Number: 300-425 Passing Score: 800 Time Limit: 120 File Version: 12.0

Exam Code: 300-425
Exam Name: Designing Cisco Enterprise Wireless Networks



Exam A

QUESTION 1

Where must the APs be mounted when used in a high-density wireless network to provide 6 dB to 20 dB of attenuation to a cell?

- A. in the aisle
- B. under the seat
- C. above the stage
- D. under the stage

Correct Answer: B

Section:

Explanation:

Under seat or under desk mounting can provide from 6 dB to 20 dB of attenuation to the cell,

QUESTION 2

A company wants to replace its existing PBX system with a new VoIP System that will include wireless IP phones. The CIO has concerns about whether the company's existing wireless network can support the new system. Which tool in Cisco Prime can help ensure that the current network will support the new phone system?

- A. Location Readiness
- B. Site Calibration
- C. Map Editor
- D. Voice Readiness

Correct Answer: D

Section:

Explanation:

The VoWLAN Readiness (voice readiness) tool allows you to check the RF coverage to determine if it is sufficient for your voice needs.

QUESTION 3

WLC SSO is set up between two WLCs in a service provider network serving public spaces. On WLC failover, it is noticed that only about half of the original client count is now showing on the secondary WLC, although it is currently showing the role as active. Which design side case explains the issue?

- A. The secondary WLC platform does not support the required client count.
- B. The WLCs had not completed database sync before the primary failure.
- C. SSO is not configured correctly.
- D. Some client sessions were in WebAuth-Req state before failover.

Correct Answer: D

Section:

QUESTION 4

Refer to the exhibit.



AireOS 5520:

config mobility group domain CCNP
config mobility group member add 00:1e:14:08:fb:ff 10.0.109.4 CCNP encrypt
enable
config mobility group member hash 10.0.109.4
dc0582ed7748ecfdb543cedd82caafa34b705a39
config mobility group member data-dtls 00:1e:14:08:fb:ff enable

IOS-XE 9800-CL

wireless mobility group name CCNP wireless mobility mac-address 001E.E63D.CDFF wireless mobility group member mac-address a493.4cb1.15e0 ip 10.0.100.2 publicip 10.0.100.2 group CCNP

An engineer is about to establish a mobility peer connection between a Cisco Catalyst 9800-CL version 16.10.1e and Cisco AireOS 5520 version 8.8.120.0. The data path between the 9800-CL and AireOS 5520 is down, but its control path is up. Based on the configuration, what is the cause of the issue?

- A. The certificate hash key is incorrect leading to data path down.
- B. The data-link-encryption configuration is missing from the 9800-CL configuration.
- C. Encrypted mobility is being used in the 5520 configuration leading to data path down.
- D. CAPS is used to key in MAC address in the IOS_XE configuration leading to data path down.

dumps

Correct Answer: B Section:

QUESTION 5

A customer is deploying an 802.11ac network on a oor to support approximately 300 wireless devices. Which setting must be changed on Cisco Prime Infrastructure Planning Tool to predict the number of APs the customer needs to service the new oor?

- A. Demand Settings
- B. Data Coverage Support Margin
- C. 802.11n Protocol Support
- D. Add AP Field

Correct Answer: A

Section:

QUESTION 6

An engineer added an AP to a deployment after a post-installation site survey. The engineer then notices an increase in co-channel interference and retransmissions. Which two features help mitigate the issue? (Choose two.)

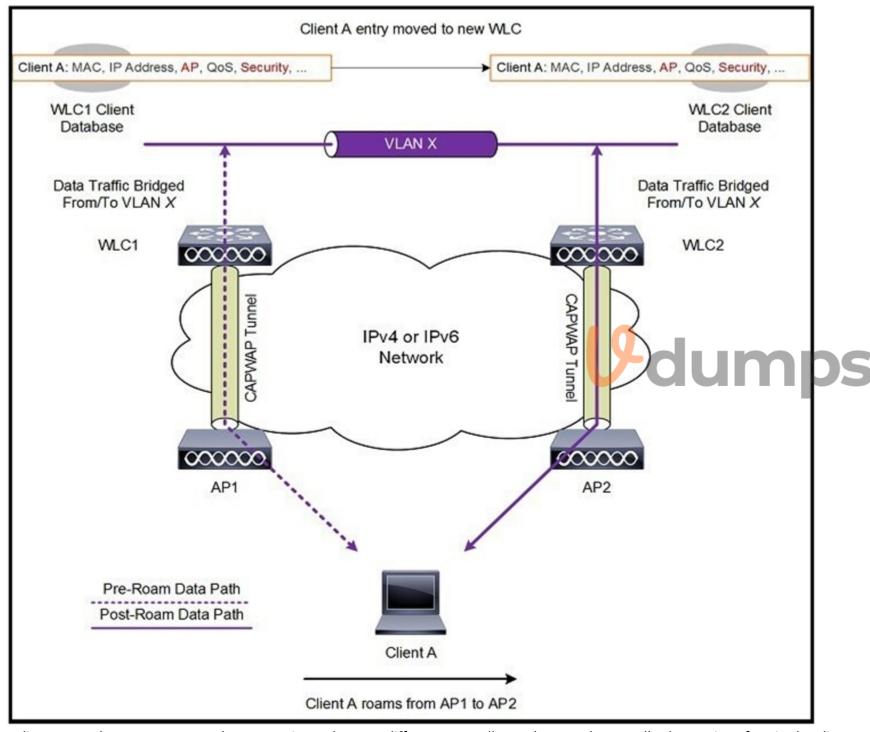
- A. Cisco Compatible Extensions
- B. Transmit Power Control
- C. Enhanced Distributed Channel Access
- D. Coverage Hole Detection

E. Dynamic Channel Assignment	
Correct Answer: B, E Section:	
QUESTION 7 A rapidly expanding company has tasked their network engineer with wirelessly connecting a new cubicle area with Cisco workgroup bridges until the wired network is complete. Each of 42 new users has a computer and VoIP phone. How many APs for workgroup bridging must be ordered to keep cost at a minimum while connecting all devices?	
A. 4	
B. 5	
C. 6	
D. 7	
Correct Answer: A Section: Explanation:	
Number of 802.11b devices per AP: Cisco recommends that you have no more than 15 to 25	
So, each AP will have 25 clients. Minimum 4 APs are sufficient.	
QUESTION 8 Which two considerations must a network engineer have when planning for voice over wireless roaming? (Choose two.)	
A. Full reauthentication introduces gaps in a voice conversation. B. Roaming time increases when using 802.1x + Cisco Centralized Key Management.	
B. Roaming time increases when using 802.1x + Cisco Centralized Key Management.	
C. Roaming occurs when the phone has seen at least four APs.	
D. Roaming occurs when the phone has reached -80 dBs or below.	
E. Roaming with only 802.1x authentication requires full reauthentication.	
Correct Answer: A, E	
Section:	
Explanation:	
https://www.cisco.com/c/en/us/td/docs/solutions/Enterprise/Mobility/vowlan/41dg/vowlan41dg-book/vowlan_ch5.html	
QUESTION 9	
An engineer is designing a wireless network that will support many different types of wireless clients. When conducting the survey, which client must be used to ensure a consistent experience for all of the wireless clients.	
A. the client that has the highest RF properties	
B. the client that is used most by the company	
C. the client that is used least by the company	
D. the client with the worst RF characteristics	
Correct Answer: D Section: Explanation:	

With the proliferation of clients with varying wireless capabilities, it is important to survey for the 'worst' clients in order to ensure a consistent experience across all your clients once your wireless network is in production.

https://documentation.meraki.com/MR/WiFi_Basics_and_Best_Practices/Conducting_Site_Surveys_with_MR_Access_Points

QUESTION 10Refer to the exhibit.



A client roams between two APs that are registered to two different controllers, where each controller has an interface in the client subnet. Both controllers are running AireOS. Which scenario explains the client roaming behavior?

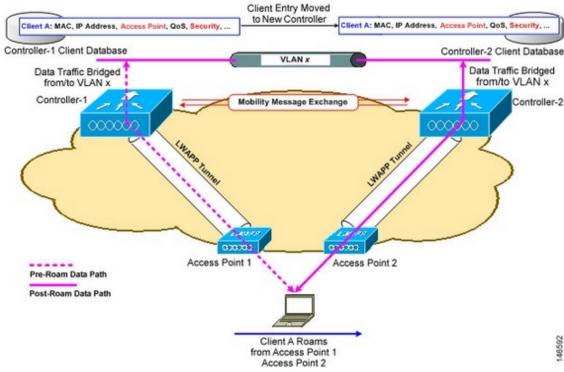
- A. Controllers exchange mobility control messages (over UDP port 16666) and the client database entry is moved from the original controller to the new controller.
- B. Controllers do not exchange mobility control messages (over UDP port 16666) and the client database, entry is not moved from the original controller to the newcontroller.
- C. Controllers exchange mobility control messages (over UDP port 16666) and a new client session is started with the new controller.

D. Controllers exchange mobility control messages (over UDP port 16666) and the client database entry is tunneled from the original controller to the new controller.

Correct Answer: A

Section:

Explanation:



In this instance controllers exchange mobility control messages (over UDP port 16666) and the client database entry is **moved** from the original controller to the new controller.



QUESTION 11

An engineer has performed a predictive site survey for high-speed data and voice in an indoor office. What is the recommended data rate with -67 dBm signal level for optimal VoWLAN design?

- A. 6 Mbps on 802.11 bgn
- B. 24 Mbps on 802.11 bgn
- C. 12 Mbps on 802.11 an
- D. 24 Mbps on 802.11 an

Correct Answer: C

Section:

Explanation:

The -67 dBm measurement has been used for years for 11b phone clients from many vendors. Tests indicate that this same rule of thumb measurement works well for 11g and 11a phone clients.

The lower data rates in 11a can be disabled, the 24 Mbps

OUESTION 12

A medium-sized hospitality company with 50 hotels needs to upgrade the existing WLAN in each hotel to 802.11n. During the site surveys for each hotel, what needs to be taken into consideration when determining the locations for each AP?

A. Selecting locations that are easily accessed so maintenance and upgrades can be performed quickly.

- B. Selecting AP locations where power is already available.
- C. Selecting APs that can be hidden in ceiling panels to provide a secure and clean aesthetic look.
- D. Selecting locations that make visual assessment of the AP operation easy.

Correct Answer: B

Section:

QUESTION 13

An engineer is using a Cisco AIR-2702i AP to conduct a Layer 1 site Survey, which mode is selected for the AP to discover non-Wi-Fi interference with metageek chanalyzer?

- A. FlexConnect
- B. Sniffer
- C. Monitor
- D. SE-connect

Correct Answer: D

Section:

QUESTION 14

A network engineer needs to create a wireless design to bridge wired IP surveillance cameras in the parking lot through a mesh AP. To which operate mode of the AP should the cameras connect?

- A. Flexconnect
- B. MAP
- C. RAP
- D. Local



Correct Answer: B

Section:

QUESTION 15

A wireless engineer is performing a post verification of a wireless network. Which two metrics does the engineer verify to ensure that the wireless network can support voice services? (Choose two.)

- A. The coverage area must have a noise floor that does not exceed -87 dBm.
- B. The client device must have at least an -67 dBm RSSI.
- C. The rate of retransmitted packets must be 15 percent or below.
- D. The rate of retransmitted packets must be 20 percent or below.
- E. The client device must have at least an -65 dBm RSSI.

Correct Answer: B, C

Section:

Explanation:

- The optimal VoWLAN Cell Edge recommendation is -67 dBm.
- Retransmissions should be kept under 20 percent.

QUESTION 16

Which three pieces of equipment are needed to conduct a fully measured wireless survey? (Choose three.)

- A. PoE battery
- B. spirit level
- C. access point
- D. tall tripod
- E. goggles
- F. ladder

Correct Answer: A, C, D

Section:

Explanation:

https://www.cisco.com/c/en/us/td/docs/wireless/technology/mesh/81/design/guide/b_mesh_81/Site_Preparation_and_Planning.html

QUESTION 17

A company has 10 access point licenses available on their backup Cisco WLC and their primary Cisco WLC is at full capacity, 5 access points are set to high failover priority and 7 access points are set to critical failover priority. During a failure, not all critical access points failed over to the backup Cisco WLC. Which configuration is the cause of this issue?

- A. The high priority access point is oversubscribed.
- B. network ap-priority is set to enable.
- C. The critical priority access point count is oversubscribed.
- D. network ap-priority is set to disable.

Correct Answer: D

Section:

Explanation:

https://www.ciscolive.com/c/dam/r/ciscolive/emea/docs/2016/pdf/BRKCOL-2275.pdf



QUESTION 18

Which UDP port numbers are used for exchange mobility packets in an AireOS wireless deployment?

- A. UDP 16666 for control plane, EoIP (IP protocol 97) for data plane
- B. UDP 16668 for control plane, UDP 16667 for data plane
- C. UDP 16667 for control plane, UDP 16666 for data plane
- D. UDP 16666 for control plane, UDP 16667 for data plane

Correct Answer: A

Section:

Explanation:

- Enable these UDP ports for Mobility traffic:
 - 16666 Secured Mode
 - 16667 Unsecured Mode

QUESTION 19

A customer asks an engineer to explain the concept of mobility domains and mobility groups. Which statement does the engineer respond with?

- A. A mobility group does not constrain the distribution of security context of a client and also does not constrain AP fail-over between controllers when the WLC are in the same mobility domain.
- B. If WLCs are in the same mobility domain, they communicate with each other but, if an anchor WLC is present it must be in the same mobility domain for communication to be possible.
- C. If WLCs are in the same mobility domain, they communicate with each other. Mobility groups constrain the distribution of security context of a client and also constrain AP fail-over between controllers.
- D. WLCs do not need to be in the same mobility domain to communicate with each other. Mobility groups constrain the distribution of security context of a client and also constrain AP fail-over between controllers.

Correct Answer: C

Section:

Explanation:

https://www.cisco.com/c/en/us/td/docs/wireless/controller/8-0/configuration-guide/b cg80/b cg80 chapter 010011.html

QUESTION 20

An engineer is designing a wireless deployment for a university auditorium. Which two features can be used to help deal with the issues introduced by high AP count? (Choose two.)

- A. TSPEC
- B. RXSOP
- C. TPC
- D. LSS
- E. DFS

Correct Answer: C, E

Section:

Explanation:

https://www.cisco.com/c/en/us/support/docs/wireless-mobility/80211/200069-Overview-on-802-11h-Transmit-Power-Cont.html

QUESTION 21

A wireless engineer is designing a wireless network to support real-time applications over wireless. Which IEEE protocol must the engineer enables on the WLC so that the number of packets that are exchanged between an access point and client are reduced and fast roaming occurs?

- A. 802.11w
- B. 802.11r
- C. 802.11i
- D. 802.11k

Correct Answer: D

Section:

Explanation:

802.11r reduces the number of packets that are exchanged between the client and an AP. The client preauthenticates to the AP it will roam to before actually roaming. This means the roam itself occurs faster because the AP already has the client authentication credentials cached, resulting in fewer packets required between the client and the AP.

QUESTION 22

A network administrator of a global organization is collapsing all controllers to a single cluster located in central Europe. Which concern must addressed?

- A. Some channels may not be available consistently across the organization.
- B. Different RF policies per office are not available in this configuration.
- C. Syslog must be configured to the time-zone of the NMS platform.

Correct Answer: A

Section:

Explanation:

https://www.cisco.com/c/en/us/td/docs/wireless/controller/technotes/86/b_Cisco_Wireless_LAN_Controller_Configuration_Best_Practices.html

QUESTION 23

An engineer must ensure that the new wireless LAN deployment can support seamless roaming between access points using a standard based on an amendment to the 802.11 protocol. Which protocol must the engineer selects?

Vdumps

- A. 802.11i
- B. 802.11ac
- C. 802.11r
- D. 802.11e

Correct Answer: C

Section:

Explanation:

The 802.11r Fast Transition (FT) Roaming is an amendment to the 802.11 IEEE standards.

QUESTION 24

A high-density wireless network is designed. Which Cisco WLC configuration setting must be incorporated in the design to encourage clients to use the 5 GHz spectrum?

- A. Band Select
- B. RRM
- C. Cisco Centralized Key Management
- D. load balancing

Correct Answer: A

Section: Explanation:

Band Select will impact the initial scan, steering clients towards 5 GHz

QUESTION 25

A network engineer is preparing for an office site survey with a height of 2.5 meters. Which three components are recommended to complete the survey? (Choose three.)

- A. Use a battery pack to power APs
- B. Use a drawing of the office space to draw AP and client placements.
- C. Use DoS attack on APs while measuring the throughput.
- D. Use APs with directional antennas.
- E. Use APs with external antennas.
- F. Use APs with built-in antennas.

Correct Answer: A, B, F

Explanation:

https://www.cisco.com/c/en/us/td/docs/wireless/technology/mesh/8-4/b_mesh_84/Site_Preparation_and_Planning.html#ID3405

QUESTION 26

A wireless engineer must optimize RF performance for multiple buildings with multiple types of construction and user density. Which two actions must be taken? (Choose two.)

- A. Configure Flexconnect groups for each building.
- B. Configure WMM profiles for each building.
- C. Configure AP groups for each area type.
- D. Configure RF profiles for each area type.
- E. Enable DTPC on the network.

Correct Answer: C, D

Section:

Explanation:

https://www.cisco.com/c/en/us/td/docs/wireless/controller/8-10/config-guide/b cg810/configuring ap groups.html

QUESTION 27

A wireless engineer is hired to design a network for a technology company. The company campus has four buildings and a warehouse with access points that provide full wireless coverage as well as a pair of WLCs located in the core of the network. Which type of wireless architecture is being used?

- A. unified deployment
- B. autonomous deployment
- C. centralized deployment
- D. distributed deployment

Correct Answer: C

Section:

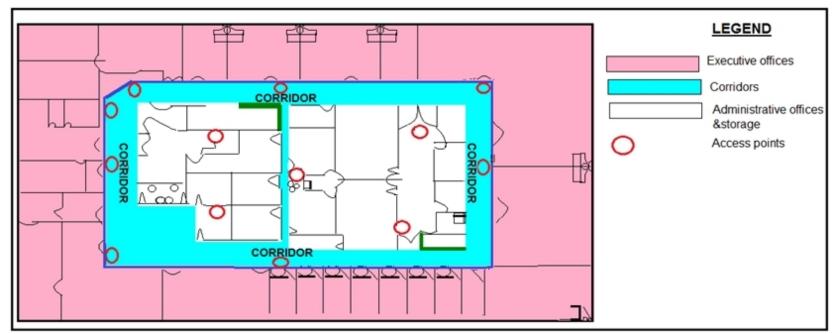
Explanation:

Centralized - Works across APs and WLCs in the same Mobility group



Refer to the exhibit.





What is the main reason why the Wi-Fi design engineer took a different approach than installing the APs in the offices, even though that installation provides better coverage?

- A. aesthetics
- B. transmit power considerations
- C. antenna gain
- D. power supply considerations

Correct Answer: B

Section:

Explanation:

https://www.cisco.com/en/US/docs/solutions/Enterprise/Mobility/emob30dg/RFDesign.html#wp1000551



An engineer has configured guest anchoring for a newly created SSD however, the mobility tunnels are not up, and EPING is failing from the foreign WLC to the anchor WLC. Which traffic flow must be allowed at the firewall to enable the communication?

9dumps

- A. UDP port 16666
- B. IP protocol 97
- C. UDP port 97
- D. TCP port 97

Correct Answer: B

Section:

Explanation:

The only special implementation of the WLC in CCKM is that WLCs exchange client PMK via mobility packets, such as UDP 16666.

QUESTION 30

Which statement about creating a mobility group is true, excluding mobility anchors?

- A. Each WLC must use the same mobility name and be defined as a peer in each other's static mobility members list.
- B. If WLCs with HA SSO are deployed, each WLC in the WLC HA pair considered separately as a mobility peer.

- C. The WLCs do not have to be of the same model or type to be a member of a mobility group, however each member should be running different software versions.
 D. A mobility groups does not require all WLCs in the group to use the same virtual IP address.

 Correct Answer: B
- Section:
 Explanation:
- The HA pair of AireOS WLCs should be considered as separated WLCs with the same exact configuration

A wireless network consultant must assess an existing wireless LAN controller. Which section must the consultant check before replacing the old APs with APs that are IEEE 802.11ac-capable?

- A. number of AP licenses
- B. controller PSU
- C. throughput capacity
- D. software version

Correct Answer: A

Section:

Explanation:

https://www.cisco.com/c/en/us/products/collateral/wireless/catalyst-9100ax-access-points/nb-06-802-11ax-faq-cte-en.html

QUESTION 32

An engineer must decide the cell overlap for a wireless voice deployment. Which Cisco measurement recommendation should be considered?

- A. The edge of the cell should be -67 dBm.
- B. The edge of the cell should be below 35 RSSI.
- C. The measurement should be done on the 2.4-GHz band.
- D. One AP should be deployed per 3000 square feet.

Correct Answer: A

Section:

Explanation:

The optimal VoWLAN cell boundary recommendation is -67 dBm

QUESTION 33

A network engineer is configuring high availability on an access point. What is the maximum number of controllers that can be configured?

- A. 1
- B. 2
- C. 3
- D. 4

Correct Answer: C

Section:

The N+1 HA architecture provides redundancy for controllers across geographically separate data centers with low cost of deployment.

So max 2 will be supported on an AP.

QUESTION 34

An engineer must configure the virtual IP address on multiple controllers in a mobility group. Which rule must the engineer follows to ensure proper roaming?

- A. Ensure that the DNS entry is tied to the virtual IP address of the WLC.
- B. Use a unique IP address for each WLC.
- C. Ensure that the DNS Host Name field is defined.
- D. Use the same IP address for each WLC.

Correct Answer: D

Section:

Explanation:

All controllers within a mobility group must be configured with the same virtual interface IP address.

QUESTION 35

A wireless engineer is utilizing the voice readiness tool in Cisco Prime for a customer that wants to deploy Cisco IP phones. Which dBm range is the network inspected against?

A. -78 to -65 dBm

B. -72 to -67 dBm

C. -85 to -65 dBm

D. -85 to -67 dBm



Correct Answer: D

Section:

Explanation:

Default voice minimum RSSI is -75 dBm. but cisco reccomend to get RSSI better than -67 dBm.

https://www.cisco.com/c/en/us/td/docs/net_mgmt/prime/infrastructure/34/user/guide/bk_CiscoPrimeInfrastructure_3_4_0_UserGuide/bk_CiscoPrimeInfrastructure_3_4_0_UserGuide/bk_CiscoPrimeInfrastructure_3_4_0_UserGuide/bk_CiscoPrimeInfrastructure_3_4_0_UserGuide/bk_CiscoPrimeInfrastructure_3_4_0_UserGuide/bk_CiscoPrimeInfrastructure_3_4_0_UserGuide/bk_CiscoPrimeInfrastructure_3_4_0_UserGuide/bk_CiscoPrimeInfrastructure_3_4_0_UserGuide_chapter_01010.html minimum is -90 and maximum is -67 for IP phone

QUESTION 36

An engineer is reducing the subnet size of the corporate WLAN by segmenting the VLAN into smaller subnets. Clients will be assigned a subnet by location. Which type of groups can the engineer use to map the smaller subnets to the corporate WLAN?

- A. WLC port groups
- B. RF groups
- C. AP groups
- D. interface groups

Correct Answer: D

Section:

- AP groups give the ability to statically map Wi-Fi service (WLAN) to VLAN based on physical location
- Users see the same Wi-Fi service on all sites.
- Admin can monitor and filter based on different IP@ each site
- Can also be used to have smaller Wi-Fi subnets

When conducting a site survey for real-time traffic over wireless, which two design capabilities of smartphones and tablets must be considered? (Choose two.)

- A. no support for 802.11ac
- B. higher data rates than laptops
- C. fewer antennas than laptops
- D. no support for 802.11r
- E. lower data rates than laptops



Correct Answer: B, E

Section: Explanation:

Site surveys are one of the basic requirements when you deploy a WLAN, and you must always consider the Wi-Fi capabilities of the client devices or endpoints. Most smartphones and tablets support 802.11. However, generally, the smartphones and tablets have fewer antennas and lower data rates than laptops. In addition, most are not purpose-built for the enterprise WLAN market. Almost all smartphones and tablets support enterprise security policies. However, many of them do not support

QUESTION 38

A customer has determined that aesthetics is a primary concern for their upcoming guest deployment. Which design consideration can be leveraged to address this concern?

- A. Paint the access point to cover the LED from being noticeable.
- B. Use enclosures to hide the wireless infrastructure in the surrounding environment.
- C. Use AIR-AP-BRACKET-1 to allow for greater mounting locations
- D. Deploy environmentally friendly cabling components to blend into the environment.

Correct Answer: D

Section:

- Use cables that are resistive to bend loss if excessive bending of cables cannot be prevented due to installation constraints.
- Avoid mounting the cabling components in places that block accessibility to other equipment (such
 as a power strip or fans) in and out of the racks.

An engineer has deployed a group of APs in an auditorium and notices that the APs are showing high cochannel interference. Which profile can be used to adjust the parameters for these high-density APs?

- A. QoS profile
- B. AVC profile
- C. RF profile
- D. ISE profile

Correct Answer: C

Section: Explanation:

Information About RF Profiles

RF Profiles allows you to tune groups of APs that share a common coverage zone together and selectively change how RRM will operates the APs within that coverage zone.

For example, a university might deploy a high density of APs in an area where a high number of users will congregate or meet. This situation requires that you manipulate both data rates and power to address the cell density while managing the co-channel interference. In adjacent areas, normal coverage is provided and such manipulation would result in a loss of coverage.

QUESTION 40

Guest anchoring is configured for a newly created SSID for your company. It has been noticed that the mobility tunnels are not up, and that MPING fails from your foreign WLC to the anchor WLC. What is the reason that it is failing?

- A. A rule is needed at the firewall to allow UDP port 16666 for communication towork.
- B. A rule is needed at the firewall to allow UDP port 97 for communication to work.
- C. A rule is needed at the firewall to allow TCP port 97 for communication to work.
- D. A rule is needed at the firewall to allow TCP port 16666 for communication to work.

Correct Answer: A

Section:

Explanation:

- UDP 16666 for tunnel control traffic
- IP Protocol 97 for user data traffic
- UDP 161 and 162 for SNMP

QUESTION 41

A wireless deployment in a high-density environment is being used by vendors to process credit card payment transactions via handheld mobile scanners. The scanners are having problems roaming between access points in the environment. Which feature on the wireless controller should have been incorporated in the design?

C. location design model
A. roaming design model B. voice design model
QUESTION 42 A university is in the process of designing a wireless network in an auditorium that seats 500 students and supports student laptops. Which design methodology should the university implement in the auditorium?
Correct Answer: A Section: Explanation: https://www.cisco.com/c/en/us/td/docs/wireless/controller/8-5/configguide/b_cg85/advanced_wireless_tuning.html
D. Application Visibility Control
B. 802.11w C. AP Heartbeat Timeout
A. RX SOP

Section: Explanation:

What causes the most signal attenuation, based on the wireless design tools?

A. cinder block wall

B. metal door

C. glass wall

D. office window

Correct Answer: B

Section:

Explanation:

It is important to note that metal chair legs and desk components will interact with the antenna of the AP and change the pattern of the radiation. Surveying the results of placement decisions with a good tool is necessary

https://www.cisco.com/c/dam/en_us/solutions/industries/docs/education/cisco_wlan_design_guide.pdf

QUESTION 44

During a client roaming event, which device is responsible for communicating the new Layer 2 EID mapping of a wireless supplicant to the fabric domain?

A. WLC

B. BN

C. CP2

D. CP1

Correct Answer: A

Section:

Udumps

Explanation:

https://www.cisco.com/c/dam/en/us/td/docs/cloud-systems-management/network-automation-and-management/dna-center/deploy-guide/cisco-dna-center-sd-access-wl-dg.pdf

QUESTION 45

Multiple WLCs are implemented in a high-availability configuration in a mobility group. APs are deployed with only a primary controller assigned. By default, which mobility group member controller do the orphaned APs join in the event of a failed controller?

- A. controller with the most available AP free license capacity
- B. controller with the lowest percent of associated APs per license capacity
- C. controller with the least CPU utilization over the last reporting period
- D. controller with the least number of associated APs

Correct Answer: A

Section:

Explanation:

https://mrncciew.com/2013/04/07/ap-failover/

QUESTION 46

Which two criteria must be considered when conducting an outdoor bridge site survey? (Choose two.)

- A. near-far effect
- B. weather
- C. traffic lights
- D. power lines
- E. Fresnel zone



Correct Answer: A, D

Section:

Explanation:

https://www.cisco.com/c/en/us/support/docs/wireless/5500-series-wireless-controllers/116057-site-survey-guidelines-wlan-00.html#anc7

QUESTION 47

A customer has two Cisco 550B WLCs that manage all the access points in their network and provide N+1 redundancy and load balancing. The primary Cisco WLC has 60 licenses and the secondary Cisco WLC has 40. The customer wants to convert the N+1 model to an HA model and provide SSO. Configuration must be performed during a maintenance window. After performing all the configurations on both controllers, the config redundancy unit secondary command is issued on the secondary Cisco WLC and it fails. Which parameter needs to be in place to complete the configuration?

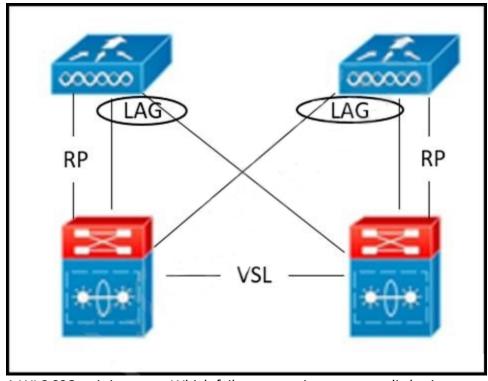
- A. A cable in the RP port
- B. The secondary Cisco WLC needs a minimum of 50 base licenses
- C. The primary Cisco WLC is already set as the secondary unit.
- D. SSO needs to be enabled

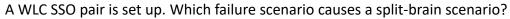
Correct Answer: B

Section:

- With Release 7.4, an HA-SKU secondary controller can be configured as a backup controller for N+1 HA. For example, the following can be used as an HA-SKU controller:
 - 5508 Series Standalone controller with 50 AP license

Refer to the exhibit.







- A. RP is down.
- B. Two distribution ports on the active WLC are down.
- C. VSL is down.
- D. One distribution port on the active WLC is down.

Correct Answer: C

Section:

QUESTION 49

A wireless engineer is getting ready to perform a predictive site survey. The new network needs to support data and voice over wireless. Which two Cisco recommendations should be considered for the design? (Choose two.)

- A. Set -19 dBm of separation between APs on the same channel.
- B. Use the 5 GHz radio band due to 40 MHz bandwidth capability.
- C. Use the 5 GHz radio band due to the 24 non-overlapping channels.
- D. Set the cell boundary to -67 dBm.
- E. Set the cell overlap to 15%

Correct Answer: B, D

An engineer is designing a wireless network to support Cisco Hyperlocation. The customer indicated some How is the design adjusted?

- A. Add additional APs to all the comers of the site.
- B. Add more APs than indicated from the site survey spread across all areas.
- C. Add an additional AP in the middle of the dense area.
- D. Run the site survey using -57d Bm as a threshold.

Correct Answer: D

Section:

QUESTION 51

An engineer is designing a new wireless network. The network needs to full the following requirements: support multimedia applications support a high concentration of wireless clients support data over wireless support roaming

A. use of micro cells with reduced power levels

Which approach should be used?

- B. use of macro cells with reduced power levels
- C. coverage for cells at maximum power levels
- D. use of macro cells with maximum power levels

Correct Answer: A

Section:



QUESTION 52

An engineer is designing a high-density WLAN for a 10,000-seat auditorium. The solution must take advantage of human attenuation, as well as the aesthetics of the room. Where must the APs be placed?

- A. on the walls
- B. under the seats
- C. on the ceiling
- D. above the seating areas

Correct Answer: B

Section:

QUESTION 53

A wireless engineer is designing a wireless network to support real time applications over wireless. Which IEEE protocol must the engineer enable on the WLC so that neighbor list radio management packets are sent to the wireless devices?

- A. 802.11w
- B. 802.11r
- C. 802.11i
- D. 802.11k

Correct Answer: D

Section:

QUESTION 54

An enterprise network administrator is asked to set up an experimental WLAN for a collaboration project with a local service provider. The WLAN must be anchored to a WLC in the service provider data center using legacy mobility mode. After the configurations are completed on the WLCs and the firewalls in the path, the data path mobility tunnel is failing to come up. What should be performed by the administrator to debug the issue?

- A. Establish a Telnet connection from a local PC to the firewall on port 97.
- B. Use the mapping command on the WLC.
- C. Establish a Telnet connection from a local PC to the firewall on port 16666.
- D. Use the mapping command on the WLC.

Correct Answer: B

Section:

Explanation:

https://www.cisco.com/c/en/us/support/docs/wireless/4400-series-wireless-lan-controllers/107458-wga-faq.html Community vote distribution

QUESTION 55

A customer with two Cisco 5520 WLCs that work as a primary and secondary had some switching issues and the primary controller lost connectivity. Immediately all APs went to discovery and joined the secondary controller. After recovering from the issue, the primary controller is online, but no APs return to it. All APs remain in the secondary controller. Which setting advises the APs to return to their primary controller?

- A. AP fallback
- B. AP multicast mode
- C. AP heartbeat timeout
- D. broadcast forwarding



Correct Answer: A

Section:

QUESTION 56

An engineer must optimize client roaming after noticing that clients in the environment are not roaming as expected. Upon reviewing an over- the-air packet capture, the engineer sees that the AP is sending a BSS Transition Management query to the client, which causes it to roam.

The disassociation imminent feature is not enabled on the WLAN. What is the cause of the issue?

- A. Low RSSI check is enabled.
- B. Fast Transition is disabled.
- C. Band Select is enabled.
- D. Optimized roaming is enabled.

Correct Answer: D

Section:

OUESTION 57

A customer Wi-Fi deployment is experiencing the sticky client problem and must enable the optimized roaming feature. The wireless clients have valid security credentials for an SSID and can see an AP that offers that SSID to join. What must be configured to enhance roaming?

A. RSSI threshold

- B. disable DFS
- C. disable 802.11k
- D. enable data rates

Correct Answer: A

Section:

QUESTION 58

An engineer at a global enterprise organization must ensure that a mesh deployment has the highest number of channels available to the backhaul, regardless of region deployed, which design meets this requirement?

- A. one controller per continent
- B. one controller per country code
- C. redundant controllers in the most restrictive regulatory domain
- D. redundant controllers in the least restrictive regulatory domain

Correct Answer: B

Section:

Explanation:

AP regulatory domain is set when shipped, this can't be changed. Country codes are changed manually on the WLC, not the regulatory domain. The country set must be in the regulatory domain of any associated APs. There is no setting for continent.

QUESTION 59

Refer to the exhibit. Inventory Advanced General Credentials Interfaces High availability Name Management IP Address(Ipv4/Ipv6) **Primary Controller** WLC-PRIMARY 192.168.1.11 Secondary Controller WLC-SECONDARY 10.42.98.11 **Tertiary Controller AP Failover Priority** Low

An engineer determined that during a recent controller failure, some APs did not failover to their secondary controller based on the network design, which has sufficient licenses for all APs. The controllers are not in a mobility group but have A records for their hostnames in DNS. Which setting needs to be addressed?

- A. The controllers must be in the same mobility group.
- B. The secondary controller IP address is incorrect.
- C. DNS hostnames are required to be FQDN.
- D. The AP failover priority was not set high enough.

Correct Answer: B

Section:

QUESTION 60

A wireless engineer must design mobility between two buildings at a campus site. The engineer has one controller at each site. The engineer is investigating inter-controller CAPWAP data and control traffic. Which two ports must be open? (Choose two.)

Α.	5246
∽.	J270

B. 5247

C. 8443

D. 16666

E. 16667

Correct Answer: C, D

Section:

QUESTION 61

An engineer has designed an anchor redundancy for guest clients connecting to SSID with auto-anchor configured. After adding a second Anchor WLC under the SSID mobility anchor list, clients are load-balanced between existing and new anchors instead of having one anchor as active and the other one as standby. Which feature should be included in the design that will be configured on the WLC running 8.1 or above to ensure anchor redundancy?

- A. Auto-Anchor Foreign Mapping
- B. AP groups
- C. Guest Anchor Priority
- D. 802.11r

Correct Answer: C

Section:

QUESTION 62

An engineer is configuring a centralized set of controllers for separate facilities. Which two Cisco wireless architectures must be used to ensure flexible sizing of WLAN to VLAN mappings? (Choose two.)

- A. interface group
- B. mobility group
- C. AP group
- D. controller group
- E. RF group

Correct Answer: B, C

Section:

QUESTION 63

APs in a remote office recently have been converted from local mode to FlexConnect to take advantage of the local switching. After the change, remote wireless users report voice quality issues and bad quality on wireless IP phones while roaming. A debug is performed, and it is noticed that the 802.11r Fast Transition is not working as expected, like on local mode AP, though the same WLAN configuration is in place. What is the cause of the issue regarding the FlexConnect APs?

- A. They do not support 802.11r FT.
- B. They must be added into AP groups along with a common RF profile.
- C. They must be in a FlexConnect group to support 802.11r FT.
- D. They must be added to AP groups to support fast roaming methods.

Correct Answer: C

An enterprise is using a Cisco AireOS controller and Wi-Fi 6 APs. The controller is installed in the head office, and the employees primarily use Apple OS devices. The APs broadcast WLAN ENT-WLAN406558520-1 for the employees and a guest WLAN with similar naming. What needs to be enabled on the controller to optimize roaming?

- A. Aggregated Probe Response Optimization
- B. Fast SSID Changing
- C. Load Balancing Window
- D. Client Timers

Correct Answer: B

Section:

QUESTION 65

During a wireless design all APs are mapped to designated controllers in case of a failure. The controllers are located in the same data center but in different racks. An AP failed over to a controller that was not defined on its High Availability tab. The customer does not want the AP to move back to its defined Cisco WLCs until they manually intervene. What needs to be addressed in the design?

- A. Set AP fallback to enabled.
- B. Set AP fallback to disabled.
- C. Change the HA SKU secondary unit option.
- D. Change the default mobility domain.

Correct Answer: B

Section:



QUESTION 66

A network engineer is troubleshooting connectivity issues between two WLCs running 8.x code in SSO mode and finds that the redundancy management heartbeat is failing. Which packet type must be filtered for heartbeats when taking a capture to verify communication?

- A. RSTP
- B. UDP
- C. TCP
- D. ICMP

Correct Answer: B

Section:

QUESTION 67

A customer has multiple WLCs running N+1 redundancy with APs equally distributed. Only one WLC is a designated backup for all other WLCs so the customer must ensure that the most critical APs remain registered or get priority over other APs in case of a WLC failure. However, the customer notices on WLC failure that some critical APs remain unregistered What needs to be addressed in the design?

- A. AP fallback is not enabled on the backup WLC.
- B. AP failover priority is not enabled globally on the backup WLC.
- C. AP failover priority is not enabled globally on the failed WLC.
- D. AP fallback is not enabled on the failed WLC.

Correct Answer: C

When a wireless survey is conducted at a customer facility, signal attenuation in an area that is surrounded by thick glass walls is noted as 2dB. When Cisco Prime Infrastructure is configured, which obstacle must be placed in a map editor to represent the impact that the glass wall will have on the RF signal in the facility?

- A. heavy door
- B. glass
- C. thick wall
- D. light wall

Correct Answer: D

Section:

QUESTION 69

While performing an AP-on-a-stick survey with a cell boundary of -67 dBm, an engineer is consistently reading SNR less than 15 dB in a particular area within the cell boundary. What is causing this issue?

- A. Another signal is interfering with the AP.
- B. The engineer forgot to compensate for the wall type in that area.
- C. The AP transmit power is too low.
- D. The engineer is too far from the AP.

Correct Answer: A

Section:

QUESTION 70

An engineer must perform a Layer 2 survey for a mining facility. Which type of antenna does the engineer use in the mine shaft?

- A. omnidirectional
- B. patch
- C. internal
- D. dipole

Correct Answer: B

Section:

QUESTION 71

An engineer is designing a wireless network to support hyperlocation in an environment that already has APs installed. During the survey, the engineer notices that the APs are pointing in different directions. What is the recommended way to align the APs to easily determine AP

Azimuth, X-Y, and ceiling height information, and minimize confusion and user-entered errors?

- A. APs must be aligned pointing toward the nearest wall.
- B. APs must be aligned pointing toward each other.
- C. APs must be aligned in the same direction.
- D. APs can be aligned all four ways.

Correct Answer: C

An engineer is performing an active survey of a network that must support different types of mobile devices. The devices must be able to run an application that requires a minimum RF of 73 dBm. Which mobile device must be used for the survey?

- A. one that has a receiver sensitivity of -70 dBm
- B. one that has the lowest receiver sensitivity
- C. one that has the most updated wireless card
- D. one that has 802.11a wireless support

Correct Answer: A

Section:

QUESTION 73

An engineer must produce a passive survey report. The coverage heat map shows the entire site with all signal levels. To see only the desired coverage, which action must the engineer take?

- A. Change the color scheme to show the desired heat map.
- B. Use the RSSI calibration tool to configure the receiver sensitivity.
- C. Use the RSSI slider to set the heat map to the desired cutoff lter.
- D. Filter the results to show the desired APs only.

Correct Answer: C

Section:

QUESTION 74

An engineer is performing an AP-on-a-stick survey and nds that the 5 GHz channel overlap is too high when an appropriate number of APs are used for the density requirements. Which two actions during the survey reduce channel overlap? (Choose two.)

- A. Raise the minimum data rate to 24 Mbps.
- B. Increase AP transmit power to improve the SNR.
- C. Allow the use of UNII-2e channels.
- D. Use directional antennas to limit the coverage area of some APs.
- E. Enable power saving mode.

Correct Answer: C, D

Section:

QUESTION 75

An engineer is designing a point-to-multipoint mesh network. Which two AP configurations must be completed for a site survey? (Choose two.)

- A. MAP hostnames
- B. Rx power
- C. mesh on 2.4 GHz band
- D. bridge group name
- E. Tx power

Correct Answer: B, E

The wireless survey report shows APs staggered throughout a facility, with several of them placed on the exterior walls. Other APs are located at building corners and major turns in the structure layout. Assuming that all survey locations are optimized with a minimum of -67 RSSI at cell edges with 20% overlapping cells, for which purpose is this survey model used?

- A. location services, VoIP, data, and video
- B. streaming video with VoIP, data, and HD resolution
- C. location-based services, BYOD preparation, and HD video streaming
- D. voice, data clients, and video on demand

Correct Answer: A

Section:

QUESTION 77

An engineer must perform a predictive design for a wireless network. The customer has devices that can tolerate at most 100 ms of delay when roaming. Which design criteria must be used?

- A. location
- B. data
- C. video
- D. voice

Correct Answer: D

Section:

QUESTION 78

A wireless engineer must assess constraints for a future WLAN deployment for a site that consists of oce cubicles. Which signal propagation attenuation result is associated with this environment?

- A. re ection
- B. absorption
- C. noise
- D. refraction

Correct Answer: B

Section:

QUESTION 79

An engineer configured the optimized client roaming on Cisco WLC with an RSSI threshold of 72dBm. Clients report frequent disconnections. What must be configured for the AP to guide the client to a better AP?

- A. Enable BSS transition at the radio level and optimized roaming on the SSID.
- B. Disable coverage hole detection on the SSID and enable BSS transition on the SSID.
- C. Disable optimized roaming and enable 802.11v support on the SSID.
- D. Enable BSS transition on the SSID and optimized roaming at the radio level.

Correct Answer: D

Section:

QUESTION 80

An engineer must install an outdoor wireless network for an area with a direct line of sight. The outdoor APs are in an open area with of harsh weather. Which two parameters must the engineer consider to prevent an

outdoor wireless outage? (Choose two.)

- A. lightning arrestor installation
- B. antenna cable grounding
- C. cable strength
- D. cable length
- E. elimination of trees

Correct Answer: A, B

Section:

QUESTION 81

A customer has a central Cisco WLC that manages APs in FlexConnect mode. The wireless infrastructure supports multiple small branches. One branch deploys new CCX wireless phones that are authenticated by a central Cisco ISE via PEAP/IMSCHAPv2, and trac is switched locally. The customer must reduce the number of full authentication requests and optimize roaming for the new phones. Which action accomplishes the requirement?

- A. Enable CCKM on the voice SSID and add APs to a FlexConnect group.
- B. Enable Aironet IE on the voice SSID and add APs to an AP group.
- C. Enable Aironet IE on the voice SSID and add APs to a FlexConnect group.
- D. Enable CCKM on the voice SSID and add APs to an AP group.

Correct Answer: A

Section:

QUESTION 82

An engineer must identify the network requirements for a company that has a main oce and 10 branch support data, voice, video, and location tracking. Which two factors must be considered? (Choose two.)

- A. security policy of the company for building access
- B. number of wireless devices that require access
- C. type of site for which the survey will be performed
- D. available power sockets in the IT room
- E. business type of the company

Correct Answer: B, C

Section:

QUESTION 83

During a meeting to gather the requirements for a new Wi-Fi network design, the customer requests that to connect. Which affect does this have to the wireless network?

- A. bigger channel width
- B. lower throughput
- C. 2.4 GHz signal congestion
- D. higher RF re ection

Correct Answer: A

Section:

QUESTION 84

A company is upgrading the wireless infrastructure and is in a state of transition. Some parts of the company's building still run on the legacy WLC. The new WLC is not located at the same site as the legacy WLC. The company requires seamless client inter-controller roaming between the new WLC and the legacy WLC, with no disruptions. Both WLCs are separated by firewalls. Which troubleshooting command validates that the mobility control packets between the WLCs can be sent and received?

- A. mapping mobility_peer IP address
- B. debug mobility handoff enable
- C. debug mobility cong enable
- D. mapping mobility_peer_management IP address

Correct Answer: A

Section:

QUESTION 85

A customer uses a Cisco 5520 WLC that is connected via a single 10-GB interface to manage the wireless network. The wireless network includes 500 APs for the campus network. The customer wants to add 300 APs and is concerned about traffic load and lack of redundancy. The purchase of a second controller is not an option. Which design approach mitigates the customer concerns?

- A. Connect a second 10-GB interface on the WLC and set the port as a secondary port.
- B. Connect a second 10-GB interface on the WLC and implement LAG.
- C. Implement a vWLC and configure SSO with the WLC.
- D. Implement a vWLC and configure N+1 redundancy with the WLC.

Correct Answer: B

Section:



QUESTION 86

A customer has a centralized wireless deployment with N+1 high availability and few open authentication SSIDs configured. After fail over, all APs are broadcasting all SSIDs, but the clients are assigned IP addresses from a different subnet. The WLANs on both WLCs are configured with the same dynamic interfaces. Which feature must be incorporated in the wireless design of the second controller?

- A. RF Protocol
- B. AP Groups
- C. VLAN Select
- D. AAA Override

Correct Answer: C

Section:

QUESTION 87

An engineer needs a wireless design to provide redundancy for APs at remote sites that are connected to Cisco 3504 Wireless LAN

Controllers. The central Cisco 5520 Wireless LAN Controller supports 2000 APs and has 1975 access points associated to it. The engineer decides that not all APs at the remote sites must remain functional in the event of a failure. How does the engineer ensure that the most important access points at the remote sites remain online while not impacting the main site?

- A. Enable Global AP Fail over Priority, set the 1975 APs to a priority of 'high', and set the 25 most important APs at the remote sites to 'critical'.
- B. Enable AP Fallback Mode, set the 1975 APs to a priority of 'high', and set the 25 most important APs at the remote sites to 'critical'.
- C. Enable Global AP Fail over Priority, leave the 1975 APs at the default priority, and set the most important APs at the remote sites to 'low'.
- D. Enable AP Fallback Mode, leave the 1975 APs at the default priority, and set the most important APs at the remote sites to 'high'.

Correct Answer: A

Section:

QUESTION 88

Based on a wireless network design, an engineer configured a primary and secondary controller for their APs. A power interruption caused the primary Cisco WLC to go down, and, as expected, all APs joined the secondary controller. When the primary controller came back up, all the APs remained joined to the secondary controller. Which approach must the engineer take for the APs to move back to the primary?

- A. Set AP Fail over Priority to 4 on each AP.
- B. Set AP Fallback to Enabled on the secondary controller.
- C. Set AP Fallback to Enabled on the primary controller.
- D. Set AP Fail over Priority to Critical globally.

Correct Answer: C

Section:

QUESTION 89

A hospital wireless environment was designed with these characteristics:

- * RF coverage
- * better than -67 dBm in the 5 GHz spectrum
- * RRM be used for DCA and TPC in the 2.4 GHz band
- * RRM be used for DCA and TPC in the 5 GHz band

After deployment, why do many of the legacy 802.11b/g devices have difficulty maintaining connectivity?

- A. Excessive co-channel interference in the 2.4 GHz band exists.
- B. Excessive overlapping channels in the 2.4 GHz band exists.
- C. TPC drastically increases Tx power in the 2.4 GHz band.
- D. TPC drastically reduces Tx power in the 2.4 GHz band.



Correct Answer: D

Section:

QUESTION 90

A customer has a Cisco wireless network that supports VoWLAN services. The customer wants supported voice clients to receive roaming recommendations and suggestions from APs. This functionality must not impact non-VoWLAN clients. What should be enabled on the VoWLAN SSID?

- A. 802.11r Fast Transition
- B. 802.11k neighbor lists
- C. CCKM with 802.1X
- D. 802.11v BSS Transition Management

Correct Answer: D

Section:

QUESTION 91

A customer deploys a new Cisco high-density wireless network within the open areas of a mall to provide free public wireless on 5 GHz. The existing mall tenants have their own wireless networks that are independently managed. Which design approach minimizes channel utilization for the public network?

A. Enable all 5-GHz channels that are supported by the region and use 40-MHz channels.

- B. Enable UNII-1 channels only and use 80-MHz channels.
- C. Enable UNII-1 channels only and use 20-MHz channels.
- D. Enable all 5-GHz channels that are supported by the region and use 20-MHz channels.

Correct Answer: D

Section:

QUESTION 92

A new wireless network design has these requirements:

- * AireOS WLCs as guest anchors
- * a Cisco Catalyst 9800 Series WLC as the foreign controller
- * use of Wi-Fi 6 APs
- * inter-controller roaming for guest users

Which two design approaches meet these requirements? (Choose two.)

- A. Use EoIP for communication between controllers.
- B. Use WLC software versions that support IRCM.
- C. Use AVC on the anchor WLCs.
- D. Use IPv6 across the wireless network.
- E. Use secure mobility to pair controllers.

Correct Answer: B, E

Section:

QUESTION 93

An engineer is designing a new wireless network. Based on the design, OceExtend AP functionality must be used. Which type of license must the Cisco 5520 WLC v8.3 have?

- A. Base license
- B. OceExtend AP license
- C. WPlus license
- D. Plus license

Correct Answer: A

Section:

QUESTION 94

What is the wireless signal loss of large cases of liquid materials being stored in a warehouse environment?

- A. It is higher than dry goods.
- B. It is not impactful to the RF design.
- C. It is less than dry goods.
- D. It is impactful but overall negligible to the RF design.

Correct Answer: A

Section:

QUESTION 95

A customer has two Cisco wireless controllers named WLC-A and WLC-B. Each controller is in a different building on a campus. The WLCs have different Layer 3 interfaces and broadcast the same SSIDs from their respective APs. Users must remain connected to the same VLAN and maintain their IP addresses during roaming from the APs that are attached to WLC-A and WLC B. Which action accomplishes the requirement?

- A. Create a mobility group between the two WLCs to allow auto-anchoring.
- B. Create an SSO cluster to ensure that client sessions sync between WLCs.
- C. Enable 802.11r on each SSID on both WLCs to allow caching of the PMK.
- D. Enable AP groups using the same name on both WLCs for each group.

Correct Answer: A Section:

