

A. Voice
B. Email
C. Skype chat
D. Video-on-demand

Answer: B

Explanation:

Question: 75

Given: The 802.11ac APs you have selected for your public access deployment support many of the
PHY and MAC enhancements offered by the
802.11n and
802.11ac amendments. The AP is configured for a single-band (2.4 GHz) and only allows 20 MHz channels. The WLAN radio in the AP is a 3x3
802.11n chip that supports two spatial streams.
What is the maximum MCS rate that could be supported by this AP?

A. 54 Mbps
B. 65 Mbps
C. 108 Mbps
D. 144 Mbps

Answer: D

Explanation:

Question: 76

As an implementation engineer, you have just received initial design specs from a network designer for your dual-band 802.11n deployment. The
network design documents prescribe the following data rate configuration for the 2.4 GHz radio: Basic Rates 5.5, 6, 11, 12 Mbps

Supported Rates 9, 18, 24, 36, 48, and 54 Mbps as well as MCS 0-15

What will result from this design strategy?

A. By disabling support for 1 and 2 Mbps while allowing 5.5 and 11 Mbps, the network will force 802.11b clients to use these higher data rates.

B. Protection mechanisms will always be in use on this network to support 5.5 and 11 Mbps as basic rates.

C. HR/DSSS (802.11b) stations will not be able to associate to the service set.

D. This configuration violates the IEEE specification that defines 6, 12, and 24 Mbps as mandatory data rates for 802.11g/n.

Answer: A

Explanation:

Question: 77

Given: As the wireless network administrator for XYZ Company, you are planning to upgrade your aging wireless network infrastructure, as well as some clients, to support 802.11ac. In your research, you have discovered that your new wireless client devices and infrastructure are 802.11ac, WMM, and WMM-PS certified by the Wi-Fi Alliance. Some of your existing client devices are 802.11a/b/g devices that do not support WMM.

Given this information, what scenario is possible when your company's employees begin using both types of client devices on the new WLAN?

A. All WMM-PS certified client devices will be prevented from utilizing WMM-PS features until all stations in use on the wireless medium are WMM-PS certified.

B. The WLAN infrastructure will set the dozing times of the WMM-PS certified client devices based upon their WMM access category, while the non-WMM-PS client devices will continue to use PS-Poll frames.

C. Performance and battery life will be inconsistent between WMM-PS and non-WMM-PS client devices when used with applications that support WMM-PS.

D. WMM-PS enabled APs will allow both WMM-PS and non-WMM-PS stations to use the trigger-and-delivery mechanism, but WMM-PS stations wil

Answer: C

Explanation:

Question: 78

You desire to achieve a 450 Mbps MCS. What 802.11n features (from the numbered list below) are required?

1. Frame aggregation
2. Short GI
3. 40 MHz channels
4. 2 spatial streams

5. 3 spatial streams
6. Transmit beamforming (TxBF)

A. 2, 3, 2
B. 1, 2, 3, 5
C. 1, 2, 3, 4, 6
D. 2, 3, 5

Answer: D

Explanation:

Question: 79

You are tasked with designing the WLAN to accommodate certain high density areas on your university campus where users frequently come and go. With a limited DHCP pool size (subnet mask = 255.255.252.0) for this WLAN subnet, you want to ensure that your DHCP addresses are used efficiently and are not exhausted, which would prevent new client Layer 3 connections. The DHCP server is a Windows Server 2012 R2 machine.

Your design task is to determine the best configuration to allow as many users as possible while avoiding WLAN service interruptions and also to use the available addresses as efficiently as possible.

What setting would be most effective at achieving this design task?

A. Set the RTS threshold to 2346 bytes
B. Set the inactive wireless client timeout (client age-out) to 5 minutes
C. Set the maximum client limit per radio to 64
D. Set the DHCP lease for this pool to 20 minutes

Answer: D

Explanation:

Question: 80

What is the DSCP Per Hop Behavior equivalent classification of the 802.11 AC_VO priority level?

A. AF31
B. CS3
C. VO
D. EF

Answer: D

Explanation:

Question: 81

You are working on a VoWLAN design with your customer's wired networking team. How many distinct priority levels do you expect for the voice applications?

A. 1 priority level, but 2 queues (one for uplink traffic, one for downlink traffic)
B. 1 priority level per client and AP pair, so the total number depends on the expected number of clients
C. 1 priority level for voice RTP, 1 priority level for voice control and RTCP
D. 1 priority level for VoWLAN client traffic, 1 priority level for wired VoIP client traffic

Answer: C

Explanation:

Question: 82

ABC Company has a WLAN controller with 10 controller-based APs; the Voice SSID is configured for centralized data forwarding. Each AP is connected to an access port on a layer-2 Ethernet switch. Each layer-2 switch is uplinked to a single layer-3 core Ethernet switch. The WLAN controller is connected directly to the layer-3 core Ethernet switch. Layer-3 tunnels are created between all controller-based APs and the WLAN controller. A voice server is connected to the layer-3 Ethernet switch.

When a voice-enabled QoS STA sends an IP data packet to a voice server in this scenario, the DSCP value carried in the STA's IP data packet gets mapped to what and by which device?

A. The DSCP value is mapped to an IEEE 802.1Q priority tag value by the WLAN controller.
B. The DSCP value is mapped to the DSCP value in the encapsulating IP header by the layer-3 switch.
C. The DSCP value is mapped to an IEEE 802.1p (802.1D-2004) UP value by the access point.
D. The DSCP value is mapped to an IEEE 802.1Q VLAN tag by the access point.

Answer: A

Explanation:

Question: 83

Given: For this fill-in the blank question, each answer option contains an answer for the first and second blanks, separated by a dash "—". Choose the answer option that correctly fills in both blanks in the following sentence.

A WLAN may use 802.11 admission control to ¸ and admission control requirements are configured separately for each .

A. Block stations with inadequate security parameters — SSID
B. Identify voice-enabled wireless devices — AP radio (that is, 2.4 GHz or 5 GHz)

C. Regulate the available bandwidth resources — Access Category
D. Mark ingress and egress frames with priority values — TCP/IP port

Answer: C

Explanation:

Question: 84

In a large enterprise (5000+ wireless users), by what would NOT be a recommended method by which IP addresses and VLANs are assigned to different clients associated to the same AP?

A. Each SSID is mapped to a static VLAN assignment
B. Upstream AAA servers dynamically assign VLANs to each user or group profile
C. Radio signal metrics (RSSI, SNR, etc.) of WLAN clients are triangulated for location-based VLAN assignment during association
D. Multiple VLAN pools are designated for an SSID and user IP addresses are selected in a roundrobin fashion from the associated pools

Answer: C

Explanation:

Question: 85

In a multiple channel architecture (MCA) network supporting 802.1X authentication, what aspect of WLAN design affects client roaming efficiency and effectiveness?

A. PHY standard used by the AP
B. Key caching protocols
C. Cipher suite
D. PHY standard used by client

Answer: B

Explanation:

Question: 86

An associated STA detects a new BSS with the same SSID as the STA's current BSS. The new BSS uses a different IP subnet than the current BSS.
If the STA is configured to use 802.1X/EAP preauthentication, what is likely to occur?

A. The STA will not attempt to preauthenticate because the new BSS uses a different IP subnet.
B. The STA will attempt to preauthenticate, but fail because the new BSS uses a different data-link broadcast domain.
C. The STA will attempt to preauthenticate and succeed if DHCP is supported on the new subnet.

D. The STA will attempt to preauthenticate and succeed if IP Mobility is enabled on the AP or WLAN controller.

Answer: B

Explanation:

Question: 87

Given: A WLAN controller is connected to ABC Company's core layer 3 Ethernet switch with an IEEE 802.1Q trunk connection. The WLAN controller's native
VLAN is VLAN 6 and its IP address is 10.0.14.2 /24. Lightweight APs supporting centralized forwarding are connected to the network on VLANs 7,
8, and 9, and they each build a Layer 3 tunnel back to the WLAN controller's IP address.
The dynamically assigned IP addresses received by each AP from a DHCP server will be

A. Associated with the VLAN on which they are connected.
B. Associated with the native VLAN of the WLAN controller.
C. Associated with VLAN 1, the default VLAN for new APs
D. Associated with a non-routable VLAN until the MAC address of the AP is removed from the controller's MAC filter

Answer: A

Explanation:

Question: 88

What is the purpose of DHCP Option 43, and how is it used with WLANs?

A. It provides clients with a temporary IP address on a restricted VLAN until 802.1X authentication is completed. Then the client receives its long-term IP address.
B. It provides IP address bindings for specific network nodes that require long-term IP address assignments. WLAN controllers are configured
to use Option 43 to receive long-term IP address leases that are centrally managed with DHCP.
C. It supports vendor-specific IP address attributes for node discovery purposes. APs use Option 43 with vendor class identifiers to obtain the
IP address of a centralized WLAN controller.
D. It integrates a DHCP server with AAA servers and user databases to dynamically assign IP addresses to client devices. During 802.1X, the AAA server uses

Answer: C

Explanation:

Question: 89

You deployed an AP and installed its antenna, and you now need to set the AP transmit power. Given a desired EIRP of 21

dBm, and an antenna
gain of 5.85 dBd connected through 25 feet of cable with a loss specification of 4 dB/100 feet.
Assuming that there is no significant loss from the connectors, what should be the transmit power level for this AP?

A. 10 mW
B. 14 mW
C. 20 mW
D. 25 mW

Answer: D

Explanation:

Question: 90

What kind of antenna results in a nearly circular pattern on the azimuth chart but a very flat donut shape on the elevation chart?

A. High gain omni-directional
B. 20 degree vertical yagi
C. 120 degree horizontal sector
D. 60 degree horizontal patch

Answer: B

Explanation:

Question: 91

What is a radome?

A. A type of semi-circular ceiling found in atriums and that is a heavy cause of RF reflection.
B. A weatherproof piece of plastic covering an antenna or antenna system.
C. The unit used to measure the signal reflected backward by the end of a cable.
D. A piece of metal positioned behind APs mounted on outdoor poles, designed to limit the butterfly effect.

Answer: B

Explanation:

Question: 92

Of the following antenna connector types, which one is the smallest?

A. RP-TNC
B. MC Connector
C. N Connector
D. Male N Connector

Answer: A

Explanation:

Question: 93

You are creating an outdoor bridge link that spans more than 1000 yards. Which one of the following antenna types is more likely to be included in the design?

A. Yagi
B. Omni
C. Patch
D. Panel

Answer: A

Explanation:

Question: 94

What is the purpose of Friis transmission equation [(LdB) = 20 log(d) + 20 log (f) - 27.55]?

A. Calculate earth bulge to determine minimum antenna height
B. Calculate receive sensitivity for an 802.11 radio/antenna pair
C. Calculate RF path loss in free space
D. Calculate the loss experienced between the intentional radiator and antenna

Answer: C

Explanation:

Question: 95

Why does a frame transmitted at 1 Mbps have a greater usable range than the same frame transmitted at 54 Mbps?

A. Free space path loss causes greater signal dispersion for higher rate transmissions.
B. Receiver sensitivity requirements are lower for frames transmitted with less complex modulation and coding.
C. To improve reliability, 802.11 STAs increase transmit power as the signaling rate decreases.
D. Lower data rate RF transmissions travel at higher speeds and are less likely to experience collisions.

Answer: B

Explanation:

Question: 96

What basic RF math formula should be used as a baseline to convert an RF value in units of dBm into a value of mW?
*Note: "dBm" in the formulas represents the known dBm value

A. 0 dBm = 1 mW
B. mW C.
D. mW mW

Answer: A

Explanation:

Question: 97

Given: You are evaluating the theoretical and real-world RF gain benefits of transmit and receive features introduced by 802.11 with MIMO. This
exercise allows you to quantify the features value in a real-world environment.
What is the maximum theoretical signal gain of chip-based TxBF and MRC (as features) when compared to the same AP using only a single
antenna for transmit and receive (effectively simulating a 1x1 chip)?

A. 2 Rx or Txchains = 3 dBi gain 3Rx or Tx chains = approx 5 dBi gain 4 Rx or Tx chains = 6 dBi gain
B. 2 Rx or Txchains = 1 dBi gain 3Rx or Tx chains = 2 dBi gain 4 Rx or Tx chains = 3 dBi gain
C. 2 Rx or Txchains = 3 dBi gain 3Rx or Tx chains = 6 dBi gain 4 Rx or Tx chains = 9 dBi gain
D. 2 Rx or Txchains = approx 4-6.5 dBi gain 3 Rx or Tx chains = approx 7-10 dBi gain

Answer: D

Explanation:
The maximum theoretical signal gain of chip-based TxBF and MRC depends on the number of antennas and the channel conditions. TxBF (transmit beamforming) is a technique that focuses the transmitted signal in the direction of the intended receiver, resulting in higher signal strength and less interference. MRC (maximum ratio combining) is a technique that combines the signals received by multiple antennas in an optimal way, resulting in higher signal-to-noise ratio and better performance. The theoretical gain of TxBF and MRC can be calculated as GTxBF=10log10(N) and
GMRC=10log10(N)
where N is the number of antennas. Therefore, the total gain of TxBF and MRC is Gtotal=GTxBF+GMRC=20log10(N)
However, this is the ideal case and assumes perfect channel conditions and alignment. In reality, the gain is lower due to factors such as channel fading, antenna spacing, and feedback delay. According to the CWDP study guide1, the typical gain of TxBF and MRC is about 4-6.5 dBi for 2 antennas, 7-10 dBi for 3 antennas, and 10-13 dBi for 4 antennas. Therefore, the answer is D. Reference: 1: CWDP Certified Wireless Design Professional Official Study Guide: Exam PW0-250, Chapter 8, page 267.

Question: 98

Given:
In your regulatory domain, a Tx Power Level of "1" is equivalent to 17 dBm.
For every integer increment (e.g. from 1 to 2) to the Tx Power Level, the APs transmit power is halved.

In units of mW, what is the actual transmit power for an AP configured at a Tx Power Level of "4"

A. 6.25 mW
B. 50 mW
C. 12.5 mW
D. 8 mW

Answer: C

Explanation:

Question: 99

You told your customer that multipath fading may be mitigated simply by moving one or both of the receivers antennas a small amount, usually by one to four wavelengths away from its original position. Your customer is prepared to make the change, but does not know the wavelength for 802.11ac.

What is the approximate wavelength of an 802.11ac radio wave?

A. 5.5 cm (2.16 inches)
B. 12 cm (4.72 inches)
C. 15.24 cm (6 inches)
D. 45 cm (17.71 inches)

Answer: A

Explanation:

Question: 100

What is a valid 40 MHz channel configuration in the 2.4 GHz ISM band where channels 1-11 are permitted?

A. 4 (primary), +1 (secondary)
B. 2 (primary), -1 (secondary)
C. 8 (primary), +1 (secondary)
D. 1 (primary), 6 (secondary)

Answer: A

Explanation:

Question: 101

Assume that your network operates in a regulatory domain that allows use of the entire 5 GHz space allowed in the 802.11ac amendment. In your upcoming 802.11ac deployment, you would like to take advantage of the performance improvements that result from channel bonding.

However, after
extensive testing, you have determined that your mission-critical WLAN should not use channels requiring DFS support. Given those two criteria (enable channel bonding and disable DFS channels), in the 5 GHz spectrum, how many non-overlapping 40 MHz channels will your system be able to use?

A. 2
B. 3
C. 4
D. 6

Answer: C

Explanation:

Question: 102

What commonly causes a client-to-AP link imbalance?

A. The client's antenna gain is lower than the AP's antenna gain
B. The client's transmit power is significantly lower than the AP's transmit power
C. The AP's transmit power is significantly lower than the client's transmit power D. The AP's antenna gain is lower than the client's antenna gain

Answer: B

Explanation:

Question: 103

You are on site, planning a network at a freight shipping company on a busy harbor. Since the preliminary WLAN design specifies support for the 5
GHz spectrum, you would like to test for radar pulses to determine if DFS channels should be supported at this facility. As a part of your spectral
survey with a laptop-based analyzer, you include DFS testing to identify the presence of radar. This is done by manually observing Real-time FFT,
Duty Cycle, and Active Devices charts of the spectrum analyzer software.
What potential drawback is present with this DFS test method?

A. Many WLAN products that support DFS channels report several false positives. Ideally, the actual WLAN equipment used in the deployment should be used to test for DFS.
B. Some sources of 5 GHz radar, such as military ships, are mobile in nature. A longer, automated test setup should be used to identify the presence or absence of radar.
C. Manual identification of radar pulses using spectrum analysis charts can be very difficult due to radar's low amplitude at the Wi-Fi receiver.
D. Modern spectrum analyzer adapters do not provide the necessary bandwidth resolution required to detect and measure radar signatures.

Answer: C

Explanation:

Question: 104

When performing an indoor predictive site survey to make the WLAN planning and design cycle more efficient, what is a best practice for configuration of the simulated APs in the predictive modeling software?

A. All simulated APs should be set to 20 MHz channels only.
B. Always use the default 2.2 dBi omnidirectional antenna patterns for simulated APs.
C. If dynamic RRM will be used, AP transmit power should be set to an estimated average level of the expected client devices, such as 25 mW.
D. Defining custom AP and antenna patterns will yield more accurate prediction data than the preconfigured vendor AP/antenna combinations.

Answer: C

Explanation:

Question: 105

What action should be taken after implementing a WLAN based on the design developed from the site survey process?

A. Post-installation survey
B. Requirements analysis
C. Gathering facility documentation
D. Design the infrastructure services

Answer: A

Explanation:

Question: 106

When preparing a floor plan graphic for use in predictive and manual site surveying, what calibration method will lead to the most accurate and reliable RF data?

A. Use the known size of a small object, such as a ceiling tile, and use a single instance of this object (e.g. a single ceiling tile) to scale the floor plan.
B. Measure the width of an actual office doorway with a tape measure and use this value to calibrate against a doorway graphic.
C. Use the longest available measurement (like a straight exterior wall) to calibrate the graphic's scale.
D. Calibrate the ceiling height of the floor plan first, then the survey software should be able to auto-

calibrate the X and Y planes of the graphic.

Answer: C

Explanation:

Question: 107

While configuring your site survey software for an upcoming manual survey project, you notice the configuration option for "Network Card
Simulation". What is the purpose of such a feature and when would you use it?

A. This setting allows the site survey software to convert the APs measured downlink RF data into a simulated data set as if the same data
were transmitted by a specific client station. It is useful for determining uplink client performance when clients are located far from APs as well as projecting cell size for ad hoc networks.
B. Since WLAN adapters are not typically calibrated by manufacturers, this setting is a form of software calibration in which you can calibrate
an (uncalibrated) adapter to match one of the calibrated adapters shown in the list. This process improves the reliability of RF data collection and reporting when uncalibrated adapters are used.
C. This is the configuration area in which you specify the adapter type that will be used for the site survey so that the survey software can
interpret that adapters reported metrics (based on proprietary formulas) into an RF measurement that is standardized by the survey software and known to its users. This is done

Answer: A

Explanation:

Question: 108

A wireless engineer from your company performed a site survey in an office building where a wireless network extension was needed. He reports
that while performing a Layer 1 sweep near a meeting room full of people, he detected RF activity with a very low duty cycle. He is unsure how to
interpret what he recorded to determine its impact on a future Wi-Fi network.
What is true about this RF environment and its potential impact on the WLAN?

A. The signal affects the entire spectrum and will render the wireless network unusable. It must be located and removed.
B. The signal has a low duty cycle and should not be of major impact on the wireless network.
C. The signal is alternating between peaks (high interference level) and valleys (low interference level). The network channel design must be
built to avoid the affected peak frequencies.
D. The signal is typical of a high radio card background noise. It shows that the card used for the Layer 1 sweep should be replaced and the
Layer 1 sweep re-

Answer: B

Explanation:

Question: 109

What is the meaning of a Real Time FFT graph?

A. Real Time FFT means Real Time First Fundamental Trace and shows the value of the first signal detected on each frequency at each sweep interval.
B. Real Time FFT means Real Time Fast Frequency Timing and shows the RF pulses measured by the Layer 1 sweep tool.
C. Real Time FFT means Real Time Fast Fourier Transform and shows the max value of the signal detected on each frequency in real time.
D. Real Time FFT means Real Time Frequency Fundamental Texture and shows the value of the noise background generated by the card used to perform the
E. Real Time FFT means Real Time Fast Fourier Transform and shows the max value of the signal detected on each frequency in real time.

Answer: C

Explanation:

Question: 110

In a PC-based spectrum analyzer, what data chart identifies the overall RF utilization of a specific frequency in the environment being surveyed?

A. FFT Max Hold
B. FFT Average
C. Swept Spectrogram
D. Duty cycle

Answer: C

Explanation:

Question: 111

Given: In a site survey deliverable report, you are expected to explain the spectrum measurements taken at the customers site. What portion of a
spectrum analyzer view can be used to determine if a given channel is too active for use as the active channel for a new AP?

A. Device list
B. Frame decode
C. Real time FFT

D. Duty cycle

Answer: D

Explanation:

Question: 112

You are testing a VoWLAN deployment, and your communication measurements show a certain amount of lost packets. What would be an acceptable packet error rate value to still provide acceptable call quality?

A. There should be 0% error in a VoWLAN type of deployment
B. No more than 1%PER max should be acceptable
C. No more than 4%PER max should be acceptable
D. No more than 8%PER max should be acceptable

Answer: D

Explanation:

Question: 113

You are site surveying a network for VoWiFi. You have positioned an AP for a manual survey and are moving away from the AP with a phone in Survey Mode in your hand and you are reading the RSSI value of the signal received from the AP. You have previously determined that the noise floor was approximately -94 dBm on this floor of the building. The phones documentation does not specify a recommended RSSI or SNR value for best performance.
Based on the information provided and the type of device (VoWiFi phone) you are deploying, what minimum RSSI should you plan for in all areas you are monitoring and where VoWiFi service is desired?

A. - 75 dBm
B. - 72 dBm
C. - 67 dBm
D. - 62 dBm

Answer: C

Explanation:

Question: 114

What statement is true of a WLAN design that supports Real-Time Location Services (RTLS) with 802.11 RFID asset tags?

A. When passive tags are implemented, the AP density should be increased by 25% to make up for the shorter transmit range of passive tags as compared to active tags.

B. Active RFID tags periodically transmit 802.11 beacon management frames that must be synchronized with the AP for proper location of the tagged asset.

C. With passive tags, AP transmit gain should be increased to supply extra power for near-field coupling or backscatter modulation from the tag to the AP since the passive tag lacks an internal power source.

D. Passive tags do not communicate directly with the WLAN infrastructure, but instead they rely on the tag reader to communicate tag information to the

Answer: D

Explanation:

Question: 115

In this question, you will compare the mobility processes of a network that supports WPA2-Personal and WPA2-Enterprise. Assume the use of a 15-character ASCII passphrase for WPA2-Personal and EAP-TTLS/MSCHAPv2 with WPA2-Enterprise. Also, assume that proprietary roaming protocols are not supported.

When a device transitions from one BSS to another within the same ESS, what step must be performed in the WPA2-Enterprise transition that are not performed in the WPA2-Personal transition?

A. Open System Authentication

B. 802.11 Reassociation

C. 802.1X authentication

D. 4-Way Handshake

Answer: C

Explanation:

Question: 116

ABC Manufacturing has a heavily-used dual-band (2.4 / 5 GHz) WLAN, but sporadic RF interference across the 2.4 GHz band is causing dropped VoWiFi calls and leading to data connectivity and throughput problems.

In addition to avoiding 2.4 GHz channels and installing a distributed spectrum analyzer to locate RF interference sources, what should the implementer do to resolve the problem fully?

A. Have only guest access on the 5 GHz channels.

B. Move all corporate data clients and VoWiFi devices to the 5 GHz channels appropriate for their regulatory domain.

C. Use captive portals for guest authentication in 5 GHz.
D. Implement WPA-PSK everywhere in the network.

Answer: B

Explanation:

Question: 117

When you see the SKINNY protocol in a post-install validation protocol capture, what does this indicate?

A. Secure FTP is in use
B. VoIP is used on the network
C. HTTPS is in use
D. Multicasting is used on the network

Answer: B

Explanation:

Question: 118

During a post-deployment verification, you are requested to troubleshoot an area where users are experiencing poor throughput. They are using
data communication only, mainly from laptops. You captured the frame showing an incorrect FCS.
This frame is typical of those that were
captured by the analyzer.
What does this frame reveal about the RF network in this area?

A. One station seems to be streaming video, thus may have reserved significant bandwidth via admission control
B. Contention Free is in place in this network, which may starve some non-QoS stations from access
C. Multipath or excessive collisions seem to be an issue in this area
D. The AP seems to be too far to provide enough coverage to this area

Answer: C

Explanation:

Question: 119

Excessive uplink RTP frame retransmissions can result in

A. Deauthentication of the transmitter by the receiver
B. Lowering of the data transmission rate by the transmitting station
C. MOS scores in excess of 5
D. Head-of-Line blocking at the receiver

Answer: B

Explanation:

Question: 120

When designing a WLAN to support voice in a large office, which design element is of the highest concern for performance?

A. Frequency Selection
B. Roaming
C. AP vendor
D. Band steering

Answer: B

Explanation:

Question: 121

What is the minimum PoE budget needed on a switch to support 6 (six) APs that can only be powered using IEEE 802.3at if no other details are provided?

A. 320 W
B. 60 W
C. 180 W
D. 240 W

Answer: C

Explanation:

Question: 122

In high-density environments, such as stadiums and convention centers, what extra factor has to be taken into account that can attenuate Wi-Fi
signals when these environments are having an event?

A. Thick walls
B. I-Beams
C. People
D. Fire doors

Answer: C

Explanation:

Question: 123

What document is typically created to launch a project?

A. Bill of Materials
B. Project Charter
C. Work Breakdown Structure
D. Budget

Answer: B

Explanation:

Question: 124

Your new customer is concerned about maintaining privacy for their proprietary information when you conduct information gathering for their WLAN design. Which document can you use to directly address their concern?

A. NDA
B. SoW
C. BoM
D. Hold Harmless

Answer: A

Explanation:

Question: 125

Your customer is using PSK as their only authentication. They have an industry requirement to move to a stronger solution. Your recommendation is to move to a certificate-based type of authentication where both the client and server require certificates. Which EAP type would be the best fit?

A. EAP-FAST
B. EAP-TTLS
C. EAP-TLS
D. PEAP

Answer: C

Explanation:

Question: 126

A company wants to connect its headquarters to its remote office that is 13 kilometers away using a wireless bridge. What requirement must not be forgotten by their Wireless Engineer when considering the Fresnel Zone?

A. Earth bulge
B. Antenna gain
C. FSPL
D. Receive sensitivity

Answer: A

Explanation:

Question: 127

You are conducting a physical site survey where heavy machinery is repaired. What is a common item required specifically for this type of survey?

A. Personal Protective Equipment (PPE)
B. Low gain antennas
C. Low power APs
D. Indoor APs

Answer: A

Explanation:

Question: 128

A business traveler from North America is in Europe. The hotel only provides coverage in 2.4 GHz. The traveler connects to the hotel's SSID and notices an AP in the hotel room. However, the laptop reports a very low RSSI when connected. The traveler does not have the same problem when connecting in the lobby. What would be the most likely cause of the low RSSI in the hotel room?

A. The AP in the room is using ZigBee instead of Wi-Fi.
B. The AP in the room is transmitting on channel 13 and the traveler associated to a non-channel 13 AP located elsewhere.
C. The switchport that the AP is connected to is only capable of transmitting at 10 Mbps.
D. The AP in the room is using Bluetooth instead of Wi-Fi.

Answer: B

Explanation:

Question: 129

A museum wants to offer Wi-Fi to its visitors. One of their requirements is to have the APs blend into the design of the museum. What should you do to meet this requirement?

A. Lock the AP inside of a metal box
B. Place the APs in between walls and I-beams
C. Use an 802.11b AP, so it looks old enough to be in a museum
D. Use a plastic cover that could blend in with the environment

Answer: D

Explanation:

Question: 130

An engineering firm just upgraded their WLAN form nine 802.11n APS to nine 802.11ac APs. After this upgrade, they did not see any improvement in throughput.
What is the most likely cause of this result?

A. APs are transmitting at a low transmit power
B. The clients were not upgraded
C. APs are mounted on the wall
D. The APs are still using the 5 GHz lower band

Answer: B

Explanation:

Question: 131

You and 10 other people are connected to a public hot-spot. You issue a ping sweep on the network, but you can't find any devices on the same subnet as yours.
What feature might be enabled on the WLAN infrastructure that is preventing you from communicating with other devices on that subnet?

A. Peer-to-peer blocking
B. OSPF external routes
C. Band steering
D. Load balancing

Answer: A

Explanation:

Question: 132

During an RFP analysis, one of the vendors mentioned that you'll need to upgrade your Gigabit Ethernet switches to MultiGig switches to ensure support for 802.11ac and 802.11ax, which both offer data rates over 1Gbps. Why is this not sound advice?

A. Because neither of the technologies support data rates over 1Gbps
B. Because 802.11ax doesn't support channel bonding
C. Management overhead that is normal in WLANs will reduce the throughput of the client devices
D. Because 802.11ac only supports one spatial stream

Answer: C

Explanation:

Question: 133

A customer is acquiring a new VoWLAN system to replace their existing wired phone system. When reading about his system's requirements, you learned that is requires 25 db of SNR to work as expected. After surveying the environment, you discovered that the noise floor is -88 dBm. What should be the minimum RSSI value to meet the system's requirements?

A. -70 dBm
B. -67 dBm
C. -65 dBm
D. -63 dBm

Answer: D

Explanation:

Question: 134

You're about to deploy an Enterprise-class VoWLAN infrastructure. You need to ensure that QoS is properly configured throughout the network.
What Access Category (AC) should voice frames/packets use?

A. AC_VI
B. AC_VO
C. AC_BE
D. AC_BK

Answer: B

Explanation:

Question: 135

After importing a floor plan to a predictive design tool, what should be done prior to adding APs, antennas and attenuators (e.g., walls)?

A. Set the transmit power for all APs
B. Add pictures of the environment
C. Nothing; just begin by adding APs, antenna and attenuators
D. Calibrate the floor plan to increase accuracy

Answer: D

Explanation:

Question: 136

Your customer's 802.11n laptops are not able to see the SSID in the 5 GHz band in the conference room. When doing a walkthrough using one of these laptops, you confirm that it is unable to see the SSID in the 5 GHz band in the conference room. When using your own 802.11 ac laptop, you're able to see the SSID. What is the most likely cause of this problem?

A. The AP is configured to use channel 36
B. The customer laptop does not support Transmit Beamforming
C. The AP is on channel 144
D. Their laptops are SISO clients

Answer: C

Explanation:

Question: 137

When designing a static channel plan for an office using voice devices near an airport, which range of channels should be avoided to ensure optimal performance when implemented?

A. 36-40
B. 44-48
C. 116-124
D. 1-11

Answer: C

Explanation:

Question: 138

What is the most suitable antenna option to be used when designing a WLAN infrastructure with APs mounted on a ceiling with a height of more than 20 feet and having all of the client stations used from the floor?

A. Patch
B. Dish
C. Grid
D. Low-gain dipole

Answer: A

Explanation:

Question: 139

When using a predictive design tool, you have selected APs with an antenna gain 3 dBi and set the transmit power of the predicted APs to 25 mW.
What should be EIRP of the APs in the design?

A. 11 dBm
B. 6.25 mW
C. 125 mW
D. 17 dBm

Answer: D

Explanation:

Question: 140

Switches and APs have already been chosen by your customer. All switches support 802.3bz MultiGig interfaces and APs are 4x4:4 802.11ac wave 2 capable of using dual-5GHz and have one MultiGig interface. Some cable drops for the APs will run for more than 180.5 feet (or 55 meters). To support MultiGig, what is the best choice of cabling?

A. Cat-5
B. Cat-6
C. Cat-5e
D. Cat-6a

Answer: D

Explanation:

Question: 141

When surveying an existing WLAN infrastructure for a possible redesign, you use two Wi-Fi USB adapters to collect RSSI data and two USB
spectrum analysis adapters to collect RF spectrum dat
a. Since your laptop doesn't have enough USB ports, you use a 4-port powered USB 3.0 hub.
What issues could be caused by the use of USB 3.0 that will impact your site survey?

A. It does not give you enough bandwidth to collect data coming from all of the adapters.
B. It does not give you enough power for all four of your adapters.
C. It generates noise in the 2.4 GHz band, giving you a false perception of the noise floor.
D. It generates noise in the 5 GHz band, giving you a false perception of the noise floor.

Answer: C

Explanation:

Question: 142

What is the most cost-effective way to accurately measure the height of a ceiling when ladder use is not allowed?

A. Estimate the height based on known object sizes
B. Gather measurements from other objects and do the math
C. Rent a lift-cart to lift you up to the ceiling
D. Use a laser measure to measure the distance from the floor to the ceiling

Answer: D

Explanation:

Question: 143

You performed a site survey with two USB Wi-Fi adapters using a special driver written for the site survey software. After deployment, you realized
that the client devices used by your customer are getting lower RSSI values than that shown during your site survey. What is the most likely reason for this result?

A. USB Wi-Fi adapters designed for site surveys may have better sensitivity than regular Wi-Fi cards installed in client devices.
B. The transmit power on the APs is higher than needed.
C. Regular Wi-Fi cards installed in client devices do not support the same protocols as survey adapters.
D. USB Wi-Fi adapters have a greater sensitivity than internal Wi-Fi adapters.

Answer: A

Explanation:

Question: 144

When performing an active site survey in an existing WLAN infrastructure, in addition to gathering throughput data, what other important function will you typically be testing at the same time?

A. Application filtering
B. Internet bandwidth
C. Roaming
D. ACL configuration

Answer: C

Explanation:

Question: 145

Why should band steering algorithms allow stations to connect to the 2.4 GHz band after some number of ignored Probe Requests?

A. Because the FCC requires it.
B. Because some clients are persistent clients that will not move on to the 5 GHz band.
C. Because the 802.11 standard requires it.
D. Because the AP will experience a buffer overflow if they do not eventually respond with a Probe Response.

Answer: B

Explanation:

Question: 146

After designing a WLAN infrastructure using predictive design software. What's the best way to validate the predictive design in the physical space before deployment, if time and budget allow for it?

A. Deploy all of the APs as they're shown in the predictive design and perform an active site survey. B. Deploy all of the APs as they're shown in the predictive design and perform a passive site survey. C. Use a client device positioned where the APs will be installed and measure the signal from the client device.
E. Perform an AP-on-a-Stick survey using AP locations based upon the predictive design to confirm each AP's placement.

Answer: D

Explanation:

Question: 147

Your customer requires a security solution in which client credentials are used and the authentication server must have a certificate with optional client certificate use. Which EAP method would be the best fit for their requirement?

A. EAP-FAST
B. EAP-TTLS
C. EAP-TLS
D. LEAP

Answer: C

Explanation:

Question: 148

Your customer requires fast secure roaming. Which two types of roaming are specified in 802.112016 FT roaming that will help meet this goal?

A. Over-the-Air and Over-the-DS
B. Over-the-Air and Over-the-Wire
C. FT and OKC
D. FT and TKIP

Answer: A

Explanation:

Question: 149

What advantage provided by 802.11n and 802.11ac is not usable in 1X1:1 low-end client devices?

A. Channel bonding
B. MCS data rates
C. Maximal Ratio Combining
D. Mandatory data rates

Answer: C

Explanation:

Question: 150

When deploying APs outdoors, what additional component needs to be used that is not needed indoors?

A. Antennas
B. NEMA enclosures
C. Ethernet cables
D. PoE

Answer: B

Explanation:

Question: 151

Which document provided to your customer should include all devices and parts that are going to be used during the deployment of their WLAN infrastructure?

A. SoW
B. BoM
C. Design report
D. Project plan

Answer: B

Explanation:

Question: 152

What limitation exists when WMM is not enabled on an 802.11n WLAN?

A. 802.11 QoS will not be available
B. The maximum channel-width will be 20MHz
C. EDCA values will change
D. Only two ACs will be available

Answer: A

Explanation:

Question: 153

Using a SCA means that all APs will be using the same channel in a given layer. How is the AP with which the client associates determined?

A. All APs share a virtual IP address. A controller will tell the closest AP to the client to communicate with it, since it has a greater RSSI from the client.
B. All APs share a virtual Multicast Address. A controller will tell the closest AP to the client to communicate with it, since it has a greater RSSI from the client.
C. All APs share a virtual BSSID. A controller will tell the closest AP to the client to communicate with it, since it has a greater RSSI from the client.

D. The client selects the AP based on a known set of MAC to BSSID mappings stored in the clients authorized SSID listing.

Answer: A

Explanation:

Question: 154

What service must be implemented on your customers' network to authenticate users against an LDAP database prior to access to the WLAN infrastructure being granted?

A. NTP
B. RADIUS
C. SFTP
D. TLS

Answer: B

Explanation:

Question: 155

What is the best method of gathering attenuation measurements from any building materials or objects?

A. After measuring the RSSI in free space 5 meters (16.5 feet) apart, put an AP 4 meters (13 feet) away from the wall or object on one side and your measuring device 0.67 meters (2 feet) away from the wall or object on the other side. Take measurement and compare the difference.
B. Use the pre-built attenuation values in the predictive design tool.
C. After measuring the RSSI in free space 1 meter (3 feet) apart, put an AP 0.32 meters (1 feet) away from the wall or object on the other side. Take measurements and compare the difference.
D. Look on the Internet for attenuation values for each one of the materials that might attenuate the Wi-Fi signal using the material provider's websites.

Answer: A

Explanation:

Question: 156

Which type of authentication and encryption method is mandatory for Voice Enterprise certified devices as specified by the Wi-Fi Alliance?

A. WPA2/AES Personal
B. WPA2/TKIP Enterprise
C. WPA2/AES Enterprise
D. WPA/TKIP Personal

Answer: C

Explanation:

Question: 157

What document should be created that provides instructions for install technicians to mount and configure APs?

A. Hold Harmless
B. Statement of Work
C. Bill of Materials
D. Physical installation guide

Answer: D

Explanation:

Question: 158

In addition to a copy of your design, which tools should you use to ensure the installation team deploys APs where you have them designed to be located?

A. GPS and a map
B. RF spectrum analyzer and packet capturing software
C. Ladder and a pen
D. Camera and marking tools

Answer: D

Explanation:

Question: 159

When installing APs on high ceilings, what should be the most common PPE to be used?

A. Hardhat, high visibility vest and body belt
B. Glasses, gloves and jacket
C. Clean suits, masks and glasses
D. Clean suits, gloves and jacket

Answer: A

Explanation:

Question: 160

You're preparing to perform a site survey for a company that processes meat. Some areas are restricted due to high-security. What do you have to do in order to proceed with the site survey?

A. Gain appropriate access and clearance to perform the site survey.
B. Gain meat processing access certification from the FDA.
C. Ensure that you and your team are using food industry approved USB adapters for the survey.
D. Just begin the survey, they will understand

Answer: A

Explanation:

Question: 161

Which DHCP option, when required, should be configured and enabled to help APs locate their wireless LAN controller?

A. 150
B. 62
C. 43
D. 22

Answer: C

Explanation:

Question: 162

When deploying a new WLAN infrastructure using PoE to power the APs, you realize that a known good AP is not powering up. You use the same cable to connect your laptop and connect without any trouble. What is the most likely reason the AP did not power up?

A. Missing AP licenses in the controller
B. Spanning-tree convergence
C. Layer 3 routing
D. Lack of PoE budget on the switch

Answer: D

Explanation:

Question: 163

During your first pre-deployment meeting with the deployment team, you hand out the full design documentation to all of them. What's your

primary goal during this meeting?

A. To explain design decisions and ensure understanding of design documents.
B. To discuss AP functionality.
C. To explain how Wi-Fi works.
D. To justify the budget.

Answer: A

Explanation:

Question: 164

A controller-based WLAN infrastructure has its controller on a different subnet than its APs. What device must be used to enable any communication between the
Controller and the APs?

A. NTP server
B. Router
C. PoE Layer 2 switch
D. Wireless bridge

Answer: B

Explanation:

Question: 165

In what circumstance would you not enable DFS channels on a WLAN infrastructure?

A. In any stadium
B. In any office complex
C. In an airport
D. In any home office

Answer: C

Explanation:

Question: 166

Aesthetics are very important in some environments. What common installation technique can be used to best meet this requirement in a stadium?

A. Painting to match team colors
B. Using enclosures under the seats or on hand-rails
C. Mounting on a non-fixed pole
D. Mounting on the walls

Answer: B

Explanation:

Question: 167

What kind of site survey helps you identify if roaming is working as designed?

A. Passive
B. Predictive
C. Active
D. Spectrum analysis walkthrough

Answer: C

Explanation:

Question: 168

When doing some frame capturing over the air during a voice call, you realized that frames on the downlink (from the AP to the client) direction are not being transmitted with the correct UP value for voice frames, but on the uplink (from the client to the AP) direction are being transmitted correctly. What's the cause of this issue?

A. Bad client driver
B. AP is not receiving enough PoE, thus not using QoS features
C. Somewhere on the wired network QoS markings aren't being trusted
D. Faulty antenna on the AP

Answer: C

Explanation:

Question: 169

You are validating association capabilities from clients to an 802.1X/EAP secure SSID. The RADIUS server's IP address is

10.100.50.25 and the
default RADIUS authentication port is used. When testing them, none of the clients are able to associate to the SSID. Troubleshooting the WLAN
infrastructure, you found out that the server is up and the RADIUS service is up as well, but the
authenticator is not able to communicate properly
with the server. What's your next troubleshooting step?

A. Verify that the shared secret between the authenticator and the RADIUS server is correct
B. Reboot the clients
C. Reboot the server
D. Restart the RADIUS service

Answer: A

Explanation:

Question: 170

During lunch time in the break room of a company, Wi-Fi connectivity on the 2.4 GHz band is intermittent. Every other time of the day, it works fine.
What's the likely cause of this issue?

A. Employees are using their cell data instead of using the Wi-Fi
B. The AP in the cafeteria keeps rebooting due to lack of PoE budget on the switch
C. Toasters and ovens are heating up the air, raising the noise floor with the Wi-Fi on the 2.4 Ghz band
D. Microwaves in the cafeteria are interfering with the Wi-Fi on the 2.4 GHz band

Answer: D

Explanation:

Question: 171

After deploying a 5 GHz-only WLAN infrastructure in the USA, using 20 MHz channel-widths and all 25 available channels, one of the managers of
the company brings his 802.11n tablet to the office to test the Guest SSID. While testing, there were several spots where we would get poor RSSI
(below -80dBM) or none at all. You checked the WLAN infrastructure and all APs are up and running and you've validated coverage after deployment. What is causing this issue?

A. His tablet doesn't support the 5 GHz band
B. His tablet only supports a 40 MHz channel-width
C. His tablet does not support one or more of the 5 GHz channels
D. His tablet doesn't support MU-MIMO

Answer: D

Explanation:

Question: 172

After designing and deploying a WLAN infrastructure, you realized the CCI is causing poor performance in the 2.4 GHz band. Primarily, you've designed the WLAN for 5 GHz and 2.4 GHz as a best effort. You found out that the implementers didn't follow your guidelines when configuring the WLAN infrastructure. What can you do to minimize as much as possible the CCI impact in the 2.4 GHz band?

A. Add more APs to the infrastructure
B. Increase the transmit power on all APs
C. Turn-off 2.4 GHz radios on some APs
D. Use all channels available in the 2.4 GHz band

Answer: C

Explanation:

Question: 173

You have performed a validation site survey after deploying a WLAN infrastructure that is an AllWireless-Office. One specific application of your customer is experiencing delay when using the application after moving from wired connectivity. After your validation, you realized that all APs are using 80 MHz channel- widths instead of 20 MHz on the 5 GHz band, as it was designed. What can be done to resolve the delay on this application?

A. APs should be using 160 MHz channel-widths to get more throughput
B. Reconfigure to use 20 MHz channel-widths, so reuse of the frequency is more effective
C. Power-off half of the APs to reduce CCI and keep 80 MHz channel-widths
D. Add more APs using 80 MHz channel-widths

Answer: B

Explanation:

Question: 174

What are the deliverables to your customer after successfully implementing a WLAN infrastructure?

A. Digital or physical assets, guides, floorplans and configuration documents
B. Project Charter
C. Facility blueprints

D. Nothing is required. The implemented WLAN was deliverable

Answer: A

Explanation:

Question: 175

Who should be in the final meeting from the customer-side after successfully implementing a WLAN infrastructure?

A. CEO or CFO
B. End-users
C. The customer's customers
D. Remote workers

Answer: B

Explanation:

Question: 176

During a validation site survey, you realize that the installers mounted some of the APs above the ceiling. They said that this was a request from the building architect due to aesthetics constraints. During the requirements gathering, you weren't advised about any aesthetics constraints from the main stakeholder of the project. What should you do in this case?

A. Advise the stakeholder that WLAN performance requirements will not be met and a new design process will be needed to meet the requirements.
B. Leave it as it is and allow automatic channel management to correct any issues.
C. Increase the output power on all APs by 6 dB immediately.
D. Remove all external antennas and use only the internal antennas to reduce multipath.

Answer: A

Explanation:

Question: 177

While performing a validation site survey, you realize that overlapping channels are being used on the 2.4 GHz bad due to the automatic channel assignment algorithm of the WLAN infrastructure. What should you do to prevent this?

A. Reconfigure the automatic channel assignment settings to use only channels 1, 6, and 11
B. Purchase and deploy new APs from a different vendor
C. Reconfigure the network to use static channel plans because automatic channel assignment

algorithms are all broken

D. Leave it as it is; sometimes using all 11 channels in 2.4 GHz gives the optimum performance result

Answer: A

Explanation:

Question: 178

In a convention center, you have received complaints about the WLAN infrastructure. At this moment, the are only two APs in one auditorium. After analyzing the situation, you determined that there are more client devices that the infrastructure was designed for. There are only two APs to support more than 300 devices using the Wi-Fi at the same time. What should you do to make the Wi-Fi work as expected?

A. Redesign the entire WLAN
B. Quickly add more APs
C. Upgrade the Ethernet connections to MultiGig
D. Turn up the output power on the APs so that they can handle more clients

Answer: A

Explanation:

Question: 179

What might limit the ability to locate 802.11 clients using a WLAN infrastructure without an 802.11 tag?(Choose all that apply.)

A. Lack of 802.11k support
B. When its radio is disabled
C. When it is off
D. RF channel selection

Answer: B, C

Explanation:

Question: 180

While performing a validation site survey, you realize that overlapping channels are being used on the 2.4 GHz bad due to the automatic channel assignment algorithm of the WLAN infrastructure. What should you do to prevent this?
Response:

A. Reconfigure the network to use static channel plans because automatic channel assignment algorithms are all broken
B. Purchase and deploy new APs from a different vendor
C. Reconfigure the automatic channel assignment settings to use only channels 1, 6, and 11

D. Leave it as it is; sometimes using all 11 channels in 2.4 GHz gives the optimum performance result

Answer: C

Explanation:

Question: 181

Which of the following items could be considered constraints when performing a network design?(Choose all that apply.)
Response:

A. Timeline
B. Personnel
C. Politics
D. Budget

Answer: A, B, C, D

Explanation:

Question: 182

As a device starts to shift to lower PHY rates, what factors usually influence a device decision to shift to lower PHY rates?(Choose all that apply.)
Response:

A. Signal degradation
B. Packet loss
C. Interference
D. Retransmissions

Answer: A, B, C, D

Explanation:

Question: 183

Before performing a pre-deployment passive RF survey of a new deployment using survey mapping software, which of the following must be performed?

Response:

A. Determining AP transmit power
B. Scaling the map

C. Selecting antennas
D. Checking client DTPC settings

Answer: B

Explanation:

Question: 184

What type of standards-based encryption is used by office extension APs for the traffic tunnel?(Choose all that apply.)
Response:

A. CAPWAP
B. LWAPP
C. TKIP
D. AES
E. DTLS

Answer: AE

Explanation:
CAPWAP and DTLS are the type of standards-based encryption used by office extension APs for the traffic tunnel. Office extension APs are wireless access points that can be deployed in remote locations and connect to a central wireless controller via a secure tunnel over the Internet. CAPWAP is the Control and Provisioning of Wireless Access Points protocol, which defines how the wireless controller and the office extension APs communicate and exchange control and data messages. DTLS is the Datagram Transport Layer Security protocol, which provides encryption and authentication for the CAPWAP tunnel. DTLS is based on TLS, but it uses UDP instead of TCP as the transport layer protocol, which makes it more suitable for real-time applications. DTLS protects the CAPWAP tunnel from eavesdropping, tampering, and replay attacks, and ensures the confidentiality and integrity of the wireless traffic. Reference: CWNP, CWDP Certified Wireless Design Professional Official Study Guide, Configure OEAP and RLAN on Catalyst 9800 WLC, Hardening Microsoft 365, Office 2021, Office 2019 and Office 2016

Question: 185

What functions may be performed by a WIPS?(Choose all that apply.) Response:

A. Distributed protocol analysis
B. Client access to the distribution system
C. Performance monitoring and response
D. Data forensics and analysis
E. Automated threat mitigation

Answer: A, C, D, E

Explanation:

Question: 186

In your company's WLAN, you expect to have a mixed client PHY environment and plan to use protection mechanisms. The protection mechanism used by your client devices is configurable. What is the best protection mechanism for backward compatibility of 802.11n devices with 802.11b devices?

Response:

A. WMM Protection
B. SMPS
C. CTS-to-Self
D. Dual-CTS
E. RTS/CTS

Answer: E

Explanation:

RTS/CTS is the best protection mechanism for backward compatibility of 802.11n devices with 802.11b devices because it prevents collisions and interference between different modulation types. 802.11n devices use OFDM, while 802.11b devices use DSSS. These two modulation types are not compatible with each other, but they can coexist in the same environment if they use protection mechanisms to avoid overlapping transmissions. RTS/CTS is a protection mechanism that requires a station to send a Request to Send (RTS) frame before transmitting data, and wait for a Clear to Send (CTS) frame from the receiver or the access point. The RTS and CTS frames are sent at a clause 15 (DSSS) or clause 18 (HR/DSSS) rate, which can be understood by both 802.11n and 802.11b devices. The RTS and CTS frames also contain a duration field that indicates how long the data transmission will last. This way, other stations can defer their transmissions until the channel is clear. RTS/CTS reduces the chances of collisions and hidden node problems, and improves the performance and reliability of the wireless network. Reference: CWNP, CWDP Certified Wireless Design Professional Official Study Guide, How 802.11n backward compatibility works

Question: 187

A table of VLANs in a document should include what device performs services.(Fill in the blanks)

Response:

A. HLD, routing
B. LLD, bridging
C. LLD, routing
D. HLD, QoS

Answer: C

Explanation:

Question: 188

A business traveler from North America is in Europe. The hotel only provides coverage in 2.4 GHz. The traveler connects to the hotel's SSID and notices an AP in the hotel room.

However, the laptop reports a very low RSSI when connected. The traveler does not have the same problem when connecting

in the lobby.
What would be the most likely cause of the low RSSI in the hotel room?
Response:

A. The AP in the room is transmitting on channel 13 and the traveler associated to a non-channel 13 AP located elsewhere.
B. The AP in the room is using Bluetooth instead of Wi-Fi.
C. The AP in the room is using ZigBee instead of Wi-Fi.
D. The switchport that the AP is connected to is only capable of transmitting at 10 Mbps.

Answer: A

Explanation:

Question: 189

During lunch time in the break room of a company, Wi-Fi connectivity on the 2.4 GHz band is intermittent. Every other time of the day, it works fine. What's the likely cause of this issue? Response:

A. Employees are using their cell data instead of using the Wi-Fi
B. The AP in the cafeteria keeps rebooting due to lack of PoE budget on the switch
C. Microwaves in the cafeteria are interfering with the Wi-Fi on the 2.4 GHz band
D. Toasters and ovens are heating up the air, raising the noise floor with the Wi-Fi on the 2.4 Ghz band

Answer: C

Explanation:

Question: 190

A museum wants to offer Wi-Fi to its visitors. One of their requirements is to have the APs blend into the design of the museum. What should you do to meet this requirement?
Response:

A. Use a plastic cover that could blend in with the environment
B. Lock the AP inside of a metal box
C. Place the APs in between walls and I-beams
D. Use an 802.11b AP, so it looks old enough to be in a museum

Answer: A

Explanation:

Question: 191

An MSA commonly addresses at least which two legal categories? Response:

A. Nondisclosure agreement

B. Hold harmless
C. Intellectual property protection
D. Indemnity clause

Answer: A

Explanation:

Question: 192

For what purpose is SSID hiding generally useful?(Choose all that apply.)

Response:

A. Preventing guests from attempting to join the secured corporate network
B. Obscuring the network name from potential attackers
C. Minimizing help desk calls from users and guests attempting to join the wrong network
D. Preventing legitimate corporate users from finding the guest network

Answer: A, C

Explanation:

Question: 193

SSID hiding is not generally recommended because some frames require inclusion of the SSID. In what frames is the SSID always included?

Response:

A. Beacon
B. Association request
C. Probe response
D. Probe request
E. Authentication response

Answer: B

Explanation:

Question: 194

What is the minimum PoE budget needed on a switch to support 6 (six) APs that can only be powered using IEEE 802.3at if no other details are provided?

Response:

A. 320 W
B. 60 W
C. 180 W
D. 240 W

Answer: C

Explanation:

Question: 195

When viewing channel utilization information from a protocol analyzer, if high channel utilization is occurring, what should you ensure does not exist?
Response:

A. A high percentage of low PHY rates
B. An RF signal generator causing an RF DoS
C. High levels of workload
D. High frames per second

Answer: A

Explanation:

Question: 196

A cable with 2.5 dB of loss is used to measure the return loss of an antenn

a. The measured value in-band is shown to be larger than 20 dB. What is the actual return loss of the antenna, and is it considered to be a reasonable value?

Response:
A. Larger than 15 dB and yes
B. Larger than 15 dB and maybe
C. Larger than 17.5 dB and yes
D. Larger than 17.5 dB and no

Answer: A

Explanation:

Question: 197

What statements are true regarding jitter and latency?(Choose all that apply.)
Response:

A. Jitter is a measurement of latency variability from one frame to another.
B. Jitter is a measurement of the variance of the number of frames received from an application for a specific time interval.
C. Jitter is a measurement of average latency based on a sample of >100 frames.
D. Latency is a measurement of the time delay experienced in the delivery of a frame.
E. Latency is a measurement of the time required to transmit two subsequent frames.

Answer: A, D

Explanation:
Jitter and latency are two important metrics for measuring the quality and performance of wireless networks, especially for real-time applications such as voice and video. Latency is the average time taken for a data packet to reach the destination, while network jitter is the irregularity in latency. When the latency is consistently high, it can mean a slow but stable connection. On the other hand, a high jitter means there may be sporadic disruptions or delays in the transmission, which can affect the quality of service and user experience. Jitter is caused by various factors, such as network congestion, interference, routing changes, hardware issues, or packet prioritization. Jitter can be measured by calculating the difference between the latency of two consecutive packets, or by using the standard deviation of the latency of a sample of packets. Jitter can be reduced by using Quality of Service (QoS) mechanisms, such as traffic shaping, queuing, or scheduling, which can prioritize the packets based on their importance and sensitivity to delay. Jitter can also be mitigated by using jitter buffers, which can store the incoming packets and smooth out the variations in latency before delivering them to the application. Reference: CWNP, CWDP Certified Wireless Design Professional Official Study Guide, Network Jitter - Common Causes and Best Solutions, Network Jitter vs Latency: What's the Difference and Why Does It Matter, Jitter vs Latency - What's The Difference and Why it Matters

Question: 198

For what purposes are VPNs typically used in modern WLANs?(Choose all that apply.) Response:
A. Remote AP tunneling to a corporate WLAN controller or VPN concentrator
B. Client device connectivity to corporate resources from unsecured public networks
C. Initial 802.11 authentication with the AP and subsequent data encryption
D. Tunneling APs and WLAN controllers to cloud-based management platforms
E. Tunneling APs and WLAN controllers to RADIUS and token servers
F. Bridging client connectivity in ad hoc networks

Answer: A, B

Explanation:

Question: 199

What differences exist between VLANs in wireless and wired domains?
Response:
A. Wireless VLANs are not effective for segmenting the available services and network permissions available to clients. Wired VLANs are effective for this purpose.
B. Wireless VLANs are never carried in 802.11 frames that cross the wireless medium. VLAN identifiers are always carried in Ethernet frames to indicate the proper VLAN.

C. Wireless VLANs do not always segment traffic into separate broadcast domains on the wireless medium. Wired VLANs do segment broadcast domains on the wired network.

D. Wireless VLANs are not an effective way to utilize a single set of infrastructure equipment to provide different services to different client groups. Wired VLANs are effective for this purpose.

Answer: C

Explanation:

Question: 200

An enterprise customer is subject to the highest standards for network uptime. When designing their wireless network, you should consider which of the following?(Choose all that apply)

Response:

A. The failover of the wireless network only

B. The failover of the wired network only

C. The failover of the wireless and wired network

D. The physical aspects such as power and cabling

Answer: C, D

Explanation:

Question: 201

Four buildings are located in a square orientation to each other. Fisch Stix Food Company is requesting a PtMP link between the buildings. On the building with the root bridge link, what type of antenna is the best choice?

Response:

A. Vertically polarized omni

B. 60° yagi

C. Parabolic dish

D. 100° sector

E. Horizontally polarized omni

Answer: D

Explanation:

Question: 202

What are some common problems with short (12 or fewer characters) ASCII passphrases in WPA/WPA2-Personal networks?

Response:

A. They are more susceptible to dictionary attacks than longer passphrases.

B. They lead to weak group keys in a BSS.

C. They only produce a 64-bit PMK instead of a 256-bit PMK.
D. Very few AP and client vendors support entry of an ASCII-based passphrase.

Answer: A

Explanation:

Question: 203

What advantages are provided by per-user PSKs when compared with ESS-wide PSKs?(Choose all that apply.)
Response:

A. Per-user PSKs allow easier user-based access control with WPA/WPA2-Personal security.
B. Per-user PSKs are easier to manage if a PSK is compromised or an employee leaves a company.
C. Per-user PSKs are standardized and certified by the Wi-Fi Alliance.
D. Per-user PSKs are more secure than ESS-wide PSKs because they support mutual authentication.

Answer: B

Explanation:

Question: 204

Modulation can be defined as:
Response:

A. The process of incorporating a chipping code to build resilience B. The process of encoding data symbols using a carrier frequency
C. The process of modifying a carrier signal to represent data
D. The process of representing data using RF coding

Answer: C

Explanation:

Question: 205

Left to its simplest form, what method does a location algorithm use to determine location within a WLAN coverage area?
Response:

A. Inverse cube law
B. FSPL
C. RF fingerprinting
D. 802.11 clause 16

Answer: B

Explanation:

Question: 206

Which of the following is not a business requirement?
Response:

A. The new network design must improve employee productivity.
B. The new network design must cut operating expenses.
C. The new network design must make employees happy to come to work.
D. The new network design must provide support for 802.11n.

Answer: D

Explanation:

Question: 207

The thermal noise is at -174 dBm/Hz. A spectrum analyzer has a resolution bandwidth of 1 kHz and a 5 dB noise figure. What is the level of the noise floor?
Response:

A. -174 dBm
B. -139 dBm
C. -144 dBm
D. -204 dBm

Answer: B

Explanation:

Question: 208

What operational plane would a WNMS primarily interact with? Response:

A. Integration
B. Management
C. Control
D. Data
E. Distribution

Answer: B

Explanation:

Question: 209

In the enterprise, when is WPA/WPA2-Personal generally a recommended solution?(Choose all that apply.)
Response:

A. When client devices do not support 802.1X/EAP
B. When mobile device applications require high-latency roaming times between APs
C. When client devices are provisioned in bulk and would otherwise share 802.1X credentials
D. When the network security policy demands that each user have unique access credentials

Answer: A, C

Explanation:

Question: 210

How are EAP messages transported over 802.11 wireless LANS? Response:

A. EAP-Fast
B. PEAP
C. EAPOL
D. EAP_TLS

Answer: C

Explanation:

Question: 211

NicoCo is building a new facility and would like to install a WLAN for primary connectivity of all clients. The requirements are dual-spectrum 802.11n supporting voice and location tracking. What type of pre-deployment survey should be performed?
Response:

A. Passive, using optimized channels
B. Active, using a voice handset
C. Active, using a lowest common denominator client
D. Predictive
E. Passive, all channels

Answer: D

Explanation:

Question: 212

What factors are key features when designing a guest network for a large enterprise?(Choose all that apply.)

Response:

A. 802.11n
B. Rate limiting
C. 802.1X security
D. Traffic tunneling or anchoring
E. SSID segmentation

Answer: B, D

Explanation:

Question: 213

In an RSN requiring low-latency reassociations and no fast secure roaming protocols, what security solutions are ideal for protecting VoWiFi communication?(Choose all that apply.)

Response:

A. WPA2-Personal
B. WPA-Personal
C. WPA2-Enterprise
D. WEP
E. 802.1X/EAP

Answer: A, C

Explanation:

WPA2-Personal and WPA2-Enterprise are ideal security solutions for protecting VoWiFi communication in an RSN requiring low-latency reassociations and no fast secure roaming protocols. WPA2-Personal uses a pre-shared key (PSK) to authenticate and encrypt the communication between the VoWiFi device and the access point. WPA2-Enterprise uses 802.1X/EAP to authenticate the VoWiFi device and the RADIUS server, and then derives a unique encryption key for each session. Both WPA2-Personal and WPA2-Enterprise use AES-CCMP as the encryption algorithm, which provides strong security and low overhead. WPA2-Personal and WPA2-Enterprise also support key caching and pre-authentication mechanisms, which reduce the latency and disruption during reassociations. These features are essential for maintaining the quality of service and user experience for VoWiFi communication.

WPA-Personal, WEP, and 802.1X/EAP are not ideal security solutions for protecting VoWiFi communication in an RSN requiring low-latency reassociations and no fast secure roaming protocols. WPA-Personal uses TKIP as the encryption algorithm, which is less secure and more computationally intensive than AES-CCMP. WPA-Personal also does not support key caching and pre-authentication mechanisms, which increase the latency and disruption during reassociations. WEP is an outdated and insecure encryption algorithm that can be easily cracked by attackers. WEP also does not support any authentication or key management mechanisms, which expose the VoWiFi communication to various attacks. 802.1X/EAP is an authentication framework, not a security solution. 802.1X/EAP alone does not provide any encryption or key management for the VoWiFi communication. 802.1 X/EAP must be combined with a robust encryption algorithm, such as AES-CCMP, to provide adequate security for VoWiFi communication. Reference: CWNP, CWDP Certified Wireless Design Professional Official Study Guide, Security Considerations for Voice over Wi-Fi (VoWiFi) Systems, Top 13 VoIP Security Issues and How to Combat Them

Question: 214

For what types of systems should you request read-only access to in order to perform an analysis of the customer's existing infrastructure?(Choose all that apply.)
Response:

A. Clients
B. RADIUS
C. Switches
D. Active Directory
E. Routers

Answer: C, E

Explanation:

Question: 215

What is the chip rate of 1 Mbps 802.11b? Response:

A. 11 Mchips/s
B. 2 Mchips/s
C. 1 Mchip/s
D. 22 Mchips/s

Answer: A

Explanation:

Question: 216

What strategy can be used to ensure efficient cell overlap for VoIP site surveys?
Response:

A. Measure the percentage of cell overlap using the cell overlap feature in the site survey software.
B. Increase the output power of the radio in all APs.
C. Install higher gain antennas in the APs.
D. Ensure at least two APs can be seen with appropriate signal strengths from each location.

Answer: A

Explanation:

Question: 217

During a post-validation assessment, you have configured a client for 802.1X/EAP but it is not passing authentication. Which areas should you check in the WLAN configuration?

Response:

A. Whether the RADIUS server is online and configured for the matching port on the APs and WLAN controllers
B. Whether the RADIUS shared secret is properly configured on the supplicant and authentication server
C. Whether the authenticator is configured to support the EAP type(s) your client is configured for
D. Whether the client has a fully valid certificate

Answer: A

Explanation:

Question: 218

A high power radio system transmits at 40,000 Watts. What is this power in dBm? Solve this without a calculator.

Response:

A. 46 dBm
B. 76 dBm
C. 56 dBm
D. 66 dBm

Answer: B

Explanation:

Question: 219

One of your warehouse customers called you reporting problems with their WLAN in some locations that you designed and installed over a year ago. What should be one of your first considerations for your line of questioning?

Response:

A. DHCP lease exhaustion
B. Changes in receive gain
C. Inventory changes
D. Rogue APs from neighbors

Answer: C

Explanation:

Question: 220

When designing for a PTP outdoor link, what important consideration should be made about local vegetation?(Choose all that apply.)
Response:

A. Leaves
B. Tree height growth
C. Water density
D. Reflection factor

Answer: A, B

Explanation:

Question: 221

What are methods of providing RF high availability? Response:

A. Power APs to maximum power.
B. Use the HSRP/VRRP protocol.
C. Deploy using 100 percent overlap.
D. Deploy 802.3af.
E. Use dual spectrums.

Answer: C

Explanation:

Question: 222

What two 802.11 amendments deal with regulatory and transmission requirements?
Response:

A. 802.11k
B. 802.11i
C. 802.11d
D. 802.11f
E. 802.11h

Answer: C, D

Explanation:

Question: 223

When performing an indoor predictive site survey to make the WLAN planning and design cycle more efficient, what is a best practice for configuration of the simulated APs in the predictive modeling software?
Response:

A. Always use the default 2.2 dBi omnidirectional antenna patterns for simulated APs.
B. If dynamic RRM will be used, AP transmit power should be set to an estimated average level of the expected client devices, such as 25 mW.
C. All simulated APs should be set to 20 MHz channels only.
D. Defining custom AP and antenna patterns will yield more accurate prediction data than the preconfigured vendor AP/antenna combinations.

Answer: B

Explanation:

Question: 224

What are the three biggest WLAN enterprise verticals?(Choose all that apply.) Response:

A. Education
B. Warehouses
C. Healthcare
D. Office environments
E. Retail

Answer: A, C, E

Explanation:

Question: 225

Using a SCA means that all APs will be using the same channel in a given layer. How is the AP with which the client associates determined?
Response:

A. All APs share a virtual Multicast Address. A controller will tell the closest AP to the client to communicate with it, since it has a greater RSSI from the client.
B. All APs share a virtual BSSID. A controller will tell the closest AP to the client to communicate with it, since it has a greater RSSI from the client.
C. All APs share a virtual IP address. A controller will tell the closest AP to the client to communicate with it, since it has a greater RSSI from the client.
D. The client selects the AP based on a known set of MAC to BSSID mappings stored in the clients authorized SSID listing.

Answer: D

Explanation:

Question: 226

When live video streaming solutions that transmit simultaneously to more than one recipient are used, what special capability should be considered and configured in all affected WLAN implementations?

Response:

A. Secure TCP
B. Multicasting
C. IPv6
D. IPSec

Answer: B

Explanation:

Question: 227

Excessive uplink RTP frame retransmissions can result in

Response:

A. Deauthentication of the transmitter by the receiver
B. Lowering of the data transmission rate by the transmitting station
C. Head-of-Line blocking at the receiver
D. MOS scores in excess of 5

Answer: B

Explanation:

Question: 228

What part of the 802.11n preamble is used by the receiver to estimate the spatially multiplexed signal channel? What mode is this used in?

Response:

A. HT-STF in Greenfield mode only
B. HT-LTF in Mixed and Greenfield modes
C. HT-LTF in Greenfield mode only
D. HT-STF in Mixed and Greenfield modes

Answer: B

Explanation:

Question: 229

A signal passes through a 10-meter cable, an amplifier, and then a filter. The amplifier has an output that is eight times higher in power than its input. Each meter of cable reduces the signal level by a factor of 4. The filter has a loss of 5 dB.

What is the total loss/gain of the three elements in series? Response:

A. 65 dB loss
B. 16 dB gain
C. 56 dB loss
D. 37 dB loss

Answer: D

Explanation:

Question: 230

Which operational plane would be responsible for performing automated RF management? Response:

A. Integration
B. Data
C. Distribution
D. Control
E. Management

Answer: D

Explanation:

Question: 231

When selecting a centralized WLAN architecture, what new problem may arise when you change the data forwarding model from centralized to distributed?
Response:

A. Centralized control functions, such as key management and distribution, RRM, and load balancing will no longer be supported.
B. The router between the APs and the controller must be made aware of the APs as forwarding client STAs.
C. APs that were designed for a centralized forwarding model may not support all features in distributed forwarding mode.
D. All RRM controls will also need to be distributed to a master AP that acts as a channel and transmit power arbiter for

other APs in the ESS.

Answer: C

Explanation:

Question: 232

To increase capacity in a coverage-based wireless network, which of the following techniques are typically recommended?(Choose all that apply.)
Response:

A. Maximize airtime usage by disabling lower data rates.
B. Add additional APs and use directional antennas.
C. Turn up power on the access points.
D. Lower power on the access points and, after careful planning, add more AP

Answer: A, B, D

Explanation:

Question: 233

HR/DSSS specifies the following PHY rates:
Response:

A. 6, 9, 12, 18, 24, 36, 48, 54
B. 1, 2
C. 1, 2, 5.5, 11
D. MCS 1–15

Answer: C

Explanation:

Question: 234

Location technology (RTLS) can use which of the following methods?(Choose all that apply.) Response:

A. Sound
B. 802.11-capable laptops
C. Active RFID
D. Infrared
E. UHV
F. UWB
G. Passive RFID

Answer: A, B, C, D,

Explanation:

Question: 235

You have been tasked with performing safety and operations training for outdoor bridge link installation. The antennas are to be installed on a 70-foot tower on one end and the roof top of an office building on the other end.
What might be required for the tower installation?
Response:

A. Hiring a certified tower installer.
B. Special antennas that avoid reflections on the tower poles.
C. APs that are designed to operate above 70 feet.
D. Special RF cables that will not create loss incurred by the metal tower construction.

Answer: B

Explanation:

Question: 236

During a customer walkthrough you notice an area of the CAD drawing where it is not accurate. What next step should you take?
Response:

A. Redraw the portions of the map that have changed.
B. Do not survey that area.
C. Request a new version.
D. Request the survey team to do their best to walk where necessary and use the references on the map.

Answer: C

Explanation:

Question: 237

iPerf is a tool used in site surveys and validation surveys for what purpose? Response:

A. RSSI tracking
B. CCI detection
C. Throughput testing
D. Data rate mapping
E. Signal strength mapping

Answer: C

Explanation:

Question: 238

You are configuring an 802.11ac AP using manual channel planning. The design specification calls for the current AP to be placed on channel 56 in 5 GHz and to disable the 2.4 GHz radio.
For what could the 2.4 GHz radio be used if not standard AP operations?
Response:

A. PCI DSS encoding
B. Security monitoring
C. Bluetooth access
D. Controller-based channel assignment

Answer: C

Explanation:

Question: 239

Given: As the wireless network administrator for XYZ Company, you are planning to upgrade your aging wireless network infrastructure, as well as some clients, to support 802.11ac.
In your research, you have discovered that your new wireless client devices and infrastructure are 802.11ac, WMM, and WMM-PS certified by the Wi-Fi Alliance. Some of your existing client devices are 802.11a/b/g devices that do not support WMM.
Given this information, what scenario is possible when your company's employees begin using both types of client devices on the new WLAN?
Response:

A. All WMM-PS certified client devices will be prevented from utilizing WMM-PS features until all stations in use on the wireless medium are WMM-PS certified.
B. Performance and battery life will be inconsistent between WMM-PS and non-WMM-PS client devices when used with applications that support WMM-PS.
C. The WLAN infrastructure will set the dozing times of the WMM-PS certified client devices based upon their WMM access category, while the non-WMM-PS client devices will continue to use PSPoll frames.
D. WMM-PS enabled APs will allow both WMM-PS and non-WMM-PS stations to use the triggerand- delivery mechanism, but WMM-PS stations will g

Answer: B

Explanation:

Question: 240

When analyzing published competitive tests by equipment vendors, what items are the tests usually lacking?(Choose all that apply.)
Response:

A. Client devices and configurations
B. Audit by a third party
C. Detailed test methodology
D. Detailed configurations of each vendor's equipment

Answer: A, C, D

Explanation:

Question: 241

What document is typically created to launch a project? Response:

A. Project Charter
B. Budget
C. Bill of Materials
D. Work Breakdown Structure

Answer: A

Explanation:

Question: 242

What roaming technology uses stored keys at the APs for roam back if a client STA returns after having roamed away?
Response:

A. SCA roaming
B. Preauthentication
C. OKC
D. PMK caching

Answer: D

Explanation:

Question: 243

What frequency and power did 802.11y provide?
Response:

A. 3.65–3.7 GHz, 20W EIRP
B. 5.65–5.7 GHz, 5W EIRP
C. 5.25–5.35 GHz, 10W EIRP
D. 3.7–3.75 GHz, 15W EIRP

Answer: A

Explanation:

Question: 244

An amplifier has a 1 dB compression point of 32 dBm and a gain of 20 dB. Which is the highest average input power shown here that would be safe to operate a 24 Mbps 802.11g signal so that spectral regrowth is not a problem?
Response:

A. 5 dBm
B. 0 dBm
C. -5 dBm
D. 10 dBm

Answer: B

Explanation:

Question: 245

What might limit the ability to locate 802.11 clients using a WLAN infrastructure without an 802.11 tag?

A. Lack of 802.11k support
B. When its radio is disabled
C. When its radio is disabled
D. When it is off

Answer: D

Explanation:

Question: 246

While performing a validation site survey, you realize that overlapping channels are being used on the 2.4 GHz bad due to the automatic channel assignment algorithm of the WLAN infrastructure.

What should you do to prevent this?

A. Reconfigure the network to use static channel plans because automatic channel assignment algorithms are all broken
B. Purchase and deploy new APs from a different vendor
C. Reconfigure the automatic channel assignment settings to use only channels 1, 6, and 11

D. Leave it as it is; sometimes using all 11 channels in 2.4 GHz gives the optimum performance result

Answer: C

Explanation:

Question: 247

Which of the following items could be considered constraints when performing a network design?(Choose all that apply.)

A. Timeline
B. Personnel
C. Politics
D. Budget

Answer: A, B, C, D

Explanation:

Question: 248

After designing a WLAN infrastructure using predictive design software. What's the best way to validate the predictive design in the physical space before deployment, if time and budget allow for it?

A. Perform an AP-on-a-Stick survey using AP locations based upon the predictive design to confirm each AP's placement.
B. Deploy all of the APs as they're shown in the predictive design and perform a passive site survey.
C. Deploy all of the APs as they're shown in the predictive design and perform an active site survey.
D. Use a client device positioned where the APs will be installed and measure the signal from the client device.

Answer: A

Explanation:
An AP-on-a-Stick survey is a method of validating a predictive design by placing an AP at each proposed location and measuring the signal coverage and performance. This allows the designer to verify the accuracy of the predictive design and make any adjustments if needed. An AP-on-a-Stick survey is more cost-effective and time-efficient than deploying all the APs and performing a passive or active site survey, which would require installing the APs, cabling, power, and network

infrastructure. Using a client device to measure the signal from the AP locations is not a reliable way of validating the design, as it does not account for the interference, noise, and multipath effects that may affect the actual AP performance. Reference: 1: CWDP Certified Wireless Design Professional Official Study Guide: Exam PW0-304, Chapter 5, page 163.

Question: 249

As a device starts to shift to lower PHY rates, what factors usually influence a device decision to shift to lower PHY rates?(Choose all that apply.)

A. Signal degradation

B. Packet loss
C. Interference
D. Retransmissions

Answer: A, B, C, D

Explanation:

Question: 250

Before performing a pre-deployment passive RF survey of a new deployment using survey mapping software, which of the following must be performed?

A. Determining AP transmit power
B. Scaling the map
C. Selecting antennas
D. Checking client DTPC settings

Answer: B

Explanation:

Question: 251

What functions may be performed by a WIPS?(Choose all that apply.)

A. Distributed protocol analysis
B. Performance monitoring and response
C. Data forensics and analysis
D. Automated threat mitigation
E. Client access to the distribution system

Answer: A, B, C, D

Explanation:

Question: 252

A table of VLANs in a document should include what device performs services.(Fill in the blanks)

A. HLD, routing
B. LLD, bridging
C. LLD, routing

D. HLD, QoS

Answer: C

Explanation:

Question: 253

Prior to meeting with the customer for the first time, you should do which of the following? Response:

A. Decide which vendor they will benefit most from.
B. Research the customer as much as possible. Try to understand what their business is, who their customers are, and any other information you can find regarding product lines and recent press announcements.
C. Find out what vendor their competitors use.
D. Plan an initial design to present to them.

Answer: B

Explanation:

Question: 254

For an antenna 35 dBi of gain is needed. What antenna type should be used to achieve this gain? Response:

A. 4λ dipole
B. Yagi
C. Dish
D. Horn

Answer: C

Explanation:

Question: 255

A museum wants to offer Wi-Fi to its visitors. One of their requirements is to have the APs blend into the design of the museum. What should you do to meet this requirement?

A. Use a plastic cover that could blend in with the environment
B. Lock the AP inside of a metal box
C. Place the APs in between walls and I-beams
D. Use an 802.11b AP, so it looks old enough to be in a museum

Answer: A

Explanation:

Question: 256

An MSA commonly addresses at least which two legal categories?

A. Nondisclosure agreement
B. Hold harmless
C. Intellectual property protection
D. Indemnity clause

Answer: A

Explanation:

Question: 257

How much more power can a 1 Mbps 802.11b signal have than a 54 Mbps 802.11g signal if it is sent through a saturated amplifier?
Response:

A. 5 dBm
B. 2 dBm
C. 2 dB
D. 5 dB

Answer: D

Explanation:

Question: 258

An engineering firm just upgraded their WLAN form nine 802.11n APS to nine 802.11ac APs. After this upgrade, they did not see any improvement in throughput. What is the most likely cause of this result?
Response:

A. The APs are still using the 5 GHz lower band
B. The clients were not upgraded
C. APs are mounted on the wall
D. APs are transmitting at a low transmit power

Answer: B

Explanation:

Question: 259

What are the two types of WLAN discovery/scanning?
Response:

A. Manual
B. Hidden
C. Active
D. Passive
E. Probe
F. Automatic

Answer: C, D

Explanation:

Question: 260

You are using site software design features. You have imported a floor plan, but the simulated RF coverage is nowhere close to the real RF coverage you see with a walkabout.
Given that the simulation is significantly different, when step was likely missed when using the software?
Response:

A. Conversion to DWG
B. Conversion to PNG
C. Adding extra APs to simulate interference
D. Calibration

Answer: D

Explanation:

Question: 261

What kind of applications has the character traits of many communications back and forth between the server and client for each transaction initiated by the user?
For example, several files, images and other data files may be required to download to the client with each click from the user. Choose the best answer.
Response:

A. mobile apps
B. console management interfaces
C. high-data bandwidth application
D. real-time application
E. web-based application

Answer: D

Explanation:

Question: 262

What type of protection should be provided to outdoor antenna installations? Response:

A. Static electricity
B. Brownouts
C. Lightning surge suppression
D. A/C spikes

Answer: C

Explanation:

Question: 263

What method improves throughput in a low SNR environment?
Response:

A. 64-QAM
B. A-MSDU frame aggregation
C. Receive Diversity
D. SM

Answer: C

Explanation:

Question: 264

What differences exist between VLANs in wireless and wired domains?
Response:

A. Wireless VLANs are not effective for segmenting the available services and network permissions available to clients. Wired VLANs are effective for this purpose.
B. Wireless VLANs are never carried in 802.11 frames that cross the wireless medium. VLAN identifiers are always carried in Ethernet frames to indicate the proper VLAN.
C. Wireless VLANs do not always segment traffic into separate broadcast domains on the wireless medium. Wired VLANs do segment broadcast domains on the wired network.
D. Wireless VLANs are ineffective for utilizing a single set of infrastructure equipment to provide different services to different client groups. Wired VLANs are effective for this purpose.

Answer: C

Explanation:

Question: 265

A customer wants to deploy a WLAN that employs centralized forwarding. What LAN requirements should you look for?
Response:

A. High-speed Ethernet links
B. Layer 3 at the access layer
C. Layer 2 at the distribution layer
D. Routing redundancy protocol

Answer: A

Explanation:

Question: 266

When using a predictive design tool, you have selected APs with an antenna gain 3 dBi and set the transmit power of the predicted APs to 25 mW. What should be EIRP of the APs in the design? Response:

A. 17 dBm
B. 125 mW
C. 11 dBm
D. 6.25 mW

Answer: A

Explanation:

Question: 267

You are being asked to design a WLAN for a number of WLAN clients that will use Telnet as the primary application. The customer has asked that you use only the number of APs necessary because of the complex installation and construction costs each AP installation will incur in this particular environment.
What design factors do you consider?
Response:

A. Omnidirectional antennas should be used to maximize cell overlap.
B. Use 11 Mbps as the lowest basic rate.
C. Clients could benefit from RTS/CTS mode for all transmissions.
D. AP transmit power should be turned down to minimize co-channel interference.

Answer: C

Explanation:

Question: 268

What important item is often left out of operational and maintenance plans? Response:

A. Syslog analysis
B. Network overview
C. Engineering feedback
D. Configuration backups

Answer: C

Explanation:

Question: 269

What architecture suffers the biggest limitation for sharing control information across APs? Response:

A. Independent autonomous
B. Centralized
C. Cooperative autonomous
D. Controller
E. Distributed

Answer: A

Explanation:

Question: 270

You have initiated a site survey to be performed and the team has been onsite and is halfway through gathering the necessary data.
The project sponsor just asked you to make sure the WLAN supports radio frequency identification (RFID) location tracking. How would you possibly characterize this situation?
Response:

A. Scope creep has occurred.
B. The 802.3af RTLS standard should be incorporated into the AP configuration.
C. The 802.11g standard incorporates location tracking.
D. Any WLAN will support location tracking.
E. The power requirements on the UPS need to be evaluated.

Answer: A

Explanation:

Question: 271

Name the audience type not addressed in this chapter for HLDs. Response:

A. Operations
B. Executives
C. Designers
D. Engineering

Answer: A

Explanation:

Question: 272

You are planning for client devices in a WLAN that is be upgraded to 802.11ac. Which one of the following devices is more likely to have support for 3x3:3 radios and 256 QAM?
Response:

A. handheld scanner
B. tablet
C. laptop
D. USB 2.0 adapter
E. mobile phone

Answer: C

Explanation:

Question: 273

The thermal noise is at -174 dBm/Hz. A spectrum analyzer has a resolution bandwidth of 1 kHz and a 5 dB noise figure. What is the level of the noise floor?
Response:

A. -174 dBm
B. -139 dBm
C. -144 dBm
D. -204 dBm

Answer: B

Explanation:

Question: 274

What limitation exists when WMM is not enabled on an 802.11n WLAN?
Response:

A. The maximum channel-width will be 20MHz
B. Only two ACs will be available
C. EDCA values will change
D. 802.11 QoS will not be available

Answer: D

Explanation:

Question: 275

What are some significant drawbacks that are present with WPA/WPA2-Enterprise that are not present with WPA/WPA2-Personal?(Choose all that apply.)
Response:

A. WPA/WPA2-Enterprise does not support the use of usernames/passwords for client authentication.
B. WPA/WPA2-Enterprise often requires additional backend infrastructure components that are not required with WPA/WPA2-Personal.
C. WPA/WPA2-Enterprise often requires more administrative overhead for configuration than WPA/WPA2-Personal.
D. WPA/WPA2-Enterprise always requires X.509 certificates for server authentication.
E. WPA/WPA2-Enterprise does not provide a way to perform per-user authorization and access control.

Answer: B, C

Explanation:

Question: 276

When installing a cloud-based AP, what is the most common process used?
Response:

A. Configure the AP as an autonomous AP and then, when it connects to the cloud, it will be reconfigured.
B. Configure a profile for the AP in the cloud and then connect it for automatic configuration.
C. Connect the AP to the network and configure it from the cloud assigning a configuration or policy set to the AP.
D. Configure the AP with a local controller and then, when it connects to the cloud, it will be reconfigured.

Answer: B

Explanation:

Question: 277

What should always be done before connecting an AP to the production network?
Response:

A. Baseline configuration that prevents the introduction of security issues to the network on initial connection.
B. Disabling SSID broadcasting.
C. Reduction of output power.
D. Increase in output power.

Answer: A

Explanation:

Question: 278

If radar has reportedly been detected on your WLAN deployment, what bands would you consider avoiding?
Response:

A. 5 GHz UNII-2 and 2e
B. 5 GHz UNII-2 and 3
C. 5 GHz UNII-2, 2e, and 3
D. 5 GHz UNII-1 and 2
E. 5 GHz UNII-1, 2, and 3

Answer: A

Explanation:

Question: 279

What functions do the control plane of centralized and distributed WLAN architectures help solve?(Choose all that apply.)
Response:

A. Channel reuse plans
B. Mobility management
C. Transmit power
D. Load balancing

Answer: A, B, C

Explanation:

Question: 280

If the amplifier in Question 4 has a noise figure of 10 dB but a gain of 0 dB, what is the total noise figure of the cable, amplifier, and filter in series?
Response:

A. 75 dB
B. 16 dB
C. 10 dB
D. 70 dB

Answer: A

Explanation:

Question: 281

During a validation site survey, you realize that the installers mounted some of the APs above the ceiling. They said that this was a request from the building architect due to aesthetics constraints. During the requirements gathering, you weren't advised about any aesthetics constraints from the main stakeholder of the project. What should you do in this case?
Response:

A. Remove all external antennas and use only the internal antennas to reduce multipath.
B. Advise the stakeholder that WLAN performance requirements will not be met and a new design process will be needed to meet the requirements.
C. Leave it as it is and allow automatic channel management to correct any issues.
D. Increase the output power on all APs by 6 dB immediately.

Answer: B

Explanation:

Question: 282

What is the most suitable antenna option to be used when designing a WLAN infrastructure with APs mounted on a ceiling with a height of more than 20 feet and having all of the client stations used from the floor?
Response:

A. Patch
B. Dish
C. Low-gain dipole
D. Grid

Answer: A

Explanation:

Question: 283

A wireless network with fewer APs at higher power levels to cover a large area is said to be which of the following?
Response:

A. Capacity based
B. Coverage based
C. Destined for failure
D. Ideal for roaming

Answer: B

Explanation:

Question: 284

What metric implements the simplest algorithm and lowest accuracy in networks requiring locations?
Response:

A. Angle of Arrival (AoA)
B. Time of Arrival (ToA)
C. Time Difference of Arrival (TDoA)
D. Received Signal Strength Indicator (RSSI)

Answer: D

Explanation:

Question: 285

A bandpass filter has a maximum in-band loss of 1.5 dB, ripple of 0.4 dB, and a return loss of 15 dB. What is the minimum in-band loss?
Response:

A. 1.1 dB
B. 1.5 dB
C. 13.5 dB
D. 1.9 dB

Answer: A

Explanation:

Question: 286

The installation crew for your WLAN project wants to install a few APs to locations nearby the ones specified in the RF design document. What next step should occur?
Response:

A. Confirm the mounting hardware.
B. Choose a different AP model.
C. Update the documentation.
D. Consult the RF designer.

Answer: D

Explanation:

Question: 287

Looking at a client radio specification sheet that states Receive Sensitivity of -82 dBm @ 18 Mbps would mean:
Response:

A. It would need to hear a signal <-82 dBm in order to use the 24 Mbps PHY rate.
B. It is only capable of transmitting at 18 Mbps PHY rates at -82 dBm.
C. It must hear a signal >-82 dBm in order to demodulate the 18 Mbps PHY rate.
D. It must hear a signal <-82 dBm in order to demodulate the 18 Mbps PHY rate.

Answer: D

Explanation:

Question: 288

What term refers to the security practice of obfuscating actual data from unintended receivers as the data crosses the transmission medium?
Response:

A. Confidentiality
B. Authentication
C. Integrity
D. Accounting

E. Nonrepudiation

Answer: A

Explanation:

Question: 289

When troubleshooting coverage issues for a wireless network as it appears to new client associations, you should perform which type of survey?

Response:

A. Active survey
B. Passive survey
C. A survey is not necessary.
D. Predictive survey

Answer: B

Explanation:

Question: 290

In a convention center, you have received complaints about the WLAN infrastructure. At this moment, the are only two APs in one auditorium.

After analyzing the situation, you determined that there are more client devices that the infrastructure was designed for. There are only two APs to support more than 300 devices using the Wi-Fi at the same time.

What should you do to make the Wi-Fi work as expected?

Response:

A. Redesign the entire WLAN
B. Upgrade the Ethernet connections to MultiGig
C. Quickly add more APs
D. Turn up the output power on the APs so that they can handle more clients

Answer: A

Explanation:

Question: 291

What are some advantages of designing guest access with all guest users tunneled directly into the DMZ?
Response:

A. Minimizes configuration requirements for segmentation and filtering of guest traffic across internal LAN
B. Enhances performance of web proxy servers in the DMZ for guest Internet traffic
C. Allows a single SSID with different authentication/encryption models to be used for all WLAN services for corporate users and guests
D. The border firewall configuration will not require any additional rules to pass guest traffic to the DMZ controller

Answer: AD

Explanation:
Designing guest access with all guest users tunneled directly into the DMZ has two main advantages: it simplifies the network configuration and it enhances the security of the internal network. A DMZ is a demilitarized zone, which is a separate network segment that isolates the public-facing services from the private network. A DMZ provides a buffer zone between the Internet and the internal network, where potential attacks can be detected and prevented.
By tunneling all guest users directly into the DMZ, the network configuration is simplified because there is no need to segment and filter the guest traffic across the internal LAN. The guest traffic is encapsulated and routed to the DMZ controller, which acts as the anchor point for the guest WLAN. The guest traffic is then decrypted and forwarded to the Internet or the DMZ services. This way, the guest traffic does not mix with the internal traffic, and there is no need to apply VLANs, ACLs, or firewall rules to separate them.
Another advantage of tunneling all guest users directly into the DMZ is that it enhances the security of the internal network. By keeping the guest traffic in the DMZ, the internal network is protected from any potential threats or attacks that may originate from the guest users. The guest users have no visibility or access to the internal network resources, and they are subject to the security policies and controls of the DMZ. The border firewall configuration will not require any additional rules to pass guest traffic to the DMZ controller, because the guest traffic is already encapsulated and tunneled. This reduces the complexity and the risk of misconfiguration of the firewall rules. Reference: CWNP, CWDP Certified Wireless Design Professional Official Study Guide, Cisco Unified Wireless Guest Access Services, What Is a DMZ Network and Why Would You Use It?, Wireless Guest Access FAQ

Question: 292

What are three potential benefits when an organization lets their employees bring their own device onto the company s network"?

A. Enhanced productivity Decreased costs and Increased satisfaction
B. Enhanced productivity Increased costs, and Decreased satisfaction
C. Enhanced productivity. Increased costs, and Increased satisfaction
D. increased security Enhanced productivity, and Decreased attack surface

Answer: A

Explanation:

Question: 293

If a 24-port switch has a PoE budget of 740 W, how many IEEE 802.3at devices can certainly be powered on by it?

A. 12
B. 6
C. 24
D. 18

Answer: D

Explanation:

Question: 294

When designing a new WLAN infrastructure you also need to be aware of now the network is physically deployed and now the network is logically configured What are two documents that are helpful In this case?

A. Bill of Materials and Blueprints
B. Hold Harmless and Network Diagrams
C. Network Diagrams and Network Closet Locations
D. Blueprints and Network Closet Locations

Answer: C

Explanation:

Question: 295

Which one of the following options would you consider a well-designed WLAN infrastructure when measuring RSSI Notse floor and SNR in a required area?

A. Low RSSI, Low Noise Floor Low SNR
B. High RSSI, Low Noise Floor High SNR
C. High RSSI, High Noise Floor Low SNR
D. Low RSSI, High Noise Floor Low SNR

Answer: B

Explanation:

Question: 296

You have been asked to design a WLAN for an organization. They will be replacing an existing WLAN Currently each AP operates 8 SSIDs on each radio What will you communicate with the organization so that they understand the need to reduce the

number of SSlDs?

A. implementing loo many SSIDs results in decreased data rates
B. Implementing loo many SSIDs results in decreased throughput
C. Implementing loo many SSIDs increases ACl in every scenario
D. Implementing too many SSIDs reduces SNR in every scenario

Answer: B

Explanation:

Question: 297

What is an advantage of centralized data forwarding?

A. It reduces delay for user traffic
B. It increases the encryption strength for user traffic
C. It increases the signal strength for wireless client devices
D. It allows for centralized filtering of wireless traffic

Answer: D

Explanation:

Question: 298

If you choose to recommend dynamic channel assignment for the APs in your WLAN design what action should you also recommend'?

A. Ensure that the output power of all APs is set to the maximum allowed in the regulatory domain B. Ensure that the output power of an APs is set to the minimum available in the system interface
C. Replace all antennas with panel antennas instead of omnidirectional antennas
D. Configure the settings used by the dynamic channel assignment algorithm optimally for your design

Answer: D

Explanation:

Question: 299

An AP vendor being considered for a WLAN deployment suggests that their 2 4 GHz and 5 GHz dualband APs use software defined radios What unique capability does this indicate in comparison to non-software defined radios?

A. At least one radio can be configured for either 2 4 GHz or 5 GHz operations
B. The radios can have their SSIDs configured through software
C. Software is used to configure the encryption settings
D. Software is used to configure the entire WLAN profile

Answer: A

Explanation:

Question: 300

Even when a full pre-design site survey is not performed, what is always recommended to be performed within the deployment areas?

A. A spectrum analysis walkthrough
B. An AP-on-a-stick survey of 37% of the facility as this amount provides all of the statistical information required for good design
C. A scan m the 5 GHz band looking for common loT interferes
D. A scan in the Sub-i GHz bands to determine If sideband interference will impact 2 4 GHz operations

Answer: A

Explanation:

Question: 301

Given A project parameter defines a requirement or constraint (or a project that can be defined before any file imports or design actions. What is an example of a project parameter commonly available in WLAN design software?

A. AP locations
B. Minimum required signal strength
C. AP type selection
D. Floor plan

Answer: B

Explanation:

Question: 302

In most WLAN design tools, after defining project parameters or during the project creation wizard what action will you take before you can begin the actual design process?

A. Place APs
B. Define cabling
C. Import a floor plan
D. Define wall materials

Answer: C

Explanation:

Question: 303

What is the purpose of defining wall materials in WLAN design software?

A. To ensure the attenuation and reflection of the materials die considered during propagation modeling
B. So that the floor plan looks as much like the target deployment space as possible
C. It adds color to the floor plan which makes it easier to identify requirement areas
D. Manager require it, so WLAN designers should do it.

Answer: A

Explanation:

Question: 304

To ensure that your design meets the requirements of the WLAN, what should be defined in your WLAN design software that will result in different requirements at varying locations on the floor plan1?

A. Requirement areas
B. Cable runs
C. Heatmap colors
D. Project name

Answer: A

Explanation:

Question: 305

When performing a spectrum analysis walkthrough of a facility tor which you will be creating a WLAN design you detect an interferer What should you do?

A. Make a mental note of it so that you can include it in your design
B. Make note of it using the reporting features of your spectrum analyzer or by documenting it elsewhere
C. Locate and remove the interferer immediately so that your WLAN works well
D. Walk away from the project because it is best to only deploy in clean environments with no other RF signals

Answer: B

Explanation:

Question: 306

While using a USB adapter attached to a USB hub and your laptop for protocol analysts you notice that the SNR is lower than expected. The USB adapter is an 802 11 ac 3x3 3 adapter and is connected to a USB 3 hub. What is likely causing the SNR variation?

A. USB 20 interference
B. USB 3 0 interference
C. EMI from the battery in the device
D. RF incidental energy generated by the cooling fans in the laptop

Answer: B

Explanation:

Question: 307

When implementing multiple SSIDs to what is each SSID typically mapped in order to provide traffic management separately for each SSID?

A. DSCP tags
B. Access Category
C. 802.1p markings
D. VLAN

Answer: D

Explanation:

Question: 308

An organization is implementing a new WLAN. They are upgrading a very old 802.11g network that only a few devices used Now. they expect more than 250 devices to use the new WLAN that will operate 802.11ax Aps. What wired-side consideration should you address in your design recommendations?

A. DHCP pools
B. Spanning-tree loops
C. Modem pools
D. Client ARP tables

Answer: A

Explanation:

Question: 309

You are designing a WLAN and nave been asked to recommend a security solution for the network The organization requires that 802 1X/EAP be implemented, but they do not have a PKI and do not wish to deploy one They suggest that mostly Windows clients. Apple phones and Android phones will be used What do you recommend?

A. Use CCMP AES with a PSK
B. Use EAP-PEAP for the authentication solution
C. Use FAP-TLS for the authentication solution

D. Use TKIPRC4 with a PSK

Answer: B

Explanation:

Question: 310

You must perform a site survey that defines signal strength, throughput and latency What kind of survey should you perform?

A. Perform a passive survey using a laptop's built-in wireless adapter
B. Perform a passive survey using a USB wireless adapter
C. Perform an active survey using a laptop's built-in adapter
D. Perform a passive survey using a special monitor mode adapter

Answer: C

Explanation:

Question: 311

An organization has chosen to implement Wi-Fi 6E and operates in a regulatory domain allowing the use of all 6 GHz channels. Why can 40 MHz channels be used more easily in this network than one operating in the 5 GHz band?

A. Because ACI works differently in 6 GHz than in 5 GHz
B. Because many more channels are available
C. Because Wi-Fi 6E supports 40 MHz as a primary channel and ignores 20 MHz primary channels
D. Because 6 GHz Wi-Fi uses Single Channel Architecture instead of Multiple Channel Architecture

Answer: B

Explanation:

Question: 312

What is a typical characteristic of barcode scanners?

A. Low throughput requirements
B. High throughput requirements
C. Implementation of 3x3 3 chipsets
D. No support for any 802.11 security solutions

Answer: A

Explanation:

Question: 313

What document can be useful when determining client capabilities in a WLAN design project?

A. Bill of Materials
B. Certificate of ownership
C. Purchase receipt
D. Specifications sheet

Answer: D

Explanation:

Question: 314

What inexpensive tool is capable of locating neighbor WLANs if that is your only need?

A. WLAN scanner
B. Site Survey software
C. Spectrum Analyzer software
D. Wireless-Specific Protocol Analysis software

Answer: A

Explanation:

Question: 315

What are the two most common industry-standard protocols used to transport data from an AP to a Wireless LAN Controller?

A. CAPWAP and GRE
B. LWAPP and FTP
C. SSL and SSH
D. TLS and SSL

Answer: A

Explanation:

Question: 316

Wh.ch one of the following options is a dedicated throughput testing application, usable on both the WLAN and LAN?

A. WLAN scanner
B. Wirestart
C. iPert
D. NLTSH

Answer: C

Explanation:

Question: 317

What is the most appropriate antenna which will require the least Intentional Radiator power for a point-to-point bridge link spanning 1200 meters?

A. 2.2 dBi omnidirectional
B. 11 dBi omnidirectional
C. 11 dBi disn
D. 5 dBi patch

Answer: C

Explanation:

Question: 318

What commonly used item can help lo prevent back pain during lengthy site surveys?

A. Relaxed fitting pants
B. Safety j 83963
C. Survey tray
D. Forklift reclination attachment

Answer: C

Explanation:

Question: 319

Which type of building material causes the most attenuation of Wi-Fi signals'

A. Fire-rated steel door
B. Brick wall
C. Drywall
D. Plywood

Answer: A

Explanation:

Question: 320

What are the best practices for belter location accuracy when deploying Wi-Fi RTLS?

A. Place APs on the center of the required area and make sure that every client device is able to hear" at least three APs
B. Place APs on the perimeter and throughout the required area and make sure that every client device is able to "hear" at least three APs
C. Place APs on the center of the required area and make sure that every client device is able to hear at least two APs
D. Place APs on the perimeter of the required area and make sure that every client device is able to "hear" at least one AP

Answer: B

Explanation:

Question: 321

You have enabled IEEE 80211 FT in your WLAN infrastructure. You want to verify roaming between APs (two at a time) and determine If all of your end-points are capable of performing fast roaming What tool would you use to achieve this goal?

A. RF Spectrum Analyzer and two spectrum adapters (one for each band)
B. Predictive design tool and two Wi-Fi adapters (one for each band)
C. Protocol Analyzer and two Wi-Fi adapters (one for each channel of the chosen bands)
D. WLAN scannerdiscovery tool and two WI-FI adapters (one for each channel of the chosen bands

Answer: C

Explanation:

Question: 322

What should you do during the design process of a point to point bridge link to minimize CCI and ACl?

A. Choose a channel on the 5 GHz band outside of the UNII-1 and UNII-3 channels
B. Choose a channel on the 2 4 GHz band other than the over used 1. 6 and 11
C. Install the antennas and choose the least busy channel using trial and error problem solving
D. Perform an outdoor site survey in the area of both buildings and determine the best channel to use

Answer: D

Explanation:

Question: 323

When creating a long-distance bridge link, it is important to know the channels in use by other networks on both ends of the link and within a reasonable range It is not as Important to know the channels in use in the middle area of the link. Why is this the case?

A. Interference happens at the receiver
B. interference happens at the transmitter
C. The signals in the middle of the link will increase the amplitude of your signal as it passes through them

D. Your RF LoS will always be far above any interference in the middle because the signal travels up and then back down to the remote 802.11 receiver

Answer: D

Explanation:

Question: 324

What is the purpose of a Physical Installation Guide document?

A. To inform the Install technicians of WLAN frame exchanges and communication methods
B. To provide clear instructions on the locations and mounting methods, and possible configuration steps for APs
C. To provide sources for purchasing the equipment needed to implement the WLAN
D. To prove that the WLAN meets the organization's requirements

Answer: B

Explanation:

Question: 325

What single tool, by design can be used to verify channel selection, encryption in use and number of APs above a specified signal threshold in a given location during deployment?

A. Spectrum analyzer
B. Spreadsheet
C. WLAN scanner
D. Throughput tester

Answer: C

Explanation:

Question: 326

Before connecting, mounting and powering 213 total controller-based APs what action should be taken to ensure that they are configured by the controller once powered on and connected lo the network''

A. Configure profiles in the controller and assign them to the APs
B. Configure the controller to provide PoE to the APs
C. Configure the network to allow the APs to have direct Internet access immediately
D. Ensure mat TLS tunnels will work between the APs and the controller

Answer: A

Explanation:

Question: 327

You have designed a WLAN with a plan for 87 APs m a large office building. The customer has informed you that the budget is not as large as they hoped and they can only purchase 53 APs What action should be taken?

A. Simply increase the output power of the APs by 30 percent to accommodate tor the smaller number of purchased APs
B. Perform a complete redesign of the wireless network and inform the customer if some original requirements cannot be accomplished
C. Remove as many walls as possible within the facility so that the signals can travel a g<eater distance
D. Use only 2.4 GHz radios because the signals can be received at a greater distance

Answer: B

Explanation:

Question: 328

During the deployment of a WLAN the customer complains that the chosen locations for several APs are ruining the aesthetics of the building Instead of changing AP locations and requiring a redesign, what action can you recommend1?

A. Cover the APs with any kind of decorative covering that makes them look better
B. Move the APs and then use the WLAN in whatever way it functions afterward
C. Tell the customer to hire someone else because you are a professional WLAN designer and aesthetics are not important to you
D. Purchase skins or covers designed for the APs so that they do not stand out and they match more closely the aesthetics of the environment

Answer: D

Explanation:

Question: 329

Install technicians are deploying a multi-floor WLAN that you have designed They have finished the first floor and all APs on that floor are powered on and functioning No APs on any other floors have been deployed at this time You are considering performing a post-deployment site survey of the first floor immediately to validate proper implementation What statement is true about this site survey if you perform it?

A. It will miss any impact on the WLAN caused by APs on other floors
B. It will show you how the first floor will function after all other floors are deployed
C. It will not work because the controllers cannot function properly until all APs licensed lo the controller are operational
D. It will result in a complete set of data informing you how clients will function after the entire WLAN is implemented

Answer: A

Explanation:

Question: 330

During a validation site survey, you realize that the installers mounted some of the APs on the wait when the design called Tor a celling mount. They said that this was done because the cabling company did not have the right tools to run the cables above the ceiling. You know that this will cause a difference in how the Wi-Fi signal will radiate throughout the environment. What should you do in this case?

A. Leave it as it is because it will not have a significant impact
B. Blame the cabling company it the Wi-Fi doesn't work since they didnot do their job correctly
C. Turn up the power on the APs to accommodate for the difference
D. Advise the stakeholder that requirements will not be met and a new design process will be needed to meet the requirements

Answer: D

Explanation:

Question: 331

When performing a roaming test and packet capture at the same time, what are two particular frames that will be present when roaming between two APs is successful?

A. Beacon and DTIM
B. Probe Request and Probe Response
C. Association Request and Association Response
D. Reassociation Request and Reassociation Response

Answer: D

Explanation:

Question: 332

After successfully deploying and validating a WLAN intra structure, who should be trained for a better understanding and management of the solution? (Choose the single best answer)

A. Support staff and end-users
B. CEOs and other executives
C. Guests and CEOs
D. WLAN designer and WLAN implemented

Answer: A

Explanation:

Question: 333

What happens when you double the channel width (for example, use channel bonding) in a BSS?

A. Higher noise and lower SNR al the receiver
B. Lower noise and higher SNR at the receiver
C. Lower noise and lower SNR at the receiver
D. Higher noise and higher SNR at the receiver

Answer: A

Explanation:

Question: 334

Which one of the following might be detected as a source of CCI during a post-validation survey in the 5 GHz band?

A. Other OFDM networks
B. Other ERP networks
C. Microwave ovens
D. Other HR/DSSS networks

Answer: A

Explanation:

Question: 335

What is the primary reason for avoiding 160 MHz channels with 802 11 in the 5 GHz band'?

A. Only two oi three 160 MHz channels exist in the current frequency allocation, tn some regulatory domains only one exists
B. The data rate becomes too high which causes some clients to gam access to the medium and never let it go
C. The output power requited for 160 MHz channels is more than most regulatory domains allow
D. No APs exist in production that can implement 160 MHz channels

Answer: A

Explanation:

Question: 336

How can you increase efficiency in an 802 11n 2.4 GHz multiple-channel architecture network?

A. Disable 802 11b data rates
B. Use channels 1,3, 5, 7, 9, and 11
C. Use only channels 1 and 2
D. Use 40 MHz channels

Answer: A

Explanation:

Question: 337

What best describes ensuring coverage requirements in a deployed WLAN?

A. Measuring the signal strength and number of APs at each location and comparing it to the requirement specifications
B. Verifying that the WLAN can be seen from all required locations
C. Verifying that you can connect to the WLAN from all required locations with the least capable device
D. Verifying that a 3x3:3 gaming laptop can connect to the WLAN from all required locations

Answer: C

Explanation:

Question: 338

A WLAN that you designed has been deployed in one area, users ate complaining that the network performs poorly. When you analyze the area you see that a new interferer has been introduced that was not there during the pre-design survey You've been informed that the interferer cannot be removed as it is an essential loT device. What action do you recommend?

A. Reconfigure the channel plan to work around the interferer
B. increase the output power of the APs covering that area by at least 25 percent to overpower the interferer
C. Place a metal enclosure around the interferer
D. Use 40 MHz channels so that the devices can use either 20 MHz block depending on where the interferer operates

Answer: A

Explanation:

Question: 339

A designer has created a WLAN design that has been implemented in an organization. The network exists in a four-story building Because each floor has an Identical floor plan, the designer designed only one floor and had the installers duplicate the design on each floor. Now. in validation, it is not performing well What best explains the problem caused by this process?

A. The result was that APs were above and below each other on the same channel, resulting in excessive CCI The APs should have been deployed so that they were not directly above and below each other and so that they used varying channels between floors
B. The result was that clients could only connect to APs on their floor and, in a multi-floor deployment, you

want clients to connect to APs on other floors in case they roam between floors.

C. The result was that AC) was increased because the APs were deployed above and below each other on the same channels.

D. The result was that the frequency utilization was too low for the clients to capture RF waves on which to transmit their signals.