



Exam : 646-102

**Title : Wireless LAN for Account Managers Exam
(WLANAM) □ □**

Ver : 11.13.06

QUESTION 1

What will you need to overcome a situation where extended wireless cell coverage is needed, but access to the backbone is either, lacking, impractical or unavailable? (Choose all that apply.)

- A. 50% cell overlap
- B. Workgroup bridge
- C. 10-15% cell overlap
- D. Wireless repeater
- E. Line of sight to AP or wireless bridge
- F. None of the above.

Answer: A, D

QUESTION 2

Which of the following are reasons to use Cisco WLAN in the business environment? (Choose all that apply.)

- A. The need to increase productivity by increasing the number of work stations.
- B. The need to move networked work resources frequently.
- C. The need to increase the number of network users.
- D. The need to increase productivity with employee mobility.
- E. The need to use older building, leased space, or temporary sites with wiring issues.
- F. All of the above.

Answer: B, D, E

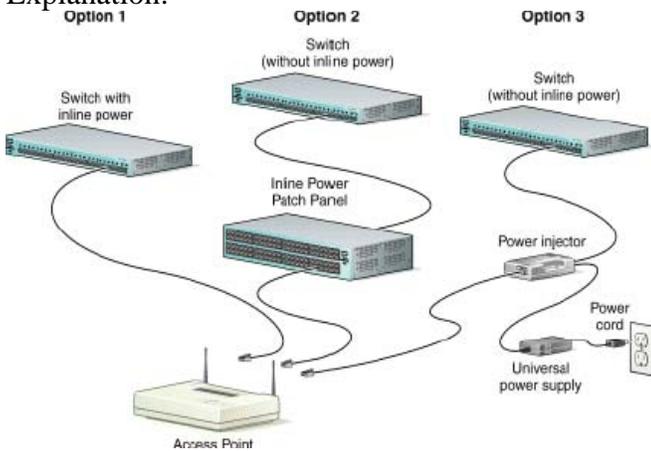
QUESTION 3

Which of the following can be used as available sources of inline power for the Access Point (AP)? (Choose three.)

- A. Cisco Catalyst 3550 switch
- B. Inline power injector
- C. Standard power cable
- D. 7500 series routers
- E. Inline power patch panel
- F. Optic cables
- G. None of the above.

Answer: A, B, E

Explanation:

**QUESTION 4**

Which of the following metrics are utilized in measuring returns on investments (ROI) when implementing Cisco WLAN solutions in a vertical industry background? (Choose all that apply.)

- A. Higher student attendance rates at schools, when a WLAN is used to provide sick students access to school resources from home.
- B. Lower litigation costs in the financial services field, when a WLAN is used to protect assets, such as customer account information, from security breaches.
- C. Higher room occupancy rates in hotels, when a WLAN is used to attract business professionals.
- D. Higher inventory turnover rates in the retail business, when a WLAN solution is used for the timeous restocking of merchandise.
- E. Higher recovery rates of patients in hospitals, when a WLAN solution is used to provide patient care at the bedside.
- F. All of the above

Answer: B, D, E

QUESTION 5

A high growth manufacturing company is extended business operations to an older building near campus. What is the best positioning statement for this sales situation?

- A. Cisco wireless bridges help companies to link operations between newer campus buildings and older warehouses and manufacturing plants.
- B. Cisco wireless bridges help companies to provide employees fast and easy access to the corporate LAN from older buildings around the campus.
- C. Cisco wireless bridges help companies leverage the availability of older buildings near campus, eliminating the need to search for newer buildings further away.
- D. Cisco wireless bridges enable companies to extend the high-speed campus network to older buildings near the campus, while minimizing the high cost of connectivity to those old buildings.

Answer: D

QUESTION 6

For educational institutions, what are two significant benefits of using WLAN technology? (Choose two)

- A. Mobility for "classroom-on-a-cart".
- B. Easy Internet access within the facility.
- C. Low-cost network connection for temporary classrooms.
- D. Low-cost leased line connections between school buildings.

Answer: A, C

QUESTION 7

What are three benefits of using Cisco Aironet Workgroup Bridge (WGB)? (Choose three)

- A. Provides driver-free device access.
- B. Supports in-line power over the Ethernet.
- C. Provides easy network access for up to eight devices.
- D. Provides load balancing for optimum WLAN performance.
- E. Allows quick redeployment of equipment when expanding or moving.

Answer: A, B, C

QUESTION 8

What is the functionality of a Networks in Motion architecture?

- A. Allows vehicles to wirelessly roam while in a WAN.
- B. Allows employees to be mobile at home and in the office.
- C. Allows for automated repair of laptops and other hardware.
- D. Allows employees to wirelessly roam from floor to floor inside a building.

Answer: A

QUESTION 9

In a Metropolitan Area Network design the backbone wireless equipment being used is_____.

- A. APs
- B. Wireless bridges
- C. Inline power switches
- D. Cisco Aironet Client Adapters

Answer: B

QUESTION 10

Two LANS are connected using a Cisco point-to-point wireless bridge utilizing dish antennas with good line of sights.

What is the Cisco recommended theoretical maximum distance between sites?

- A. 2 miles
- B. 5 miles
- C. 15 miles
- D. 25 miles
- E. 40 miles

Answer: D

QUESTION 11

What are three available sources of inline power for the Access Point (AP)? (Choose three)

- A. 7500 series routers
- B. Inline power injector
- C. Standard power cable
- D. Inline power patch panel
- E. Cisco Catalyst 3550 switch

Answer: A, B, C

Note: Uncertainty

QUESTION 12

For hospitals, what are two significant benefits of using WLAN technology? (Choose two)

- A. More flexible, mobile patient monitoring
- B. Slower, but more accurate electronic procedures
- C. Quicker, more convenient access to research data
- D. Less cluttered, more available laboratory floor space

Answer: A, C

QUESTION 13

What are four benefits of using Cisco Aironet Workgroup Bridge (WGB)? (Choose four)

- A. Free drivers are provided for device access.
- B. It can be used in a non-Cisco 802.11b WLAN infrastructure.
- C. It eliminates cable installation costs and lowers facilities costs.
- D. Equipment can be easily moved as workgroups change in number or location.
- E. If attached to a hub, it can provide up to 8 MAC addresses to support access from wired devices.
- F. It supports remote workgroups at greater distances with a clear line of sight to a wireless bridge by using an optional long-range antenna.

Answer: A, B, C, D

QUESTION 14

Which statement represents a common reason for using Cisco in-building WLAN solution in the business environment?

- A. Enhancing traditional wired network performance.
- B. Wireless moving, adding, and changing user locations.
- C. Expanding to a remote location in another city.
- D. Increased user access authorization to the network.
- E. None of the above.

Answer: B

QUESTION 15

What makes a Cisco WLAN solution the preferred choice when considering its security features?

- A. It can circumvent physical barriers when transmitting.
- B. It will protect confidential or proprietary data when it is transmitted over WLAN via radio waves.
- C. It does not allow corruption of data by radio interference.
- D. It is able to recover data lost during transmission.

Answer: B

QUESTION 16

You are a network technician at Certkiller .com. Your newly appointed Certkiller trainee wants to know why Cisco WLAN is preferred for communications in fast-growing organizations. What would your reply be? (Choose all that apply.)

- A. Location of computers in cases where it would have been impractical or impossible to run cables.
- B. Portable computers can roam freely within a city while maintaining network access.
- C. It is possible to access information from conference rooms, reception areas and other temporary locations in real-time.
- D. Traditional LANs can be disposed of.
- E. Temporary workgroups can be established quickly.
- F. No traversing of firewalls when accessing Internet websites.

Answer: A, C, E

QUESTION 17

What are three unique features that apply to the Cisco Aironet 1100 and 1200 Access Points (APs)? (Choose three)

- A. Dual radio support
- B. Inline power support
- C. Upgradeable to 802.11g
- D. A metal case for harsh environments
- E. 100 mW radio design for the 802.11b radio

Answer: B, C, E

QUESTION 18

Load balancing of clients between Access Points (APs) is a method to achieve optimal WLAN performance. Which two statements are true about load balancing? (Choose two)

- A. Load balancing policies are based on number of users, error rates, and signal strengths.
- B. Load balancing redistributes users among APs to deliver more balanced collision domains.
- C. Load-balancing policies are based on cell size, aggregate peak cell capacity, and radio frequency.
- D. Load balancing redistributes users among APs to deliver clients to the most compatible cell frequency.

Answer: A, B

QUESTION 19

When using VLANs on Cisco Aironet 1100 and 1200 APs, which three types of security can be enabled? (Choose three)

- A. LEAP
- B. Kerberos
- C. 128 bit WEP
- D. 256 bit WEP
- E. PEAP and WPA

Answer: A, C, E

QUESTION 20

Which three statements about the Cisco Aironet 1200 are true? (Choose three)

- A. It has a plastic case.
- B. It has a dual radios.
- C. It is upgradeable to 802.11g.
- D. It supports 802.11a/b/g technologies.
- E. It has RP-SMA connectors for 2.4 GHz antennas.

Answer: B, C, D

QUESTION 21

What are the key benefits of WLAN technology for a vertical industry? (Choose three)

- A. Retail stores can improve inventory control with timely restocking merchandise and fewer errors.
- B. Educational institutions can quickly and flexibly deploy mobile classrooms where and when they are needed.
- C. Hotels can increase corporate customer loyalty by providing meeting rooms with secure wireless network access.
- D. Pharmaceutical companies can speed up drug development by providing easy public access to clinical study information.

Answer: A, B, C

QUESTION 22

What are three factors that make a Cisco WLAN idea for communications in fast-growing organizations? (Choose three)

- A. Ability to dispose of traditional LANs.
- B. Quick establishment of temporary workgroups.
- C. Access to Internet websites without traversing a firewall.
- D. Location of computers where it is impractical or impossible to run cable.
- E. Ability for portable computers to roam freely within a city while maintaining network access.
- F. Access to real-time information from conference rooms, reception areas, and other temporary locations.

Answer: A, B, E

QUESTION 23

What is a common business driver for a Cisco in-building WLAN solution?

- A. Improving the performance of a traditional wired network.
- B. Extending operations to a remote location in another city.
- C. Moving, adding, and changing user locations without rewiring.
- D. Increasing the number of users authorized to access the network.

Answer: C

QUESTION 24

Vertical markets, such as healthcare, were early adopters of WLAN technology because _____.

- A. High speed was not important criteria.
- B. Security concerns for privacy and loss of control were minimal.
- C. WLAN technology offered a lower investment cost than traditional LAN.
- D. Employee mobility reduced operational costs and provided an immediate ROI.

Answer: D

QUESTION 25

What are three key benefits of WLAN technology for a vertical industry? (Choose three.)

- A. Hotels can increase customer loyalty by providing guests with high-speed, mobile Internet access.
- B. Hospitals can improve patient care by providing quick access to accurate patient information at the patient bedside.
- C. Retail stores can flexibly, and without wiring costs, place wireless point of sale (POS) devices anywhere in the store.
- D. Educational institutions can quickly connect temporary classroom trailers to the main school building with low-cost leased lines.

Answer: A, B, C

QUESTION 26

What are three business drivers for using a Cisco WLAN (Choose three.)

- A. the need to increase the number of network users
- B. the need to move networked work resources frequently
- C. the need to increase productivity with employee mobility
- D. the need to use older buildings, leased space, or temporary sites with wiring issues

Answer: B, C, D

QUESTION 27

Working in a vertical industry, which of the following are essential benefits of WAN technology? (Choose all that apply.)

- A. By providing guests with high-speed, mobile Internet access, hotels can increase customer loyalty.
- B. Wireless point of sale (POS) devices can be placed anywhere in a store, flexibly, and without wiring costs.
- C. Temporary classroom trailers in educational institutes can quickly be connected to main educational buildings with low-cost leased lines.
- D. By providing quick access to accurate patient information at the patient bedside, hospitals can improve patient care.

Answer: B, C, D

Explanation:

http://www.cisco.com/warp/public/cc/pd/witc/ao340ap/prodlit/airo_ov.htm

Current vertical markets include:

Education

Finance

Health care

Hospitality and retail

Manufacturing and industrial

QUESTION 28

Your newly appointed Certkiller trainee wants to know what the features of Cisco Aironet Access Points (APs) is.

What will you reply? (Choose all that apply.)

- A. It supports Layer 3 routing.
- B. It controls incoming and outgoing traffic flow in the wired network.
- C. It provides ports for a maximum of 8 wired machines.
- D. It allows network access to wireless clients.
- E. It allows for seamless roaming between wireless cells.

Answer: B, D, E

Explanation:

Cell Master

The AP is the master for the cell, and controls traffic flow to and from the network. The remote devices do not communicate directly with each other; they communicate to the AP

Higher Standards

The products seamlessly integrate into wired Ethernet networks, fully comply with the IEEE 802.11b standard at all speeds, and deliver up to 11 Mbps throughput. Security and hardware features have been improved to ensure stability and enhanced performance.

Filtering

Broadcast and multicast filtering enables administrators to select the amount of such frames that enter the WLAN, conserving the shared bandwidth. Layer 3 IP Net and IP Socket filters are also provided.

http://www.cisco.com/warp/public/cc/pd/witc/ao1200ap/prodlit/casap_ds.htm

Fast secure roaming is supported by the Cisco Aironet 1200 Series in conjunction with Cisco or Cisco Compatible client devices. With fast secure roaming, authenticated client devices can roam securely from one access point to another without any perceptible delay during reassociation. Fast secure roaming supports latency-sensitive applications such as wireless voice over IP (VoIP), enterprise resource planning (ERP), or Citrix-based solutions. (Figure 3).

QUESTION 29

How can an educational institute benefit from WLAN mobility? (Choose two.)

- A. A workgroup bridge (WGB) can connect a temporary mobile classroom to the main network, enabling the sharing of scholastic aids where needed.
- B. WLAN technology facilitates an affordable solution to connect classroom trailers to the main building by rendering highly priced wires and cables obsolete.
- C. WLAN technology can provide network access to all student records and instructional materials, giving access to both students and teachers.
- D. WLAN technology facilitates the establishment of high-speed network connections between buildings, incurring only leased line installation costs.

Answer: B, D

Explanation:

Mobile Classrooms

WLANs can also provide a low cost solution to connect remote classrooms (trailers) to the main school building. The expense of running fiber or copper to those potentially mobile buildings is cost prohibitive.

Used As a WirelessBridge

WLAN is used as a replacement for leased line/frame relay in the educational market because it has no recurring costs. The Cisco Aironet 350 series bridge is used to connect all the remote school locations to a centralized location. This centralized location will then have a pipe to the ISP (either leased or wireless).

QUESTION 30

Which three describe a multi-point bridging environment? (Choose three)

- A. The LANs all appear as one.
- B. The LANs are individual subnets.
- C. Directional antennas are typically used at the main site.
- D. An omni directional antenna is typically used at the main site.
- E. The remote sites communicate with the main site and with each other directly.
- F. The remote sites communicate with the main site, with traffic from one remote site to another passed through the main site.

Answer: A, B, C

QUESTION 31

A common method of securing early WLANs used to be the Service Set Identifier (SSID). Which of the following describes the SSID? (Choose two.)

- A. 40-bit keys
- B. Medium level of security
- C. Network naming scheme for RF networks
- D. Must match on both client and Access Point (AP)
- E. One-way authentication

Answer: C, D

Explanation:

SSID Use

The SSID is a network-naming scheme to define the radio frequency (RF) network that both the client and the AP must share. If the client does not have the proper SSID, it would be unable to associate to the AP, and would have no access to the network.

QUESTION 32

Which of the following statements regarding the radios within the Cisco Aironet 350 and 1200 Access Points (APs) are valid? (Choose all that apply.)

- A. Both are WECA "Wi-Fi" compliant.
- B. 802.11 do not cover the communication between Access Point (APs) and the backbone infrastructure, but Cisco Aironet Wireless excels in this area.
- C. They meet the 802.11a specifications only.
- D. They meet the 802.11b specifications only.
- E. Cisco is shipping its 1 st generation of 802.11b products.
- F. They meet both 802.11, 802.11a and 802.11b specifications.
- G. They improve upon 802.11 WEP by implementing 802.1x and Cisco LEAP.
- H. All of the above.

Answer: A, B, F, G

QUESTION 33

Cisco Aironet 350 and 1200 Access Points (APs) have four unique features in common. What are these features? (Choose four.)

- A. Inline power
- B. Dual-cell service area (DSA)
- C. 100 mW output power on the 802.11b radio
- D. Fire-wire in the fixed internal antenna
- E. An 802.11b radio
- F. Fixed internal antenna
- G. Plenum-rated enclosure
- H. all of the above

Answer: A, C, E, G

QUESTION 34

Which of the following are the characteristics of the type of security called Wired Equivalent Privacy (WEP) as defined by the 802.11 standard? (Choose all that apply.)

- A. 40-bit keys
- B. Dynamic creation of WEP keys.
- C. Static key sharing between the wireless client and Access Point (AP).
- D. Statically defined keys
- E. Username/password authentication

Answer: A, C, D

Explanation:

http://www.cisco.com/warp/public/cc/so/cuso/epso/sqfr/safwl_wp.htm

802.11 and WEP

The 802.11 standard defines a type of security, Wired Equivalent Privacy (WEP), has initially defined 40-bit keys. These keys are used to encrypt the data packets prior to being transported across the open through the RF.

RC4 Encryption

WEP is based upon the RC4 encryption method from RSA Data Security, Inc. Using this method, a wireless client and AP share static WEP Keys

128-Bit Encryption

WEP can also be utilized with a 32 character string which equates to 128-bit encryption. The IEEE 802.11 standard has chosen to use 40-bit keys. Several vendors such as Lucent and Cisco support 128-bit WEP encryption with their WLAN solutions for improved security. WECA also allows for the use of 128-bit WEP encryption to achieve the Wi-Fi seal.

QUESTION 35

Why buy a Cisco WLAN solution for its security features?

- A. It transmits around physical barriers.
- B. It prevents corruption of data by radio interference.
- C. It recovers data lost during transmission between buildings.
- D. It protects confidential or proprietary data transmitted over WLAN via radio waves.

Answer: D

QUESTION 36

What are three business drivers for using a Cisco WLAN? (Chose three)

- A. The need to increase the number of network users.
- B. The need to move networked work resources frequently.
- C. The need to increase productivity with employee mobility.
- D. The need to use older buildings, leased space, or temporary sites with wiring issues.

Answer: B, C, D

QUESTION 37

Cisco Aironet 1200 Access Points (APs) have four unique features. What are these features? (Choose four.)

- A. Inline power
- B. The mini-PCI will support 802.11a
- C. The CardBus radio will support 802.11a
- D. Plenum-rated enclosure
- E. Dual-cell service area (DSA)
- F. 100 mW output power on the 802.11b radio

Answer: A, C, D, F

Note: Compare with Q24.

QUESTION 38

Cisco Aironet series Access Points deliver improved performance even in harsh environments. Which three Access Points characteristics contribute to this industry-leading range and reliability? Choose three.

- A. Inline power
- B. Antenna diversity
- C. Receive sensitivity
- D. Transmit sensitivity
- E. Superior delay spread characteristics

Answer: B, C, E

QUESTION 39

Cisco WLAN security is capable of supporting Wired Equivalency Privacy (WEP) technology. In what fashion does WEP technology protect confidential and proprietary data?

- A. It creates decoy data packets for redundancy.
- B. It uses a 40-bit or 128-bit encryption key to encrypt the text.
- C. Network access is limited to authorized users.
- D. Potential internal and external network intrusion can be detected.

Answer: B

Explanation:

802.11 and WEP

The 802.11 standard defines a type of security, Wired Equivalent Privacy (WEP), that has initially defined 40-bit keys. These keys are used to encrypt the data packets prior to being transported across the open through the RF.

128-Bit Encryption

WEP can also be utilized with a 32 character string which equates to 128-bit encryption. The IEEE 802.11 standard has chosen to use 40-bit keys.

Several vendors such as Lucent and Cisco support 128-bit WEP encryption with their WLAN solutions for improved security. WECA also allows for the use of 128-bit WEP encryption to achieve the Wi-Fi seal.

QUESTION 40

Authentication and association is part and parcel of the process when a client attaches to an Access Point (AP).

Which of the following statements is true? (Choose all that apply.)

- A. Association is the process of AP association with a specific Service Set Identifier (SSID) entry.
- B. Association is the process of associating a client with a given AP in the WLAN.
- C. Authentication is the verification of the user credentials wanting to join a WLAN.
- D. Authentication is the verification of the client credentials wanting to join a WLAN.
- E. Association is when a user is associated with a specific client entry in the RADIUS database.
- F. Authentication is the verification of the credentials of a session-generated Wired Equivalent Privacy (WEP) key.

Answer: B, D

Explanation:

Authentication and Association

The process a client undergoes while "attaching" with an AP is two part, authentication and association.

Authentication is the process of verifying the credentials of a client desiring to join a WLAN. Association is the process of associating a client with a given access point in the WLAN.

QUESTION 41

You are the network administrator at Certkiller . Your newly appointed Certkiller trainee wants to know the advantages are of using Cisco Aironet workgroup bridge (WGB).

What would your reply be? (Choose all that apply.)

- A. Cable installation costs are eliminated and facilities costs are significantly lowered.
- B. Movement of equipment when work groups change in number and location is easily facilitated.
- C. It can provide up to 8 MAC addresses to support access from wired devices, when attached to a hub.
- D. Device access drivers are provided free of charge.
- E. Non-Cisco 802.11b WLAN infrastructure is not an issue.
- F. It supports remote workgroups up to 10 miles away with clear line of sight to a wireless bridge by using an optional long-range antenna.

Answer: B, C, D, F

Explanation:

<http://www.knowledge.net>

http://www.cisco.com/warp/public/cc/pd/witc/ao350ap/prodlit/a350b_ds.htm

Designed to meet the needs of remote workgroups, satellite offices, and mobile users, the Cisco Aironet(r) 350 Series Workgroup Bridge brings the freedom and flexibility of wireless connectivity to any Ethernet-enabled device. The workgroup bridge quickly connects up to eight Ethernet-enabled laptops or other portable computers to a wireless LAN (WLAN), providing the link from these devices to any Cisco Aironet Access Point (AP) or Wireless Bridge. The Cisco Aironet 350 Series Workgroup Bridge offers:

- Ø Driverless installation of up to eight Ethernet-enabled devices
- Ø Optimum wireless performance and range
- Ø Standards-based centralized security
- Ø Two versions for a range of application requirements
- Ø Full-featured utilities and robust management

QUESTION 42

The delivery of improved performance in all circumstances, even in harsh environments can be attributed to Cisco Aironet series Access Points (APs).

Which of the following Access Point (AP) features makes a significant contribution to this industry-leading range and its reliability? (Choose all that apply.)

- A. Inline power
- B. Line of sight reception
- C. 100 mW transmit power
- D. Transmit sensitivity
- E. Superior delay spread characteristics
- F. Line of sight transmission
- G. Antenna diversity
- H. Sensitive reception
- I. All of the above

Answer: C, E, G, H

Explanation:

<http://www.cisco.com/univercd/cc/td/doc/pcat/ao350ap.htm#xtocid6>

Industry-Leading WLAN Performance, Range, and Reliability

The 100-mW transmit power and receive sensitivity of the Cisco Aironet 350 Series AP leads the industry in

range and reliability. Antenna diversity and superior delay spread (multipath) characteristics of the Cisco Aironet 350 Series deliver improved performance even in harsh environments such as warehouses, factories, and metal buildings.

Administrators can also configure the radio transmit power (1, 5, 20, 30, 50, 100 mW) on the Cisco Aironet 350 Series to meet the specific coverage requirements and minimize interference. In addition to an AP with two captured 2.2 dBi antennas, an AP with two RP-TNC connectors is offered for more challenging applications, where a broad portfolio of removable antennas can be used to further increase range and reliability.

QUESTION 43

Enterprise customers are adding WLAN and wireless bridge components to their networks in order to extend wired networks without _____.

- A. wire-related costs
- B. additional equipment
- C. changes in personnel
- D. relocation of resources

Answer: A

QUESTION 44

You are a network technician at Certkiller .com. Your newly appointed Certkiller trainee wants to know which credentials are necessary when using the LEAP authentication method.

How will you reply? (Choose all that apply.)

- A. WEP key
- B. User name
- C. Static keys
- D. Password
- E. Public key
- F. EAP logon

Answer: B, D

Explanation:

http://www.cisco.com/en/US/customer/about/ac123/ac114/about_cisco_online_exclusive09186a00800a5cab.html

Step by Step: Cisco LEAP

The Cisco derivative of EAP is based on mutual authentication, which means that both the user and the AP to which the user is attempting to connect must be authenticated before access onto the corporate network is allowed. Mutual authentication protects enterprises from unauthorized (or "rogue") APs serving as a potential launching pads for entry into the network.

Cisco LEAP is based on a username/password scheme and uses the following basic authentication process:

1. A client connects to the wireless medium.
2. The client sends a start message to an AP.
3. The AP sends an access request on behalf of the client to the authentication server.
4. The client sends its username to the AP, which forwards it to the authentication server.

5. The authentication server sends a challenge back.
6. The AP forwards the challenge to the client as an EAP message over 802.1X.
7. The client runs the challenge through the Cisco LEAP algorithm, mixes challenge and user password together, and responds with a value, which the AP forwards to the authentication server.
8. The authentication server runs the user password through the Cisco LEAP algorithm, which processes the challenge and client response, then compares its derived value with the value it received from the client. If the two values match, the authentication server sends a success message to the AP, which passes it to the client.
9. Now, the client sends a challenge to the authentication server to authenticate the AP (the network), and proceeds through the reverse Cisco LEAP process.
10. If the network is successfully authenticated, the client passes a success message through the AP to the authentication server, which opens a port. The user is live on the network.
11. Cisco LEAP RADIUS server a WEP key for that session and stores it in the AP.
12. The Cisco LEAP client locally derives the WEP key.

QUESTION 45

What should you do when performing a density and performance test?

- A. There is never a need for manual testing.
- B. Run the AP Scan utility and relay its input.
- C. Do a complete manual site survey to determine the total number of APs and placement of all APs.
- D. Do a manual survey in a representative area of the building to determine the cell size and throughput for a single AP.

Answer: D

QUESTION 46

Which three statements are true about 802.11g WLANs? (Choose three)

- A. 802.11g devices are backward compatible to 802.11a devices.
- B. 802.11g devices are backward compatible to 802.11b devices.
- C. The modulation for 64 MB is identical to 802.11a modulation at 54 Mbps.
- D. The spectral bandwidth is identical to the bandwidth of 802.11b spectral bandwidth.

Answer: B, C, D

QUESTION 47

Which two devices are needed for 802.1X authentication? (Choose two)

- A. Switch
- B. RADIUS server
- C. Cisco Aironet Access Points

D. Wired Equivalence Privacy (WEP) server

Answer: B, C

QUESTION 48

Which two are required features in WPA? (Choose two)

- A. WEP authentication
- B. WPA migration mode
- C. Pre-shared key authentication
- D. Unicast and broadcast key management

Answer: C, D

QUESTION 49

What is a financial advantage of WLANs and wireless bridges compared to T1/E1 leased lines?

- A. Low monthly fees.
- B. No installation costs.
- C. Longer distances for network connectivity.
- D. Greater bandwidth capabilities at lower cost.

Answer: D

QUESTION 50

Cisco wireless bridges can provide a connection between line-of-sight buildings within the high cost of _____.

- A. Relocating resources
- B. Adding software to the network
- C. Replacing an existing traditional LAN
- D. Digging trenches, leasing lines, and solving right-of-way issues

Answer: D

QUESTION 51

You are a network technician at Certkiller .com. Your newly appointed Certkiller trainee wants to know why enterprise customers opt to use WLAN and wireless bridge components to extend their wired networks.

What would your reply be?

- A. Additional equipment has to be purchased
- B. Wire-related costs are kept to a minimum
- C. Changes in personnel must be accommodated
- D. Relocation of resources is made possible

Answer: B

QUESTION 52

A rapidly expanding manufacturing plant plans to lease new premises that are situated within eyesight of their existing campus. They however want to avoid the unnecessary costs that are associated with expanding an existing network.

What is the best positioning statement for this sales situation?

- A. Cisco wireless bridges can facilitate the rapid relocation and distribution of resources in disparate buildings within a campus, without replacing the existing traditional LAN.
- B. Cisco wireless bridges enable companies to quickly add line-of-sight buildings to a high-speed campus network, without the high cost associated with having to dig trenches, leasing lines, and right-of-way issues like expropriation.
- C. Cisco wireless bridges will facilitate a quick, shared single high-speed line to the Internet between buildings.
- D. Cisco wireless bridges are high-speed, high-power radio transceivers that provide connectivity between two or more buildings regardless of distance between, in a single LAN.

Answer: A

QUESTION 53

A high-growth manufacturing company plans to lease new buildings within sight of the existing campus, while avoiding unnecessary networking expenses.

What is the best positioning statement for this sales situation?

- A. Cisco wireless bridges allow companies to quickly set up a shared single high-speed line to the Internet across a campus.
- B. Cisco wireless are high-speed, high-power radio transceivers that connect two or more buildings that are up to 25 miles apart in a single LAN.
- C. Cisco wireless bridges allow companies to quickly relocate and distribute resources in disparate buildings within a campus, without replacing the existing traditional LAN.
- D. Cisco wireless bridges enable companies to quickly add line-of-sight buildings to a high-speed campus network, without the high cost associated with trenches, leased lines, and right-of-way issues.

Answer: D

QUESTION 54

How do Cisco wireless bridges create a single LAN?

- A. by seamlessly linking remote networks
- B. by encrypting data that transmit through the air
- C. by easily connecting mobile users to a backbone LAN
- D. by cleanly transmitting data through ceilings, floors, and walls

Answer: A

QUESTION 55

Which of the following statements regarding Cisco wireless bridges are valid? (Choose four.)

- A. It operates at Layer 2.
- B. It doubles as an AP in some applications.
- C. It does not need line of sight.
- D. It does not increase the Ethernet hop count
- E. It provides IP subnetting on the remote LAN.
- F. Network can view it as simple cables.
- G. Obstacles such as buildings, trees, and hills have no effect.
- H. All of the above.

Answer: A, B, D, F

Explanation:

WirelessBridgeUse

Wireless bridges connect two or more physically separated networks, even when they are separated by obstacles such as freeways, railroads, and bodies of water. Cisco wireless bridges also allow multiple sites to share a single, high-speed connection to the Internet.

Routing Limitation

Cisco Bridges operate at the MAC address layer (Data Link Layer), which means they have no routing capabilities. A router must be put in place if IP subnetting is needed within the network.

Point-to-Point Bridges

In a point-to-point bridge, two LANs can be located up to 25 miles apart. The antennas must have line of site with each other. Obstacles such as buildings, trees and hills will cause communication problems.

Unified Segments

Ethernet segments in both buildings act as if they are one. The bridge does not add to the Ethernet hop count, and is viewed by the network as simply a cable. A simple parameter change in one of the bridges will allow for the bridges to communicate with each other.

WirelessBridgeDeployment

A bridge can act as an AP in some applications by communicating with clients at the remote sites. These clients can include the Cisco Workgroup Bridge, PC Card and PCI products. Multiple topologies provide a wide range of networking options.

QUESTION 56

How is a single LAN created by Cisco wireless bridges?

- A. By encrypting data that is transmitted through the air.
- B. By allowing the connection of mobile users to a backbone LAN without problems.
- C. By seamlessly linking remote networks.
- D. By transmitting data through ceilings, floors, and walls without corrupting it.

Answer: C

QUESTION 57

Which two statements about the Cisco Aironet 1100 Series are true? (Choose two)

- A. It is upgradeable to 802.11g.
- B. It has a single, upgradeable 802.11b radio.
- C. It has dual band radios for 802.11a and 802.11g.
- D. It has RP-TNC connectors for 2.4 GHz antennas.

Answer: A, B

QUESTION 58

What are three features of Cisco Aironet Access Points (APs)? (Choose three)

- A. It provides Layer 3 routing.
- B. It has ports for up to 8 wired machines.
- C. It allows wireless clients to access a network.
- D. It allows for seamless roaming between wireless cells.
- E. It controls wireless traffic to and from the wired network.

Answer: C, D, E

QUESTION 59

Radio waves travel through ceilings, floors, and walls. Therefore, transmitted data may _____.

- A. Frequency hop.
- B. Reach unintended recipients.
- C. Be duplicated during transmission.
- D. Be corrupted by radio interference.

Answer: B

QUESTION 60

What is one of the most important customer benefits derived from WPA security?

- A. It can coexist with ACS.
- B. It supports Cisco client adapters.
- C. It requires 802.1X and EAP authentication.
- D. It permits implementation of security on non-Cisco devices.

Answer: D

QUESTION 61

Which two are components of WPA (version 1)? (Choose two)

- A. 64 bit IV space
- B. 802.1X authentication

- C. 256 bit EAS encryption cipher
- D. Per-packet keying and Message Integrity Check

Answer: B, D

QUESTION 62

What are two used and benefits of WLAN technology in a medial context? (Choose two)

- A. Medical teams can do patient rounds with wireless carts to look up records and lab results.
- B. Doctors can check the Internet instantly to research medical conditions from the patient's bedside.
- C. Hospitals can raise productivity by providing nurses with access to patient records from home.
- D. Medical research groups can share resources across multiple hospitals throughout a given radio frequency (RF) regulatory domain.

Answer: A, B

QUESTION 63

How does medical science use and benefit from WLAN technology? (Choose all that apply.)

- A. Hospitals can enhance productivity by providing nurses with access to patient records from home.
- B. Interns can do their rounds with wireless carts to look up records and lab results.
- C. Doctors can get up to date information instantly by checking the Internet to research medical conditions from the patient's bedside.
- D. Doctors can inform the next of kin of their patients' conditions through the Internet instantaneously.
- E. Medical research groups can share resources across multiple hospitals throughout a given radio frequency (RF) regulatory domain.

Answer: B, C

Explanation:

Mobility and Efficiency

With their wireless solution, the hospital team begins work rounds with two wireless carts, giving them the ability to look up labs and graphic trends for a patient while at the bedside. The carts are also connected to the Internet, facilitating instant research.

Quicker Data Access

The result is quicker, more convenient access to records and research data, which has proven invaluable in situations ranging from emergency care to daily patient visitation. The Cisco WLAN solution has been essential to successfully implementing online order entry in the intensive care unit.

Medical Use

By implementing Cisco WLAN solutions, hospitals improve data input, provide more efficient access to data at the patient's bedside, and enable more flexible and mobile patient monitoring.

QUESTION 64

Fast Secure Roaming improves total latency time associated with the roam from >500 ms to _____.

- A. < 350 ms
- B. < 250 ms
- C. < 200 ms
- D. < 150 ms

Answer: D

QUESTION 65

What is a Metropolitan Mobile Network solution?

- A. A network that is installed on a ship for public access.
- B. A wireless network installed inside a school for emergency situations.
- C. A mobile network that can be installed in your home that is free to others.
- D. A wireless infrastructure for police, EMS, fire, park rangers, government employees, and transportation employees.

Answer: D

QUESTION 66

Your newly appointed Certkiller trainee wants to know what gives WLAN deployment the edge in multi-dwelling units (MDUs) and multi-tenant units (MTUs).

What will your reply be?

- A. Due to increased mobility that the WLAN facilitates, the use of costly network resources are maximized.
- B. Due to their proximity to an Access Point (AP), multiple users can access the Internet without having to bear the costs of installing cable.
- C. There is no need to consider physical obstructions or distances between within a building unit when implementing a WLAN.
- D. Users can share resources due to simplified WLAN installation and management.

Answer: B

Explanation:

Mobile Network Access

Away from the office, one important deployment location for WLANs is in multi-dwelling units (MDUs) or multi-tenant units (MTUs), where proximity to an AP allows multiple users to access the internet at home without the costs of installing cables.

QUESTION 67

On an IOS Aironet AP, which two statements are true? (Choose two)

- A. It is configurable up to 16 VLANs.
- B. The VLAN assignments is done by the WLSE.
- C. APs support QoS assignment by VLAN or protocol type.
- D. APs need to be connected to specialty switch for full functionality.

Answer: A, C

QUESTION 68

Adding cells to increase WLAN coverage creates an extended service area (ESA).

To allow users to roam without losing connections, bordering cells within the ESA should have ____ overlap.

- A. 0%
- B. 10-15%
- C. 30-35%
- D. 35-40%
- E. 50% or more

Answer: B

QUESTION 69

What are four software features of Cisco Aironet series Access Points (APs)? (Choose four)

- A. Load balancing
- B. Quality of Service
- C. Virtual LANs (VLANs)
- D. Hot-standby capability
- E. Multi-language support
- F. Driver-free device access

Answer: A, B, C, D

QUESTION 70

Which three are enabled with the Cisco implementation of 802.1X, EAP, and LEAP? (Choose three)

- A. Session-based WEP keys.
- B. Support for Kerberos authentication.
- C. An AP that uses unique keys per client.
- D. RADIUS server used to authenticate clients.
- E. Native EAP support on Windows 95, 98, ME and NT.

Answer: A, B, D

QUESTION 71

Why buy Cisco WLAN solution for its security features?

- A. It transmits around physical barriers.
- B. It prevents corruption of data by radio interference.
- C. It recovers data lost during transmission between buildings.
- D. It protects confidential or proprietary data transmitted over WLAN via radio signal.

Answer: D

QUESTION 72

Why is encryption recommended on a WLAN?

- A. Because transmissions are short in duration.
- B. Because it uses discrete frequencies to communicate.
- C. Because radio signals can travel through walls and floors.
- D. Because a proprietary compression mechanism is in place.

Answer: C

QUESTION 73

Which three elements does the Cisco Wireless Security Suite use? (Choose three)

- A. ACS
- B. Portfast
- C. RADIUS
- D. WEP keys
- E. HTTP gateway

Answer: A, C, D

QUESTION 74

What are two ways that WEP technology protects proprietary data? (Choose two)

- A. It limits network access to authorized devices.
- B. It creates duplicate data packets for redundancy.
- C. It encrypts the text using a 40-bit or 128-bit encryption key.
- D. It detects potential internal and external network intrusions.

Answer: A, C

QUESTION 75

What is WEP?

- A. Wired Equivalent Privacy
- B. Wired Enabled Protection
- C. Wireless Equivalent Privacy
- D. Wireless Equipped Protection

Answer: A

QUESTION 76

The WLSE Cisco Aironet Conversion Tool allows the administrator to _____.

- A. Store base AP configuration.
- B. Convert VxWorks APs to IOS.
- C. Store base client configuration.
- D. Convert APs to either VxWorks or IOS.

Answer: B

QUESTION 77

Location Manager is a component of which device's user interface?

- A. WLSE
- B. Cisco ACS Server
- C. Cisco Access Point
- D. Cisco Client Adapters

Answer: A

QUESTION 78

Where does the majority of the latency time occur during a roam?

- A. The client receives a signal strength from a new AP.
- B. Reauthentication and reassociation with new AP.
- C. As the client scans its current channel and waits for an AP to respond, which includes the time between the first probe and the start of authentication.
- D. As the client scans all legal 802.11 channels and selects an alternative AP, which includes the time between the first probe and the start of authentication.

Answer: D

QUESTION 79

How can 802.11 WLAN solution best help organizations improve communications?

- A. By the integration of cell phones with data communication.
- B. By replacing the traditional wired network with wireless access.
- C. By providing information access and distribution to mobile workers.
- D. By using encryption and authentication software to protect information.

Answer: C

QUESTION 80

Cisco wireless bridges deliver high data rates and superior throughput for data-intensive applications that are _____.

- A. Centralized within a building.
- B. Distributed to GSM or CDMA users.

- C. Distributed across disparate network worldwide.
- D. Available for line-of-sight, building-to-building campus deployments.

Answer: D

QUESTION 81

What are two security enablers for Cisco WLAN? (Choose two)

- A. Distributed authorization lists.
- B. Specialized appliances to prevent access.
- C. Network intrusion detection for worms and viruses.
- D. Encryption of data packets that transmits through the air.
- E. Centralized user authentication and encryption key management.

Answer: D, E

QUESTION 82

What are three characteristics of WEP? (Choose three)

- A. 40-bit keys
- B. Statically defined keys
- C. Username/password authentication
- D. Ability to dynamically create WEP keys per session
- E. Static keys that are shared by wireless clients and APs

Answer: A, B, E

QUESTION 83

How can an enterprise leverage WLAN technology to be more competitive?

- A. By avoiding wiring and cabling costs.
- B. By mobilizing a highly productive workforce.
- C. By upgrading its existing wired LAN technology.
- D. By retaining the cultural integrity of an old building.

Answer: B

QUESTION 84

Which three features are part of the SWAN architecture? (Choose three)

- A. Client Management
- B. Rogue AP Detection
- C. Assisted Site Survey
- D. PEAP Authentication
- E. Fast Secure Roaming

Answer: B, C, E

QUESTION 85

What are two functions of the WDS AP? (Choose two)

- A. To collect client and AP Radio Management data,
- B. To collect AP configurations to store on the WLSE.
- C. To allow more clients to get access through an AP.
- D. To cache security credentials to facilitate Fast Secure Roaming.

Answer: A, D

QUESTION 86

In a Network Motion architecture what is MAR?

- A. Mobile Access Radio
- B. Media Access Router
- C. Mobile Access Router
- D. Metropolitan Area Router
- E. Metropolitan Area Radiou

Answer: C

QUESTION 87

What is the benefit if spread spectrum technology OFDM modulation?

- A. Range improves as data rates increases.
- B. It makes 802.11q and 802.11a interoperate.
- C. It requires less spectral bandwidth than CCK modulation.
- D. It has better performance for multipath interference than CCK modulation.

Answer: D

QUESTION 88

Which group developed and administers the certification program for interoperability of WLAN devices?

- A. Hyper LAN
- B. IEEE 802.11
- C. Wi-Fi Alliance
- D. Home RF Working Group

Answer: C

QUESTION 89

What is the maximum data rate under the IEEE 802.11a specification?

- A. 11 Mbps
- B. 36 Mbps
- C. 48 Mbps
- D. 54 Mbps
- E. 108 Mbps

Answer: D

QUESTION 90

Which data rate is covered under the 802.11q specification?

- A. 10 Mbps
- B. 24 Mbps
- C. 50 Mbps
- D. 108 Mbps

Answer: B

QUESTION 91

Which data rate is included in both the 802.11b and 802.11g specifications?

- A. 3 Mbps
- B. 8 Mbps
- C. 9 Mbps
- D. 11 Mbps

Answer: D

QUESTION 92

The purpose of the 802.11g protection mechanism is to allow _____.

- A. 802.11g client to roam 802.11b APs.
- B. 802.11g client cards to transmit at 802.11g data rates.
- C. The transmit power of an 802.11g AP to be set at 30 Mw.
- D. 802.11b client cards to transmit in the same cell with 802.11g client without collisions.

Answer: D

QUESTION 93

What does the 802.11g protection mechanism do?

- A. Uses the CTS (clear to send) to manage the transmit power of all clients.
- B. Reduces the data rate for 802.11g clients when 802.11b clients are in the same cell.
- C. Reduces the transmit power of 802.11b clients when 892.11g clients are in the same cell.
- D. Uses CTS (clear to send) to protect 802.11g clients from collisions with 802.11b clients.

Answer: D

QUESTION 94

What is the highest transmission speed achievable with an IEEE 802.11b compatible radio?

- A. 2 Mbps
- B. 11 Mbps
- C. 15 Mbps
- D. 22 Mbps
- E. 54 Mbps

Answer: B

QUESTION 95

An 802.11a radio utilizes what technique to transmit its signal?

- A. IR
- B. DSSS
- C. FHSS
- D. OFDM

Answer: D

QUESTION 96

In the U.S., no licensing is required for which four RF bands? (Choose four)

- A. 902-928 MHz
- B. 800-821 MHz
- C. 2.400-2482 GHz
- D. 2.500-2600 GHz
- E. 5.150-5.350 GHz
- F. 5.725-5-825 GHz

Answer: A, C, E, F

QUESTION 97

After June 1994, FCC and DOC regulations require all 2.4 GHz antenna connectors to be proprietary (unique and non-standard). Cisco Aironet has since used what connectors on its Access Points and bridges?

- A. BNC
- B. RP-SMA
- C. RP-TNC
- D. N-connector

Answer: C

QUESTION 98

What are two possible sources of interference for 2.4 GHz (802.11b or 802.11g) devices in a home environment? (Choose two)

- A. Cellular phones
- B. Cordless phones
- C. Microwave ovens
- D. Satellite dish receivers

Answer: B, C

QUESTION 99

When doing a survey in a hospital application which three should you consider? (Choose three)

- A. Pagers
- B. Fire doors
- C. Televisions
- D. Microwave ovens
- E. Radiology/x-ray areas

Answer: B, D, E

QUESTION 100

Because of some timing specifications in the 802.11 standard, what is the maximum distance that an Access Point can reliably connect to client?

- A. Approximately 1 mile or 1.6 km.
- B. Approximately 2 miles or 3.2 km.
- C. 25+ miles or 40+ km.
- D. No limit.

Answer: A

QUESTION 101

Which IEEE 802.11 task group is responsible for the development of WLAN security standards?

- A. 802.11d
- B. 802.11e
- C. 802.11f
- D. 802.11i

Answer: D

QUESTION 102

If the power output of a radio is equal to 100 mW, what is its equivalent rating in dBm?

Answer: 20dBm

QUESTION 103

What is the calculation formula for EIRP?

- A. Antenna gain - Transmitter Power + Cable Loss
- B. Transmitter Power + Antenna Gain - Cable loss
- C. Cable Loss + Antenna Gain - Receiver Sensitivity
- D. Cable Loss + Receiver Sensitivity + Antenna Gain

Answer: B

QUESTION 104

What functions does the WLSE perform?

- A. Rouge AP shut down and automatic client card configuration.
- B. Security configuration and firmware management of Cisco APs.
- C. Facilitation of automatic configuration of APs and client firmware management.
- D. Facilitation of automatic configuration of APs, security management, and management of non-Cisco APs.

Answer: B

QUESTION 105

Which two statements are true about Cisco SWAN Radio Management? (Choose two)

- A. It is supported by all APs.
- B. WDS serves as an aggregator.
- C. It performs interference detection and isolation.
- D. SNMP Read Only (RO) is required while Read Write is optional.

Answer: B, C

QUESTION 106

What are three metrics used to measure return in investment (ROI) for implementing Cisco WLAN solutions in a vertical industry? (Choose three)

- A. In hospitality, higher room occupancy rates, when a WLAN is used to attract business professionals.
- B. In retail, higher inventory turnover rates, when a WLAN solution is used for timely restocking of merchandise.
- C. In health care higher recovery rates, when a WLAN solution is used to provide patient care at the bedside.
- D. In education, higher student attendance rates, when a WLAN is used to provide sick students access to school resources from home.
- E. In financial services, lower litigation costs when a WLAN is used to protect assets, such as customer account information, from security breaches.

Answer: C, D, E

QUESTION 107

Which three display modes are useful for determining the actual test AP coverage boundary? (Choose three)

- A. Speed
- B. S/N Ratio
- C. Signal Level
- D. Packet Decode
- E. Channel Scanning

Answer: A, B, C

QUESTION 108

You are performing the actual survey, walking a path inside a building to measure coverage from a test AP. Which three are commended data collection practices? (Choose three)

- A. Reset traffic wheel to zero before starting.
- B. Walk the perimeter of the area to check coverage at the edges of the building.
- C. Move at a constant rate between clicking data collection points on the map graphic window.
- D. Move at an irregular rate near the farthest points from the AP that a non-zero signal is still received from the AP.
- E. Keep track of the instantaneous signal level display in the Survey window to make sure a valid signal level is being received from the test AP.

Answer: B, C, D

QUESTION 109

When performing a site survey using AirMagnet, what is the target percentage goal to overlapping adjacent areas?

- A. 5%
- B. 20%
- C. 50%
- D. 70%

Answer: B

QUESTION 110

Which benefit does the WDS serve in the SWAN Site Survey process?

- A. Facilitates the Client Walkabout.
- B. Measures path loss between APs.
- C. Minimize traffic across the LAN/WAN.
- D. Provides Kerberos authentication capabilities.

Answer: C

QUESTION 111

Which two statements about the SWAN Assisted Site Survey are true? (Choose two)

- A. It is a deployment and configuration tool for optimizing RF configuration.
- B. It configures client devices channel and power settings for optimal configuration.
- C. It provides characterization of the RF environment from a single management station.
- D. It stores and archives configuration histories so the AP configuration can be rolled back.

Answer: A, C

QUESTION 112

Which two happen in the AP Radio Scan process? (Choose two)

- A. All clients are disassociated with the AP.
- B. Radio Scan measurements are disabled.
- C. Transmit power is set to the maximum defined threshold.
- D. A backup of the current AP configuration is created and saved.

Answer: B, C

QUESTION 113

Is the maximum transmit power threshold for the APs participating in the AP Radio Scan user configurable?

- A. Yes, it is user configurable to a value not to exceed 30 mW.
- B. No, it is not user configurable from the default value of 50 mW.
- C. No, it is not user configurable from the default value of 100 mW.
- D. Yes, it is user configurable to the maximum power permitted by the AP.

Answer: D

QUESTION 114

What is the most important reason for performing a density and performance test when using the Assisted Site Survey Tool?

- A. To determine the data rate that should be used.
- B. To select the channels to be used for the installation.
- C. To determine the minimum number of users that one AP can support.
- D. To determine the starting range of the selected AP in the particular site environment.

Answer: D

QUESTION 115

What are two benefits of the SWAN architecture? (Choose two)

- A. Enhances security.
- B. Provides higher throughput to clients.
- C. Requires multiple individual management tools.
- D. Provides the ability to manage a large number of APs.

Answer: A, C

QUESTION 116

The process of a client attaching to an AP includes authentication and association. Which two statements are true? (Choose two)

- A. Association is the process of ensuring unique WEP keys.
- B. Association consists of the client validating the SSID to an AP.
- C. Association is the process of associating an AP with a specific QoS policy.
- D. Authentication is the process of verifying the credentials of a client desiring to join a WLAN.

Answer: B, D

QUESTION 117

What four functions are incorporated in the 802.1X Cisco WLAN security implementation? (Choose four)

- A. EAP support
- B. Encrypted user traffic
- C. Session-based WEP keys
- D. Server-based authentication
- E. Pre-defined RADIUS WEP keys
- F. VPN tunnel termination at an AP

Answer: A, B, C, D