Exam : 642-582

Title : Wireless LAN for Field Engineers Exam

Ver : 10.12.06

QUESTION 1:

What advice can you offer the Certkiller trainee technician to resolve RF noise issues within the 2.4 GHz (802.11b or 802.11g) cell structure? (Choose all that apply.)

A. To use a directional antenna when possible
B. To use an amplifier in-line to overcome the noise
C. To change the channel on which the Access Point is configured
D. To use a diversity antenna on the Access Point

Answer: A, C

QUESTION 2:

When you find yourself in Japan, how many 2.4 GHz RF channels for DSSS will be available to you?

A. 2
B. 9
C. 11
D. 14

Answer: D

Explanation:
APs transmit and receive RF signals over channels within the 2.4 GHz frequency band. Regulatory domains determine the number of channels that wireless communications can use within the 2.4 GHz frequency band. The Cisco Aironet APs support up to 11 communication channels in North America, 13 channels in Europe (ETSI) and 14 channels in Japan. An access point broadcasts on a specific channel within the available channel range. To provide a stable wireless environment and reduce channel interference, you must specify non-overlapping channels for each AP. The recommended channels are 1, 6, and 11.

QUESTION 3:

Which of the following statements regarding 802.11g WLANs is valid? (Choose all that apply.)

A. In WLANs, 802.11g devices are backward compatible to 802.11a devices.
B. The spectral bandwidth is identical to the bandwidth of 802.11b spectral bandwidth in WLANs.
C. In WLANs, 802.11g devices are backward compatible to 802.11b devices.
D. The modulation for 54 Mb is identical to 802.11a modulation at 54Mbps.

Answer: B, C, D

Explanation:
802.11g
This is the most recently approved standard. This standard specifies an operational frequency of 2.4GHz and data rates up to 54Mbps. 802.11g systems are backward compatible with 802.11b systems because of the same operational frequencies. Like 802.11a, 802.11g uses the OFDM modulation scheme to achieve higher speeds.
802.11g uses the same modulation schemes as 802.11a, Orthogonal Frequency Division Multiplexing (OFDM). In contrast, 802.11b uses the less power-hungry complimentary code keying.

QUESTION 4:

What does the 802.11g protection mechanism permit?

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

Answer: D

Explanation:
When 802.11b clients are associated to an 802.11g access point, the access point will turn on a protection mechanism called Request to Send/Clear to Send (RTS/CTS). Originally a mechanism for addressing the "hidden node problem" (a condition where two clients can maintain a link to an access point but, due to distance cannot hear each other), RTS/CTS adds a degree of determinism to the otherwise multiple access network. When RTS/CTS is invoked, clients must first request access to the medium from the access point with an RTS message. Until the access point replies to the client with a CTS message, the client will refrain from accessing the medium and transmitting its data packets. When received by clients other than the one that sent the original RTS, the CTS command is interpreted as a "do not send" command, causing them to refrain from accessing the medium. One can see that this mechanism will preclude 802.11b clients from transmitting simultaneously with an 802.11g client, thereby avoiding collisions that decrease throughput due to retries. One can see that this additional RTS/CTS process adds a significant amount of protocol overhead that also results in a decrease in network throughput.

QUESTION 5:

The newly appointed Certkiller trainee technician is curious as to which way Cisco/Aironet WLAN radios perform their transmission. What can you tell him?

A. full duplex
B. single side-band
C. half duplex
D. depends upon data rate

Answer: C

Explanation:
802.11 environments are shared-media LANs that operate half duplex over a (potentially) noisy radio channel. Since a radio's receiver is turned off when the transmitter is activated, it is impossible to detect collisions. In addition, the AP must be able to hear all stations associated with it.
As all 802.11 environments provide half-duplex communication so Cisco/Aironet Wireless radios perform their transmission using Half duplex communication.

QUESTION 6:

What modulation is used when transmitting data at 11 Mbps under the 802.11b standard?

A. QAM
B. BPSK
C. CCK
D. QPSK
E. none of the above

Answer: C

Explanation:
Complementary Code Keying, a set of 64 eight-bit code words used to encode data for 5.5 and 11Mbps data rates in the 2.4GHz band of 802.11b wireless networking. The code words have unique mathematical properties that allow them to be correctly distinguished from one another by a receiver even in the presence of substantial noise and multipath interference.

QUESTION 7:

How much of the 2.4 GHz ISM band for transmission is utilized by an 802.11b radio?

A. 1 MHz
B. 11 MHz
C. 22 MHz
D. 83.5 MHz
E. 802.11 MHz

Answer: C

Explanation:
In the U.S., the ISM band is divided into 11 channels of 5MHz apiece. An 802.11 wireless network adapter utilizes 22MHz of bandwidth due to signal spreading, so a station operating at one channel will overlap onto adjacent channels. If you've ever tried listening to a small alternative radio station that sits on

the dial close to a huge adult contemporary advertising machine, you'll appreciate how channel overlap can cause unacceptable signal distortion.

QUESTION 8:

Under the IEEE 802.11a specification, what is the maximum data rate?

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

Answer: D

Explanation:
The 802.11a standard, which supports data rates of up to 54 Mbps, is the Fast Ethernet analog to 802.11b, which supports data rates of up to 11 Mbps.

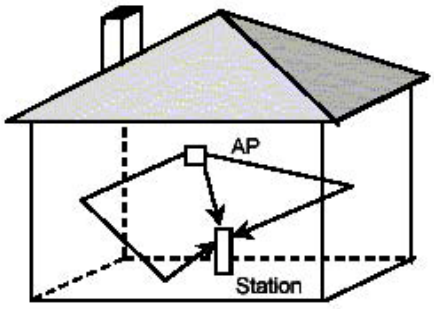
QUESTION 9:

Why is it advantageous to have spread spectrum technology OFDM modulation?

A. The range improves as data rates increases.
B. It provides interoperability between 802.11g and 802.11a.
C. it has better performance for multipath interference than CCK modulation.
D. It requires less spectral bandwidth than CCK modulation.

Answer: C

Explanation:
OFDM is arguably the best waveform available today for WLAN applications. The main challenge designers of WLAN equipment face is signal impairment due to multipath. In the indoor environment, signals can arrive at the antenna by more than one path as shown in Figure.



QUESTION 10:

The PCM352 has two leds. Which of the leds indicate that the card is working properly? (Choose two.)

A. green LED off; amber LED solid
B. green LED off; amber LED blink sporadically
C. green LED blinking fast; amber LED blinking sporadically
D. green LED blinking slowly; amber LED blinking sporadically

Answer: C, D

Explanation: The Aironet client adapter card provides two LEDs to display card and link status information:
&c#61489;&c618486;&c#61472;Link Integrity/Power LED The link integrity and power LED provides visual confirmation that the adapter is receiving power (green) and that it is associated with the wireless network (green and blinks slowly).
&c#61490;&c618486;&c#61472;Link Activity LED The link activity LED provides a visual display of the level of
transmit and receive activity from the client node radio transmitter. During normal operation, the amber LED blinks quickly and erratically in synch with network traffic. When a device error occurs, the amber LED blinks in a pattern according to the type of error encountered.

QUESTION 11:

What is the common network name used for devices in a WLAN subsystem?

A. Data Beacon Rate (DTIM)
B. Beacon Period (Kusec)
C. SSID
D. All of the above

Answer: D

QUESTION 12:

Which of the following antennas radiate in a 360 degree pattern? (Choose all that apply.)

A. Yagi
B. omni
C. dipole
D. patch

Answer: B, C

Explanation: Ceiling Mount Omni-Directional Antenna

This indoor medium range antenna is designed to provide 360-degree coverage in an office space environment. Specifically, the antenna has a 360-degree horizontal coverage and a 38-degree vertical coverage.
Mast Mount Omni-Directional Antenna
The mast mount is primarily a short-range outdoor antenna. Much like the ceiling mount omni-directional antenna, the mast mount omni-directional antenna has a 360-degree horizontal coverage and a 38-degree vertical coverage.
High-Gain Mast Mount Omni-Directional Antenna
It is a medium range outdoor antenna that has a 360-degree horizontal coverage and is designed to be fastened to a mast and used for point-tomultipoint applications.
POS Diversity Dipole Omni-Directional Antenna
The antenna provides 360-degree horizontal coverage, a 75-degree vertical coverage, and a range of 350 feet at 1 Mbps and 100 feet at 11 Mbps. Specifically, this antenna works with LMC adapters that have dual MMCX connectors.

QUESTION 13:

What is the length of Ethernet cabling that can be used when powering a 350 series Access point?

A. 150 meters
B. 100 meters
C. 200 meters
D. no limit

Answer: B

Explanation: The power injectors provide up to 15 watts (depending on the Cisco power supply model) over the unused wire pairs of a Category 5 Ethernet cable, supplying enough power to provide for up to a 100-meter cable run.
Reference: http://cco-rtp-1.Cisco.com/en/US/products/hw/wireless/ps469/products_data_sheet09186a00800f927d.html
Note: The Cisco Aironet 350 APs are powered inline. This means that they receive their power through Ethernet cables. This Ethernet cable can be up to 300 feet in length. Therefore, you do not need a power cord for the unit. All Ethernet powered solutions are limited to 300 feet, which should not present a problem for most installations within the 100-meter rule for Ethernet.

QUESTION 14:

Is the following statement true, WLAN and WLAN clients within an access point service area can receive data transmitted to/from the access point.

A. This is not always true - must be judged case by case
B. True
C. True and False
D. False

Answer: B

QUESTION 15:

When trying to provide coverage down a long hallway with an antenna at the end of the hallway. Which antenna should be used?

A. 12 dBi omni
B. 14.4 dBi omni
C. 8.5 dBi patch
D. 28.8 dBi dipole

Answer: C

Explanation: Patch antennas were chosen in this example because the beam is kept focused, and there will be no interference from others

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QUESTION 16:

You are the network administrator at Certkiller . Your newly appointed Certkiller trainee wants to know what DC voltage is used to power a Access Point through the use of in-line power to the Ethernet port?

A. 5 VDC
B. -9 VDC
C. -12 VDC
D. 12 VDC
E. -48 VDC

Answer: E

QUESTION 17:

When in adhoc mode, the Cisco Aironet wireless PCMCIA client can talk to which of the following devices? (Choose all that apply.)

A. Cisco Aironet Access Points
B. Cisco Aironet PCI wireless adaptor
C. Cisco Aironet Workgroup Bridge (WGB)
D. Cisco Aironet PCMCIA wireless adaptor

Answer: B, D

Explanation: Ad Hoc network mode provides wireless client nodes with the capability to establish peer-to-peer network connections with other wireless client nodes. When configured in Ad Hoc, infrastructure components are not required to establish the network connection. Two or more workstations configured to access the same wireless network is all that is needed. The primary use of Ad Hoc network mode configurations is for peer-to-peer file exchange between wireless clients over the wireless radio network.

QUESTION 18:

What IEEE standard do all Cisco Aironet 350 Series client adapters adhere to?

A. 802.11a
B. 802.11b
C. 802.11g
D. 802.11i

Answer: B

Explanation: The Cisco Aironet 350 is IEEE 802.11b-compliant so that it will interoperate with other vendor devices within your range of coverage.
Cisco has designed the Aironet 350 series to meet the needs of mobile users and satellite offices so that they can maintain connectivity and have the freedom to move around and the flexibility to grow.

QUESTION 19:

What could happen to an antenna's radiation pattern as the gain of the antenna increases? (Choose all that apply.)

A. The angle of radiation increases.
B. The angle of radiation decreases.
C. The coverage distance from the antenna increases.
D. The coverage distance from the antenna decreases.

Answer: B, C

QUESTION 20:

What is the Service Set known as if an AP is connected to a wired network and a set of wireless stations?

A. Extended
B. Advanced

C. Basic
D. Intermediate

Answer: C

Explanation: Basic Service Set (BSS) networks The basic topology set of 802.11 systems is the basic service set (BSS).The BSS consists of at least one AP connected to the wired network infrastructure and a set of wireless end stations

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QUESTION 21:

What could the affect be of water seeping into the connectors of the antenna cabling used to connect the antenna to the radio device? (Choose all that apply.)

A. The interior of the cable could corrode.
B. The cabling could exhibit additional loss.
C. The connection will show a 10% increase in Bandwidth.
D. Nothing happens because the center conductor is solid.
E. Nothing happens because the outside jacket of the cabling is weatherproof.
F. The cable could be more prone to static electric discharge from lightning strikes, making it more imperative that a lightning arrestor be used.

Answer: A, B

Explanation: Antenna cable has numerous air pockets and in an outdoor environment, in the event of a faulty termination or cable slice, there is a possibility for water to collect in these pockets rendering the cable useless.

QUESTION 22:

Which of the following ways does a Workgroup Bridge (WGB) use to connect to Ethernet devices? (Choose all that apply.)

A. Ethernet patch cable to a hub
B. Ethernet UTP cat5 cable to a Switch.
C. Ethernet crossover cable to a hub
D. Ethernet patch cable to a single device
E. Ethernet crossover cable to a single device

Answer: A, E

QUESTION 23:

You are the network engineer at Certkiller . You ask your newly appointed Certkiller trainee what network managers use WLANs to facilitate:

A. security
B. network moves
C. cost savings
D. performance tuning
E. data encryption

Answer: B

QUESTION 24:

You are a network administrator for Certkiller . One customer runs a site with an omni-directional antenna. The antenna has 50 ft of cabling and is increased to 100 ft.
What could this change in cabling affect?

A. increase the data rate
B. increase the coverage area
C. decrease the coverage area
D. increase the bandwidth
E. decrease the angle of radiation from the antenna

Answer: C

QUESTION 25:

Which of the following can a Cisco Work Bridge (WGB) associate to? (Choose all that apply.)

A. another Cisco WGB
B. a Cisco Aironet Access Point
C. a Cisco Aironet wireless bridge
D. any 802.11b compliant Access Point

Answer: B, C

QUESTION 26:

In what mode do most corporate wireless LANs operate in?

A. Infrastructure
B. Native
C. Mixed
D. Ad-hoc

Answer: A

QUESTION 27:

What are the frequencies that an antenna is tuned for referred to as?

A. bandwidth
B. beamwidth
C. frequency range
D. frequency modulation

Answer: A

Explanation: Bandwidth, in the computer world, is defined as how much data you can send through a connection usually measured in bits per second.
In the radio world, bandwidth is defined in a little more complicated manner. Bandwidth is the difference between limiting frequencies within which performance of a radio device, in respect to some characteristic, falls within specified limits or the difference between the limiting frequencies of a continuous frequency band. In the 2.4 GHz unlicensed frequency-band, which is used in Cisco Aironet products, the band begins at 2.4 GHz and ends at 2.4835 GHz. The difference between the beginning point and the end point is the bandwidth.

QUESTION 28:

You are a technician at Certkiller . Your newly appointed Certkiller trainee wants to know what speeds 802.1a provides?
What would your reply be?

A. 1 or 2 Mbps
B. 1 only
C. 12 Mbps
D. 2 only
E. 512 Mbps
F. 54 Mbps

Answer: F

Explanation: 802.11a equipment will operate at 5 GHz and support up to a 54 Mbps data rate.

QUESTION 29:

Is the following statement true or false, with Ad-Hoc you do not need to use an AP.

A. False
B. This is not always true - must be judged case by case
C. True

D. True and False

Answer: C

Explanation: Wireless system that does not require a Distribution System (DS) would be an ad-hoc network where wireless stations communicate directly and mutually access services and applications.

QUESTION 30:

Your newly appointed Certkiller trainee asks you, to what the designator dBd a decibel is referenced as.
What would your reply be?

A. Diphole
B. MilliWat
C. Decibel
D. Dipole

Answer: D

QUESTION 31:

You are the network administrator at Certkiller . Certkiller has a two cell configuration. The one cell's Access Point is configured utilizing channel 6
What would be the best channel for the second cell's Access Point?

A. Channel 0
B. Channel 3
C. Channel 4
D. Channel 5
E. Channel 8
F. Channel 9
G. Channel 11

Answer: G

Explanation: When two APs have overlapping coverage, each AP must use a different channel so that the client can distinguish the difference the between the RF for each AP. The only three channels that do not overlap concurrently are channels 1, 6, and 11. Cells must be separated at least 5 channels in order to not interfere each other. The adequate channels, if you are already using the 6, would be 1 and 11. Then, G is the right answer.

QUESTION 32:

Which Service Set is an asset of two ore more BSSs that form a single subnetwork?

A. Basic
B. Intermediate
C. Extended
D. Advanced
E. Adhoc

Answer: C

Explanation: Extended Service Set (ESS) networks Extended Service Set (ESS) topologies consist of a series of overlapping BSS sets (each containing an AP), commonly referred to as cells. These cells are usually connected together by some wired medium, what we referred to in our wireless architecture section as a DS

QUESTION 33:

You are the network engineer at Certkiller . Your Certkiller trainee wants to know if your radio transmits at 20 dBm and you are using a 13.5 dBi Yagi with 50 feet cabling, and the cabling has a loss of 6.7dB per 100 feet.
What would your EIRP be in dB?

A. 16.16
B. 28.80
C. 30.15
D. 64.40
E. 8.80

Answer: C

Explanation: EIRP = transmitter power + antenna gain - cable loss
20dBm + 13.5 dBi - 3.35 = 30.15

QUESTION 34:

Which of the following components must be configured to enable World mode in a WLAN system? (Choose all that apply)

A. any wireless client
B. any Access Point
C. any Cisco router
D. Cisco switch
E. Cisco router
F. Cisco Access Point
G. Cisco wireless client

Answer: F, G

Explanation: World mode This setting allows for the connection of wireless devices to occur no matter where in the world you are located (as long as there is wireless coverage in that area).What this means is that a visitor from Europe could travel to America, and the wireless device could associate itself with a wireless bridge or AP and configure itself to work with the correct channel settings. When a wireless client node and a wireless AP are both configured for World Mode, the wireless client node will support the maximum transmitter power and transmit frequencies supported by the AP.

QUESTION 35:

Which of the following is RF a shorthand for?

A. Dwell frequency
B. Frequency hopping
C. Radio frequency
D. Orthogonal frequency division multiplexing

Answer: C

Explanation: Radio frequency (RF) is a specific type of electric current known as alternating current (AC) that generates an electromagnetic (EM) field when applied to an antenna.

QUESTION 36:

You are the network technician at Certkiller . You ask your newly appointed trainee, if EIRP is a measurement of power from an RF system where is the measurement made?

A. output of cabling
B. output of the radio
C. input of the antenna
D. output of the antenna

Answer: D

Explanation: Radio frequency (RF) is a specific type of electric current known as alternating current (AC) that generates an electromagnetic (EM) field when applied to an antenna. The antenna, along with air, can be thought of as the medium for wireless networking, outside the DS. It is the physical component that radiates the modulated signal through the air so that the destination can receive it.

QUESTION 37:

You are the network administrator at Certkiller . You ask the newly appointed Certkiller trainee, if the 350 series Access Points are programmed with U.S. channel sets and have the option to reduce the power output to control the area of coverage. The power settings are as follows: 100mW, 50mW, 30mW, 20mW, 5mW, and 1mW. How will this allow the Access Points to be very scalable? (Choose all that apply.)

A. The receiver sensitivity decreases.
B. The receiver sensitivity increases.
C. You can create smaller coverage patterns.
D. While covering the same floor, you can increase the ratio of Access Points to clients when it is set at 1 mW rather than 100mW.

Answer: C, D

QUESTION 38:

What is the AirSnort tool used for?

A. breaking the WEP key
B. data encryption
C. tuning the WLAN
D. site backup
E. site surveying

Answer: A

Explanation: Wired Equivalent Protocol (WEP) combines access control, data privacy, and data integrity using an underlying algorithm; it can also be broken via passive monitoring with freely available monitoring software such as AirSnort.

QUESTION 39:

A 2.4 GHz 6 dBi patch antenna has a vertical beamwidth of?

A. 180 degrees
B. 65 degrees
C. 85 degrees
D. 360 degrees

Answer: B

Explanation: 6dBi Patch Antenna wall mount patch antenna is not omni-directional. The vertical coverage area for this antenna is 65 degree
The 6dBi patch provides excellent coverage with a wide radiation pattern.

QUESTION 40:

You are the network engineer at Certkiller . Certkiller runs a Cisco server-based authentication security scheme, what device is used as the supplicant of the system?

A. client
B. switch
C. router
D. Access Point
E. authentication server

Answer: A

Explanation: Authentication Server is used to verify the supplicant PAE. It decides whether the supplicant is authorized to access the authenticator or not.
The supplicant sends authentication credentials to the authenticator which in turn sends the information to the authentication server, where the logon request is compared against a user database to determine if, and at what level, the user may be granted access to the network
resources.

QUESTION 41:

What is the amount of time taken by a radio to change from channel to channel known as?

A. Hop Sequence
B. Dwell Time
C. Hop Frequency
D. Dwell Frequency
E. Hop Time

Answer: E

QUESTION 42:

You are the network administrator of the Certkiller network. A Certkiller customer wants coverage in a square courtyard that is surrounded by buildings. There is no roof access for any antenna and it needs to be placed on the side of one of the buildings.
Which antenna should be recommended for this application?

A. 6 dBi patch
B. 16.4 dBi omni
C. 26.5 dBi Yagi
D. 2.14 dBi dipole

Answer: A

QUESTION 43:

Which of the following component of a WLAN is used to radiate the RF signal to create the cell structure?

A. radio
B. client
C. antenna
D. Access Point

Answer: C

QUESTION 44:

Which means of client authentication does the 802.11 standard support? (Choose all that apply.)

A. open authentication
B. closed authentication
C. shared-key authentication
D. aggregated-key authentication

Answer: A, C

Explanation: The authentication parameters are open and shared key

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QUESTION 45:

The newly appointed Certkiller trainee technician wants to know to what the designator dBd decibel is referenced?

Answer: dipole

Explanation:
dBd (decibels related to dipole antenna) is a measure of the gain of an antenna system relative to a dipole antenna at radio frequency.

QUESTION 46:

To what number of milliwatts is the value of dBm is equivalent to?

Answer: 1

Explanation:
Another standard-referenced system of power measurement in the unit of decibels has been established for use in telecommunications systems. This is called the dBm scale. The reference point, 0 dBm, is defined as 1 milliwatt of electrical power dissipated by a 600 ? load. According to this scale, 10 dBm is equal to 10 times the reference power, or 10 milliwatts; 20 dBm is equal to 100 times the reference power, or 100 milliwatts.

QUESTION 47:

Which of the following can Antenna gain be measured in?

A. dBi and dBI
B. qRt and qSy
C. dBI and jBI
D. dBi and dBd

Answer: D

Explanation:
Gain may be expressed as either a power multiplier or in dB. Antenna gain stated in dB is referenced to either isotropic or a half-wave dipole. The microwave industry has universally established the convention of reporting antenna gain in dBi (referenced to isotropic). The land mobile industry has almost universally expressed antenna gain as dBd (referenced to a half-wave dipole rather than isotropic.) When a manufacturer lists a gain as dB, you may generally assume that the referenced gain is dBd.
There are two scales that antennas are commonly measured on -- dBi and dBd . dBi is approximately 2 units higher than dBd. 5dBi = 3dBd. 2.2dBi = 0 dBd, etc.All antennas can be represented by either dBi or dBd - So an antenna at 5dBi is equivalent to an antenna at 3dBd.

QUESTION 48:

Which of the following antennas radiate in a 360 degree pattern (as seen from above)? (Choose all that apply.)

A. patch
B. dipole
C. Yagi
D. omni

Answer: B, D

QUESTION 49:

What would you tell the Certkiller trainee technician is the optimal way to deal with both public and private networks in the same wireless cell?

A. To make use of VLANs
B. To make use of diversity antenna systems
C. To install two APs per cell and configure separate QoS
D. To install two APs per cell and configure load balancing

Answer: A

QUESTION 50:

EIRP is a representation of power from an RF system (Transmitter, cabling, and antenna). Now the Certkiller trainee technician wants to know where in this system that value is referenced. What will your reply be?

A. In the cabling output
B. In the radio output
C. In the antenna input
D. In the antenna output

Answer: D

Explanation:
One of the more important rules for communicating with satellites is to use the proper power (Effective Isotropically Radiated Power or EIRP) when transmitting to the satellite. Uplink EIRP is a combination of power transmitted by a transmitter and gain added to the transmitter by an antenna minus any cable losses. Uplink EIRP is referenced after the antenna contribution before any free space loss is encountered.

QUESTION 51:

You are trying to provide coverage down a long hallway with your antenna at the end of the hallway. Which antenna should you use?

A. 12 dBi omni
B. 5.2 dBi omni
C. 8.5 dBi patch
D. 2.14 dBi dipole

Answer: C

QUESTION 52:

EIRP is a measurement typically circulated in _____.

A. dBi
B. dBr
C. dBd

D. dBm

Answer: D

Explanation:
The radiated (transmitted) power is rated in either dBm or Watts. Power coming off an antenna is measured as Effective Isotropic Radiated Power (EIRP). EIRP is the value that regulatory agencies such as the FCC or European Telecommunications Standards Institute (ETSI) use to determine and measure power limits in applications such as 2.4 GHz wireless equipment. EIRP is calculated by adding the transmitter power (in dBm) to antenna gain (in dBi) and subtracting any cable losses (in dB.)
http://www.cisco.com/en/US/tech/ CK7 22/ CK8 09/technologies_tech_note09186a00800e90f e.shtml

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QUESTION 53:

You are a network administrator for a company, Certkiller . Your newly appointed Certkiller trainee wants to know what FHSS means?
What would your reply be?

A. Frequency high speed spectrum
B. Frequency high speed service
C. Frequency hopping speed service
D. Frequency hopping spread spectrum

Answer: D

Explanation: Frequency Hopping
The first type of spread spectrum developed is known as frequency hopping spread spectrum (FHSS). Simply put, frequency hopping is the process of jumping quickly from one frequency to another. A communications signal (voice or data) is split into separate parts. This technique broadcasts the signal over a seemingly random series of radio frequencies. A receiver, hopping between frequencies in synchronization with the transmitter, receives the message. The message can be fully received only if the series of frequencies is known.

QUESTION 54:

Your newly appointed Certkiller trainee wants to now what the designator dBm is referenced as?
What would your reply be?

A. Decibels
B. PMPO
C. Watt
D. Milliwat

Answer: D

Explanation: The dB scale is used to measure the power of a signal and is logarithmic in nature.
Signal strength display in dBm (percent of maximum power or dBm milliwatts)

QUESTION 55:

What is the speed of the 802.11 standard?

A. 10
B. 1 or 2
C. 7
D. 12 only
E. 15 only

Answer: B

Explanation: 802.11 uses 1 Mbps and 2 Mbps and 802.11b uses 5.5 Mbps and 11 Mbps.

QUESTION 56:

You are the network technician at Certkiller . Your newly appointed Certkiller trainee wants to know which mode Ad-hoc mode is referred to as?
What would your reply be?

A. central
B. peer-to-peer
C. client server
D. secured
E. infrastructure

Answer: B

Explanation: Ad Hoc network mode provides wireless client nodes with the capability to establish peer-to-peer network connections with other wireless client nodes.

QUESTION 57:

Your newly appointed Certkiller trainee wants to know how many milliwats 0 dBm is equivalent to.
What would your reply be?

A. 1
B. 2

C. 4
D. 8

Answer: A

Explanation:
Analog dBm meters that convert dBm into voltage (V) measure impedance in ohms (W) so that any voltage across any resistance (R) that results in 1 mW equals 0 dBm.

QUESTION 58:

You are the network technician at Certkiller . Your newly appointed Certkiller trainee wants to know what DSSS stands for?
What would your reply be?

A. Data Sequence Spread Spectrum
B. Data Sequence Speed Spectrum
C. Direct Sequence Spread Spectrum
D. Direct Sequence Speed Spectrum

Answer: C

Explanation: Direct Sequence Spread Spectrum (DSSS)
The other type of spread spectrum communication is called DSSS. This is currently the most common method used in WLANs. A direct sequence transmitter spreads its transmissions by adding redundant data bits called chips to them. DSSS adds at least ten chips to each data bit to protect the receiver from data loss. DSSS does not split a data signal into pieces; instead, it encodes each data bit into these chips.

QUESTION 59:

You are a technician at Certkiller . Your newly appointed Certkiller trainee wants to know what of allows users of a wireless device to connect to a wired LAN?
What would your reply be?

A. WAP
B. CSD
C. FHSS
D. DSSS

Answer: A

Explanation: Wireless Access Point (WAP)
A WAP is a wireless radio. They are the centre points in an all-wireless network, or a connection point between a wired and wireless network.

QUESTION 60:

An antenna is rated at 3 dBd what would its rating be in dBi?

A. 3.2 dBi
B. 1.2 dBi
C. 5.2 dBi
D. 2.4 dBi

Answer: C

Explanation: 3 + 2.2 = 5.2

QUESTION 61:

Which two ports are monitored within hot-standby mode to determine if the primary Access Point is still on-line? (Choose two.)

A. SNMP
B. radio port
C. switch port
D. Ethernet port

Answer: B, D

QUESTION 62:

Which two cables may be used to connect a 1400 Series Wireless Bridge Power Injector and network device? (Choose two.)

A. cross over
B. coaxial cable
C. straight through
D. Cisco serial console port cable

Answer: A, C
Note: The 1400 bridge does not have a console port.

QUESTION 63:

What is required to launch a dictionary attack against an EAP authentication algorithm?

A. userid or login
B. encryption key
C. master session key

D. RADIUS shared secret

Answer: D

Explanation:
A dictionary attack occurs when an adversary uses a large list of words to try to guess a password. The encrypted password is compared against each word in the list (also encrypted) until a match is found. All password-based authentication methods are vulnerable to dictionary attacks; however, LAN Manager authentication is particularly susceptible, due to the way the password is processed. To correct this problem, LAN Manager authentication is not supported in MS-CHAP v2. Only the stronger Windows NT authentication method is supported. The Windows NT authentication method is much more resistant to dictionary attacks because random data is included in the authentication credentials.
During a dictionary attack, variations of passwords are used to compromise a user's authentication credentials. Most password-based authentication algorithms are vulnerable to dictionary attacks in the absence of a strong password policy.
Ref 2:
A dictionary attack uses variations of passwords to break into systems.
Cisco admitted that its password-based authentication EAP algorithm, known as Leap, is vulnerable to dictionary attacks, as are other systems.

QUESTION 64:

What are three components of WPA (Version 1) Choose three.)

A. LEAP
B. 48-bit IV
C. 802.1X authentication
D. 256-bit AES encryption cipher
E. per-packet keying and Message Integrity Check

Answer: B, C, E
Explanations:
LEAP is a Cisco proprietary variation of EAP, while 802.11X is a standard (included in WPA). The correct answers are B, C and E. It can be found at the security chapter of "Fundamentals of Wireless LANs Companion Guide" (Pub. by Cisco Press in 2004, ISBN: 1-58713-119-6).
Note:
Securing a WLAN takes more than WEP. It includes three components: the authentication framework, the authentication algorithm, and the data privacy or encryption algorithm. All three components are included in the Cisco Wireless Security Suite, which monitors security policies and includes the following features:
Authentication framework based on the 802.1X standard
Authentication algorithm based on Extensible Authentication Protocol (EAP)
Data privacy via Temporal Key Integrity Protocol (CKIP), which includes Message

Integrity Check (MIC), per-packet keying, and dynamic key rotation for broadcast and multicast traffic

Cisco Wireless Security Suite

The Cisco Wireless Security Suite solution fulfills the need for a consistent, reliable, and secure mobile networking solution. This 802.1X-based solution provides scalable, centralized security management and supports dynamic per-user, per-session WEP encryption keys to protect the privacy of transmitted data. It includes support for WPA, and also includes support for mutual authentication, message integrity check, and perpacket keying to ensure that every data packet is encrypted with a different key.

This suite of security enhancements augments the 802.11 security draft by implementing pre-standards enhancements to 802.11 authentication and encryption. WEP is not the only component to wireless security. Wireless security consists of three components:

• The authentication framework
• The authentication algorithm
• The data privacy or encryption algorithm

These components are all included in the Cisco Wireless Security Suite:

• 802.1X authentication framework-The IEEE 802.1X standard provides a framework for many Extensible Authentication Protocol (EAP) types, including Protected EAP (PEAP), EAP Transport Layer Security (EAP TLS), Cisco EAP (LEAP), and the link layer
• LEAP-LEAP supports centralized, user-based authentication, single-user login, and the ability to generate dynamic WEP keys
• CKIP-Cisco has implemented three components to augment WEP encryption:
- Message Integrity Check (MIC)-The MIC function provides effective frame authenticity to mitigate man-in-the-middle vulnerabilities
- Per-Packet Keying-Per-packet keying provides every frame with a new and unique WEP key that mitigates WEP key derivation attacks
- Broadcast Key Rotation-Provides dynamic key rotation for broadcast and multicast traffic

For more technical information on the Cisco Wireless Security Suite:

WPA Support

Wi-Fi Protected Access (WPA) is a standards-based, interoperable security enhancement that strongly increases the level of data protection and access control for existing and future wireless LAN systems. It is derived from and will be compatible with the upcoming IEEE 802.11i standard. WPA leverages Temporal Key Integrity Protocol (CKIP) and Michael message integrity check (MIC) for data protection and 802.1X for authenticated key management.

WPA supports two mutually exclusive key management types: WPA and WPA-Preshared key (WPA-PSK). Using WPA key management, clients and the authentication server authenticate to each other using an EAP authentication method, and the client and server generate a pairwise master key (PMK). The server generates the PMK dynamically and passes it to the access point. Using WPA-PSK key management, however, you configure a pre-shared key on both the client and the access point, and that pre-shared key is used as the PMK.

Only 350 series and CB20A cards that are installed on computers running Windows 2000 or XP and running LEAP or host-based EAP authentication can be used with WPA.

Support for WPA is available in the software components included in Install Wizard version 1.2 or greater. However, if you want to use host-based EAP authentication with WPA, you must also install a host supplicant with WPA support. The following host supplicants are recommended for use with Cisco Aironet client adapters:

QUESTION 65:

Which statement is true about Cisco's server-based authentication process?

A. It is mutual authentication between server and client.
B. The authentication method is one way (client to server).
C. The authentication method is one way (server to client).
D. The authentication method is dependent upon which 802.11 authentication method is used (open vs. shared key).

Answer: A

Explanation:
Server-Based Authentication
This feature leverages Cisco software and firmware so that your network logon triggers server-based authentication using your name and password.
Note Server-based authentication for Windows CE, Linux, and Macintosh is not tied to your network logon. Instead, the username and password used for server-based authentication are entered in one of the client utility screens or in a dialog box that appears when LEAP is enabled. Also, Windows CE is the only operating system in which the username and password are stored in the client adapter.

QUESTION 66:

To support WLAN LEAP authentication, the Cisco Aironet Access Point must be configured as a(n) ____. AAA client in the ACS application

A. IETF RADIUS
B. RADIUS WLAN
C. RADIUS Aironet
D. RADIUS IOS/PIX

Answer: C
RADIUS Aironet" must be chosen when configuring a Cisco Aironet as the AAA client in the Cisco Secure ACS. You can find it at the ACS user manual publishec in the Cisco web site.

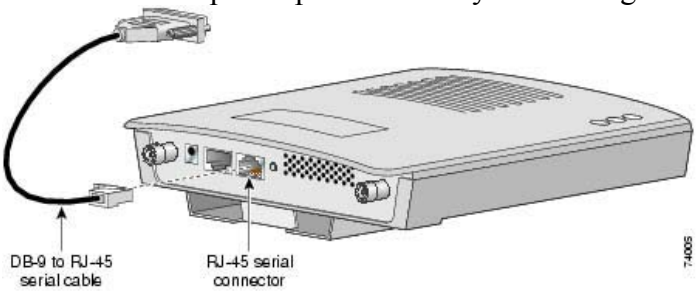
QUESTION 67:

What is the serial cable used to configure the Cisco Aironet 1200 Series Access Point?

A. DB-9 to DB-9 roll-over cable
B. DB-9- RJ45 roll-over cable
C. DB-9 to DB-9 straight through cable
D. DB-9 to RJ45 straight through cable

Answer: B

Explanation:
Connecting to the Access Point Locally
If you need to configure the access point locally (without connecting the access point to a wired LAN), you can connect a PC to its console port using a DB-9 to RJ-45 serial cable. Follow these steps to open the CLI by connecting to the access point console port:



QUESTION 68:

When mounting a Cisco Aironet 1200 Series Access Point with an RM20A Module in a plenum rated airspace, Cisco _____.

A. recommends mounting the AP vertically with its antennas pointing up
B. recommends mounting the AP horizontally with its antennas pointing up
C. recommends mounting the AP horizontally with its antennas point down
D. informs users that a Cisco Aironet 1200 Series Access Point cannot be mounted in a plenum airspace

Answer: A

QUESTION 69:

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
These three options are available with this product and all 3 provide displays that are useful in determining the AP coverage.
Option D (Packet decode) is not applicable in a site survey
Option E (Channel scanning) would not be performed at this stage.

QUESTION 70:

You are the Certkiller technician, you have been asked to collect data to measure the coverage from a test AP. You are performing the actual survey, walking a patch inside a building. Which of the following are data collection practices are recommended? (Choose all that apply.)

A. resetting the traffic wheel to zero before starting
B. walking the perimeter of the area to check coverage at the edges of the building
C. moving at a constant rate between clicking data collection point on the map graphic window
D. moving at an irregular rate near the farthest points from the AP that a non-zero signal is still received from the AP
E. keeping 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: A, B, C

QUESTION 71:

Which of the following represents the 2.4 GHz antenna connectors used on the Cisco Aironet 1200 Series Access Point?

A. RP-UHF
B. RP-SMA
C. RP-N
D. RP-TNC

Answer: D

QUESTION 72:

In the event of mounting the Cisco Arionet 1200 Series Access Point, in which type of rated enclosure should an AP be mounted when conditions are extremely moist, dirty and dusty?

A. UL
B. NARA
C. NEMA
D. OSHA

Answer: C

QUESTION 73:

What will you advise the Certkiller trainee technician to do when performing a density and performance test?

A. Manual testing is always obsolete.
B. To run the AP Scan utility and rely on its input.
C. To do a complete manual site survey to determine the total number of APs and its placement
D. To 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 74:

You are the network administrator at Certkiller . Your newly appointed Certkiller trainee wants to know how a Cisco/Aironet 802.11b radio performs transmissions. What would your reply be?

A. full duplex
B. half duplex
C. single side-band
D. all of the above

Answer: B

Explanation: The Cisco Aironet 340 and 350 wireless bridges use the Direct Sequence Spread Spectrum (DSSS) radio transmission and modulation technique within the 2.4 GHz Industrial Scientific and Medical (ISM) band. It supports transmission rates of up to 11 Mbps over a half-duplex radio channel, meaning it can send or receive transmissions but not do both at the same time.

QUESTION 75:

In which of the following formats are Cisco Aironet 350 Series Client Adapters available in? (Choose all that apply.)

A. ISA
B. PCI
C. VESA
D. PCMCIA

Answer: B, D

Explanation: Cisco Aironet client adapters are available in several form factors. These include PC Card, LM Card, PC Interface (PCI), and mini PCI card

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QUESTION 76:

You are a network administrator at Certkiller . You are setting up a wireless connection that uses a 2.4 GHz signal. What will happen if a tree or other foliage is in the direct path between the transmitter and the receiver?

A. The signal will be reflected.
B. The signal will be refracted.
C. The signal will be absorbed.
D. The signal will be deflected.
E. The signal will be diffracted.

Answer: C

Explanation: Signals emitted at 2.4 GHz will pass thought most solid objects such as walls, they do not pass through objects with a high water content very well because 2.4 GHz signals are absorbed by water molecules and causes these molecules to become excited, otherwise known as heated. This is the same principle that makes microwave ovens work so well with "wet" food and not very well with "dry" food.

QUESTION 77:

How can a client use a null value for their SSID and still associate to an 802.11 Access Point?

A. by using LEAP
B. by using open authentication
C. by using shared-key authentication
D. by using a Broadcast SSID
E. by using a null character in the Access Point's SSID field

Answer: D

Explanation: The broadcast SSID also referred to as no-SSID or empty SSID, is used as a default means or last resort for establishing communications over a wireless network.

QUESTION 78:

Which of the following statements are true?

A. If a device that uses static WEP keys is lost or stolen, the possessor of the stolen

device can access the WLAN.
B. If a device that uses static WEP keys is lost or stolen, the possessor of the stolen device cannot access the WLAN.
C. If a device that uses static WEP keys is lost or stolen, the possessor of the stolen device can access the WLAN if the correct user name is supplied.
D. If a device that uses static WEP keys is lost or stolen, the possessor of the stolen device can access the WLAN if the correct username and password is supplied.

Answer: A

Explanation: A static WEP key is manually entered onto the client machine so is know by both the AP and the Clent.
Therefore, if the client device is lost or stolen, the possessor of the stolen device CAN access the network.
Because WEP key retrieval is now possible by casual attackers, keeping the same static WEP key in a production role for an extended period of time does not make sense. If your WEP key is static, it could be published into the underground by a hacker and still be used in a production WLAN six months to a year later.

QUESTION 79:

What is the most common cause of multipath interference?

A. a point-to-point bridge link
B. a point-to-multipoint bridge link
C. in-building open air environment
D. in-building cluttered environment

Answer: D

QUESTION 80:

Which of the following antenna architecture can be used to eliminate null areas in RF coverage?

A. splitters
B. diversity
C. high gain omni
D. patch antennas

Answer: B

Explanation: If the RF between the two devices is strong, it can sometimes give the misperception of good connectivity. Even if the signal strength is good, the signal quality might be poor, thus causing traffic performance to suffer. By adding a second antenna to the AP, you can increase the area in which signals are received and thus minimize, if not

eliminate, the "dead path" and increase the signal quality and performance. Using antennas in this way, with APs, is called antenna diversity.

QUESTION 81:

Within an 802.11b cell structure, what can you do to resolve RF noise issues? (Choose two.)

A. use a directional antenna where possible
B. use a patch antenna on the Access Point
C. use an in-line amplifier to overcome the noise
D. change the channel on which the Access Point is configured

Answer: A, D

QUESTION 82:

What is the wireless medium of a Cisco Aironet 350 Series Client Adapter?

A. DSSS
B. FHSS
C. BSS
D. GWAP

Answer: A

Explanation: These adapters are designed for DSSS technology and operate at 2.4 GHz. All Cisco wireless client adapters comply with the IEEE 802.11b standard.

QUESTION 83:

You are the network administrator at Certkiller . The Certkiller WLAN includes Cisco Aironet Access Points that have two antenna connectors. Your newly appointed Certkiller trainee wants to know what advantages would having two antennas provide?
What would your reply be? (Choose all that apply.)

A. It eliminates null zones
B. It allows you to use two antennas for diversity to overcome multipath distortion
C. It allows for full-duplex operation of the radio (one antenna for transmit and one for receive)
D. It reduces the number of Access Points needed in an area by using directional antennas aimed in two different directions

Answer: A, B

Explanation: Dual antenna connectors allow for the support of multipath compensation

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QUESTION 84:

Which of the following should you consider when doing a survey in a hospital application? (Choose all that apply.)

A. pagers
B. fire doors
C. televisions
D. microwave ovens
E. radiology/X-ray areas

Answer: A, D, E
Pagers are RF devices, Fire Doors are not.

QUESTION 85:

What media access protocol does the Cisco Aironet 350 Series Client Adapter use for the wireless connection?

Answer: CSMA/CA

Explanation: Cisco Aironet 350 series client adapters, use CSMA/CA as the MAC protocol for the wireless connection.

QUESTION 86:

In an ETSI regulated country, what is the maximum EIRP of a 2.4 GHz RF system?

A. 10 mW
B. 25 mW
C. 50 mW
D. 100 mW
E. 250 mW

Answer: D

QUESTION 87:

What modulation does the 802.11b standard use when transmitting data at 11 Mbps?

A. CCK
B. QAM

C. DBPSK
D. DQPSK

Answer: A

Explanation: CCK- Complimentary Code Keying is a newer modulation standard originally based on another modulation technique called Mary Orthogonal Keying (MOK). It was not a defined modulation technique in the original IEEE 802.11 standard for WLANs, unlike BPSK and QPSK. CCK was designed as a new, modified modulation technique by industry leaders to overcome the limitations of the rate barrier of 2 Mbps within the original standard. It was adopted in the newer IEEE 802.11b standard that is currently employed by most vendors.
CCK is a phase modulation technique used by most 802.11b Cisco Aironet wireless devices.

QUESTION 88:

What do all Cisco wireless client adapters use the Cisco Aironet Client Utility for?

A. site backup
B. antenna adjustment
C. adapter configuration
D. connection maintenance

Answer: C

Explanation: The ACU is used by administrators and end users to configure the Aironet wireless LAN adapter locally and to perform wireless network tests and general system diagnostics.

QUESTION 89:

What specifies the amount of time a radio takes to change from one channel to another channel?

A. Hop Sequence
B. Dwell Time
C. Dwell Frequency
D. Hop Time

Answer: D

QUESTION 90:

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 91:

Which of the following statements regarding the signal propagation of an Omni antenna on a horizontal plane is valid?

A. The signal propagation is the same as a patch antenna
B. The signal propagation is radiated in 360 degree pattern
C. The signal propagation has less signal strength than the vertical plane
D. The signal propagation makes the Omni antenna a good solution for point to point bridge connections

Answer: B

QUESTION 92:

Which specific antenna architecture would you advice the Certkiller trainee technician to use to help eliminate RF null areas of coverage?

A. splitters
B. diversity
C. patch antennas
D. high gain omni

Answer: B

QUESTION 93:

Which of the following represents the minimum requirement to complete an Assisted Site Survey?

A. performing AP radio scan
B. configuring WEP on the AP
C. performing clint walkabout
D. Terminating all ohter user traffic on the AP

Answer: A

QUESTION 94:

Which of the following are the advantages of the SWAN architecture? (Choose all that apply.)

A. SWAN architecture enhances security
B. SWAN architecture requires multiple individual management tools
C. SWAN architecture provides the ability to manage a large number of APs
D. SWAN architecture provides higher throughput to clients

Answer: A, C

QUESTION 95:

Which program can you advice the Certkiller trainee technician to use to push profiles out to multiple Cisco Aironet clients?

A. ADU
B. ACU
C. ACM
D. ACAU

Answer: D

QUESTION 96:

What are the actions that can be performed when making use of the system tray icon? (Choose all that apply.)

A. profiles can be switched
B. drivers can be updated
C. profiles can be configured
D. client utility can be opened

Answer: A, D
These two options are available when you right click the ACU icon in the system tray, but you cannot configure a profile until you select "open aironet desktop utility" from the menu.

QUESTION 97:

Which of the following operating systems are supported in the Cisco Aironet 802.11a/b/g CardBus client card? (Choose all that apply.)

A. MAC OSX
B. Microsoft Windows XP
C. Microsoft WinCE
D. Microsoft Windows 2000

Answer: B, D

QUESTION 98:

What could probable be the reason why both LEDs are not lit on the wireless LAN client adapter?

A. The laptop is not getting an IP address.
B. The wireless LAN client adapter is not associated to an AP.
C. The AP is incorrectly configured.
D. The wireless LAN client adapter is not fully inserted into the CardBus port.

Answer: D

QUESTION 99:

The Cisco Aironet drivers on WinCe.NET devices support which of the following 802.1X security types? (Choose all that apply.)

A. Kerberos
B. Cisco LEAP
C. VPN
D. PEAP

Answer: B, D

QUESTION 100:

What is the most important reason for performing a density and performance test when 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: C

QUESTION 101:

What is the maximum cable length that is supported by a 10/100 Ethernet port on Cisco Aironet 1200 Series Access Point?

A. 100 meters

B. 200 meters
C. 300 meters
D. 500 meters

Answer: A

Description	Cisco Aironet Power Injector Media Converter	Cisco Aironet Power Injector for 1100, 1200 Series	350 Series Single Port Power Injector
Part Number	AIR-PWRINJ-FIB	AIR-PWRINJ3	AIR-PWRINJ
LAN Connection	Max Fiber cable length: 2 km Type: MT-RJ (multimode fiber) Label: 100BASE-FX To Network Speed: 100 Mbps Duplex: Full	Max Cat 5 cable length: 100 m from switch to device Type: RJ-45 Label: 10/100BASE-TX To Network	Max Cat 5 cable length: 100 m Type: RJ-45 Label: To Network

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QUESTION 102:

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

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

Answer: B
Definition: QBSS load is another term for the access point's use of the RF channel. It is calculated as a percentage of time the channel is in use by that access point. Note that the overall channel load may be much higher than indicated; several access points may be sharing the same RF channel and background or environmental noise may "use" it too. The best way to help ensure a clean RF environment is to conduct a full site survey with specific tools, as described in this document. The Cisco Wireless IP Phone 7920 uses the QBSS load in its roaming algorithm. This value will vary based on the time of day the survey is performed. For example, at night (when the network is largely idle), the QBSS load will be very low. For this reason, the site survey should be performed during peak hours. QBSS load may be minimized by adding access points as necessary.
Note: The RSSI and channel utilization values can be read directly using the Cisco Wireless IP Phone 7920 site survey tool (identified in the section below). Refer to Table 1.2 for corresponding values between dBm (industry standard values) and RSSI (relative

value on the Cisco Wireless IP Phone 7920) to enable identification of signal strength through the use of other site survey tools.
11 Mbps of link speed available at all times (this is true for data clients as well as voice clients).
Access point coverage overlap of 15 to 20 percent.

QUESTION 103:

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: B
Viewing Radio Management Reports
The following Radio Manager reports contain useful information about your WLAN radio environment:
• Configured Radio Parameters Report-
• Path Loss Between Managed APs Report-.
• Channel Loading Report-S
To view, export, and email these reports, select Reports > Radio Manager. For more information about displaying Radio Manager reports,
The following reports contain useful information about the type of client that is associating with an access point, how much bandwidth the client is using, and a history of with which access points the client has been associated:
•Wireless Client Details Repor
• Wireless Client Statistics Report
•Wireless Client Historical Association Report
• Wireless Client Access Failure Report
To view, export, and email these reports, select Reports > Wireless Clients.
What is WDS and Why Do I Need To Use It?
The critical software component in the network is a set of IOS features called the Wireless Domain Services (WDS). The WDS provides control path technologies that must be active on an AP in each AP subnet; a backup WDS can also be defined in each AP subnet. The WDS provides:
• Fast, secure layer-2 wireless client roaming-The WDS acts as an 802.1x authenticator for wireless clients within the layer-2 network.
• Radio Management (RM) data aggregation-The WLSE provides intelligent processing of aggregated data collected by the WDS access points from other wireless clients in the network. The WLSE can manage multiple subnets, so it can receive radio data from many APs running WDS.

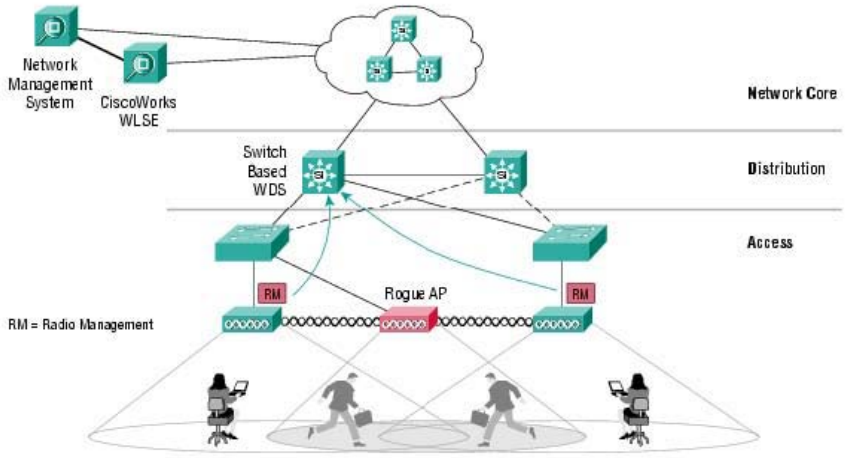
QUESTION 104:

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 form a single management station.
D. It stores and achieves configuration histories so the AP configuration can be rolled back.

Answer: A, C
This Cisco Structured Wireless-Aware Network (SWAN) feature allows the Cisco Aironet access point to be set in a scanning-only mode, where it scans the RF environment for other access points and unassociated 802.11 clients. In this mode, the access point does not transmit beacons, respond to probe requests, or support client device association. This mode allows the Cisco Aironet access point to function as an intrusion detection device to detect rogue (unauthorized) access points and unassociated 802.11 clients.
Integrated wired and wireless LAN services using the Cisco infrastructure and Cisco IOS Software
Simplified management of hundreds to thousands of central or remotely located access points
Wireless Domain Services for Institute of Electrical and Electronics Engineers Inc. (IEEE) 802.1X local authentication service and fast secure roaming support
Rogue access point detection and location
Air/Radio Frequency (RF) scanning and monitoring
Interference detection to isolate and locate network interference
Simplified WLAN deployment processes with assisted site surveys
Streamlined WLAN management and operations support
Enhanced troubleshooting and diagnostic tools for proactive performance and fault monitoring
High availability with self healing wireless LANs
Security policy monitoring
Seamless delivery of enhanced network security solutions
Air/RF Scanning and Monitoring
(Available fourth quarter 2003)
With the Cisco Structured Wireless-Aware Network, IT managers can easily detect rogue access points and the switch ports to which they are connected because both access points and client devices actively participate in continuous scanning and monitoring of the RF environment. This allows the IT team to manage their air/RF medium via the CiscoWorks WLSE and WDS (Figure 1).
Cisco Aironet access points, Cisco clients, and Cisco Compatible clients work together to take regular RF measurements. This unique access point and client based solution provides advantages over access point only scanning.
Figure 4 illustrates access point only RF scanning. In this scenario, only rogue access

points within RF range of the deployed access points will be detected. Unfortunately, access point only RF scanning falls short of being a robust solution because only access points scan and monitor the RF environment.
Figure 4 Rogue Access Point Detection with Access Point Only RF Scanning



QUESTION 105:

Which are Cisco Aironet 1200 Series Access Point features?

A. serial, fiber, and power connections
B. serial, Ethernet, and power connections
C. fiber, Ethernet, and antenna connections
D. serial, fiber, antenna, and Ethernet connections

Answer: B

QUESTION 106:

Which of the following statements regarding channel reuse is valid?

A. Channel reuse cannot be used with 802.11g clients
B. When there are a large number of clients, it is not wise to use channel reuse.
C. In a given area, channel reuse optimizes the use of available 802.11 spectrum.
D. Channel reuse eliminates duplication of broadcast and multicast packets to a client.

Answer: C

QUESTION 107:

Which of the following statements describes the way in which Workgroup Bridge (WGB) connect to Ethernet devices? (Choose all that apply.)

A. Ethernet patch cable to a single device
B. Ethernet crossover cable to a single device
C. Ethernet patch cable to a hub
D. Ethernet crossover cable to a hub

Answer: B, C

QUESTION 108:

What is the maximum number of non-root bridges supported in a point to multipoint environment with a Cisco Aironet 1400 Series Wireless Bridge?

A. 10
B. 15
C. 16
D. 17

Answer: D

QUESTION 109:

What are two appropriate methods for increasing the distance that two bridges can communicate? (Choose two.)

A. disable WEP
B. lower the data rate transmission
C. use an antenna with a decreased beam width
D. use an antenna with an increased beam width

Answer: B, C
Parabolic dish antennas tend to provide the greatest gain and the narrowest beam width, making them ideal for point-to-point transmission over the longest distances.) and omnidirectional (An antenna that provides a 360-degree transmission pattern. These types of antennas are used when coverage in all directions is required.) antennas, mounting hardware, and other accessories, installers can customize a wireless solution that meets the requirements of even the most challenging applications.

QUESTION 110:

Which two methods are used to protect a 1400 Series Wireless Bridge from a lightning strike? (Choose two.)

A. grounding block
B. lightning arrestor
C. insulated mast mount
D. isolated (non-grounded) antenna

Answer: A, B
The grounding block provides lightning provides surge protection for any charge that might build up on the Ethernet cable inner conductor.

QUESTION 111:

The Cisco Aironet 1400 Series Bridge has a full duplex 100 Mbps interface using ____.

A. two 75 Ohm "F" style connectors
B. two 50 Ohm "N" style connectors
C. two 75 Ohm "N" style connectors
D. two 50 Ohm "RP-TNC" style connectors

Answer: A
Ethernet Ports
The bridge's power injector dual-coax ports accept a pair of 75-ohm F-type connectors, linking the bridge to your 100BASE-T Ethernet LAN through the power injector. The dual-coax cables are used to send and receive Ethernet data and to supply inline 48-VDC power from the power injector.

QUESTION 112:

Why should you include a fade margin in the range calculation utility?

A. to increase the distances achieved
B. to always obtain an 11 Mbps link speed
C. to offset weather conditions such as rain or snow
D. to offset variances that are inherent in the antenna manufacturing process

Answer: C
Most professional installers also will add a fade margin to their overall range calculations. This margin will vary depending on the geographic and climatic conditions of different geographic areas, which may introduce atmospheric and multipath-related fading that must be added to the free-space path loss simulated in our tests.
A 10 dB fade margin is included for 2.4 GHz calculations, while the included 5dB fade margin for 5 GHz calculations is sufficient for dependable communications in all weather conditions. The distances given are only theoretical and should only be used to determine the feasibility of a particular design.
In telecommunication, the term fade margin (fading margin) has the following meanings:
A design allowance that provides for sufficient system gain or sensitivity to accommodate expected fading, for the purpose of ensuring that the required quality of service is maintained.
The amount by which a received signal level may be reduced without causing system

performance to fall below a specified threshold value
Fade margin in range calculation utility obtain 11Mbps link speed.

QUESTION 113:

Which two statements are true? (Choose two.)

A. Bridge in root mode will connect to bridge in root.
B. Bridge in root mode will connect to bridge in non-root.
C. Bridge in non-root mode will connect to bridge in non-root.
D. Access point in root mode will associate to a bridge in non-root mode.
E. Access point in non-root mode will associate to a bridge in root mode.

Answer: B, D
B: A bridge set to Non-Root Bridge w/o Clients will only associate with a root or nonroot bridge.
D: Bridge Host: This is also known as Work Group Bridge. This is a non-root bridge that is connected to a remote LAN segment and will only communicate with repeaters or root bridges.
Non-Root Bridge: This wireless bridge does not connect to the main wired LAN segment. It connects to a remote wired LAN segment and can associate to root bridges and other non-root bridges that accept client associations. It also can accept associations from other non-root bridges, repeater access points, and client devices. Repeater Device that connects multiple segments, listening to each and repeating signal on one to every other connected one; regenerates each transmission so that it can travel farther. Repeater or Non-root Access Point The repeater access point is not connected to the wired LAN. The Access point in root mode will be accessible to bridge in non root model

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QUESTION 114:

When setting up a wireless repeater what should the variable "role in radio network" be configured as?

A. root
B. client
C. bridge
D. non-root

Answer: D
Root-A wireless LAN transceiver that connects an Ethernet network with wireless client stations or with another Ethernet network. Use this setting if the access point is connected to the wired LAN.
Repeater/Non-Root-A wireless LAN transceiver that transfers data between a client and another access point. Use this setting for access points not connected to the wired LAN.
Client/Non-root-A station with a wireless connection to an access point. Use this setting for diagnostics or site surveys, such as when you need to test the radio by having it

communicate with another access point or bridge without accepting associations from client devices.

QUESTION 115:

The SWAN feature known as Fast Secure Roaming uses a mechanism known as Cisco Centralized Key Management (CCKM) to expedite the Layer 2 roaming process.
The CCKM authentication mechanism is configured ____.

A. on the client device
B. in the RADIUS Server
C. using the WLSE service
D. on the Infrastructure APs

Answer: D

Explanation:
Understanding Fast Secure Roaming
Access points in many wireless LANs serve mobile client devices that roam from access point to access point throughout the installation. Some applications running on client devices require fast reassociation when they roam to a different access point. Voice applications, for example, require seamless roaming to prevent delays and gaps in conversation.
During normal operation, LEAP-enabled client devices mutually authenticate with a new access point by performing a complete LEAP authentication, including communication with the main RADIUS server,
Using Cisco Centralized Key Management (CCKM), an access point configured to provide Wireless Domain Services (WDS) takes the place of the RADIUS server and authenticates the client so quickly that there is no perceptible delay in voice or other time-sensitive applications.

QUESTION 116:

Which three management tools are applicable to Cisco WLAN? (Choose three.)

A. MIBs
B. CiscoWorks 2000
C. Cisco QoS Device Manager
D. Cisco Element Manager Framework
E. RF Sniffers and Spectrum Analyzers

Answer: B, C, E

QUESTION 117:

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 the 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: C
One of the main issues with wireless mobility is the latency involved when a client moves out
of the range of one AP and into the range of another, called a handoff [1]. Handoff can cause
jittering in the connection which interrupts the stream of data being sent to the client.
A. Process
The handoff process involves two steps:
1. Discovery - this is when the client scans the network by looking for the beacon messages that each access point broadcasts. Also, the client can build a priority list of APs, depending on its signal strength.
2. Reauthentication - Using the priority list built during discovery, the client is synchronizing itself with the best AP in its list. It involves having authorization credentials and state information sent from the original AP to the new one.
Delays
The two steps required for a successful handoff introduce latency issues. These issues are as follows:
•
Probe Delay - this is the amount of time it takes the client to complete a scan of available networks and to build its priority list. It is required to send somewhere between 3 to 11 messages in order to complete this task.
•
Authentication Delay - this is the amount of time it takes for the client to reauthenticate to the AP it chose from its priority list. Depending on the type of authentication, either 2 or 4 packets need to be exchanged.
•
Reassociation Delay - this is the amount of time it takes for the client to signal the AP that the handoff is complete. It is required that a minimum of 2 packets be exchanged.

QUESTION 118:

With the 1400 Series Wireless Bridge, What is the maximum distance of combined cabling you can run between the network device, the power injector, and the Outdoor Unit (ODU)?

A. 50 meters

B. 150 meters
C. 200 meters
D. 250 meters

Answer: C
The Power Injector LR converts the standard 10/100 baseT Ethernet category 5 RJ-45 interface that is suitable for weather-protected areas to a dual F-Type connector interface for dual coax cables that are more suitable for harsh outdoor environments. While providing a 100baseT interface to the Cisco Aironet 1400 Series, the Power Injector LR also provides power to the unit over the same cables with a power discovery feature that protects other appliances from damage should they accidentally be connected. As an added benefit to the installer, Auto MDIX is built in, allowing the dual cables to be swapped and while maintaining the same functionality. To support longer cable runs from your infrastructure network switch or router, the Power Injector LR is designed to accommodate 100 m coaxial cable run plus 100 m of indoor cat5 cable, to enable total cable runs up to 200 meters. Lightning and surge protection is also included at the F-Type connector interface to provide added protection to your network infrastructure devices.

QUESTION 119:

What might happen if the connections that connect the antenna and cable are not weatherproofed? (Choose two.)

A. Water could seep into the cabling.
B. The cabling could exhibit additional attenuation.
C. The impedance of the antenna cable could change with the result being the loss of lightning protection.
D. The installation could be in violation of regulatory agency specifications on RF leakage requirements.

Answer: A, C
A: Waterproof the coax connector so water cannot seep into your coax.

QUESTION 120:

Which statement is true about a multi-point bridge link using a frequency of 5745 MHz?

A. Non-root bridges must not exceed six radio hops.
B. Generally only one root bridge is used, the rest should be non-root bridges.
C. Only two root bridges can be supported, the rest must be non-root bridges.
D. Multiple root and non-root bridges are typically used to optimize the bandwidth.

Answer: B

QUESTION 121:

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
Role of the WDS Access Point
The WDS access point performs several tasks on your wireless LAN:
• Advertises its WDS capability and participates in electing the best WDS access point for your wireless LAN. When you configure your wireless LAN for WDS, you set up one access point as the main WDS access point candidate and one or more additional access points as backup WDS access point candidates.
• Authenticates all access points in the subnet and establishes a secure communication channel with each of them.
• Collects radio data from access points in the subnet, aggregates the data, and forwards it to the WLSE device on your network.
• Registers all client devices in the subnet, establishes session keys for them, and caches their security credentials. When a client roams to another access point, the WDS access point forwards the client's security credentials to the new access point.
Role of Access Points Using the WDS Access Point
The access points on your wireless LAN interact with the WDS access point in these activities:
• Discover and track the current WDS access point and relay WDS advertisements to the wireless LAN.
• Authenticate with the WDS access point and establish a secure communication channel to the WDS access point.
• Register associated client devices with the WDS access point.
• Report radio data to the WDS access point.

QUESTION 122:

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

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

Answer: B, C, E

Explanation:

Cisco SWAN integrates and extends wired and wireless networking-making wireless a true extension of the wired network. The framework uses familiar Cisco IOS Software access point, switch, and router management features for integrated management of Cisco access points and client devices. End-to-end delivery of WLAN services such as fast secure roaming, rogue access point detection, security, mobility, quality of service (QoS), and management are enabled today on access points, client devices, and the Cisco Catalyst 6500 Series WLSM, with integration on additional switches and routers starting in 2004.

FEATURES AND BENEFITS

Cisco SWAN minimizes the total cost of ownership and maximizes wireless network uptime by optimizing the following deployment, management, and security features:

• Simplified management of several, hundreds, or thousands of central or remotely located access points
• Simplified WLAN deployment with assisted site surveys
• Enterprise-class security and security policy monitoring with smooth delivery of enhanced network security solutions
• Unified wireless and wired infrastructure, delivering a single point of control for all WLAN traffic
• Extension of rich, intelligent Cisco infrastructure device features to wireless traffic
• Streamlined WLAN management and operations support
• Air/RF scanning and monitoring
• Interference detection to isolate and locate network interference
• Enhanced troubleshooting and diagnostic tools for proactive performance and fault monitoring
• WLAN Intrusion Detection System (IDS)
• Self-healing WLANs that provide high availability
• Fast secure Layer 3 roaming

Cisco Structured Wireless-Aware Network

The Cisco Aironet 802.11a/b/g Wireless CardBus Adapter is a key component of the Cisco Structured Wireless-Aware Network (SWAN), an innovative, comprehensive Cisco solution for deploying, operating and managing a few to hundreds to thousands of Cisco Aironet access points using the Cisco infrastructure. Cisco SWAN provides the wireless LAN with the same level of security, scalability, and reliability that customers have come to expect in their wired LAN by introducing "wireless-aware" capabilities into the Cisco infrastructure. This solution is available on IEEE 802.11a and IEEE 802.11b Cisco and Cisco Compatible clients today and on IEEE 802.11g clients in 2004.

Wireless domain services (WDS) is introduced with Cisco SWAN. WDS is a collection of Cisco IOS Software features that expand WLAN client mobility, simplify WLAN deployment and management and enhance WLAN security. These services, supported on access points and client devices today and on specific Cisco LAN switches and routers in 2004, include radio management aggregation, fast secure roaming and WAN link remote site survivability. WDS radio management aggregation supports radio frequency (RF) managed services such as rogue access point detection, interference detection and assisted site surveys.

Fast secure roaming is supported by Cisco and Cisco Compatible client devices in conjunction with Cisco Aironet, Cisco IOS Software-based access points. 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

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QUESTION 123:

Location Manger 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
Explanation
The CiscoWorks WLSE enables administrators to quickly and easily detect, locate, and disable rogue access points. Details are displayed about the switch port into which the rogue access point is connected, and the physical location of the rogue access point is shown on the Location Manager GUI.
Note: All data captured from the access points and client devices is compiled by WDS and sent to the CiscoWorks WLSE. The CiscoWorks WLSE processes these received samples, calling out those that indicate the presence of rogue access points in the CiscoWorks WLSE 2.5 Location
Manager and CiscoWorks WLSE 2.0 Fault Summary.

QUESTION 124:

What role does the WLSE fulfill?

A. WLSE will shutdown rogue AP and automatic client card configuration
B. WLSE performs the security, configuration, and firmware management of Cisco APs
C. WLSE facilitates the automatic configuration of Aps and client and firmware management
D. WLSE facilitates the automatic configuration of APs, security Management, and management of non-Cisco APs

Answer: B

QUESTION 125:

Which of the following statements regarding Cisco SWAN Radio Management is valid? (Choose all that apply.)

A. It is supported by all APs.

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

Answer: B, D

QUESTION 126:

What does the WLSE Cisco Aironet Conversion Tool allow the administrator to do?

A. To store base AP configuration
B. To convert VXWorks Aps to IOS
C. To store base client configuration
D. To convert APs to either VXWorks or IOS

Answer: B

QUESTION 127:

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

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

Answer: D

QUESTION 128:

Which of the following are the available parameters on the Express Setup screen of the Access Point? (Select two.)

A. IP address
B. WeP settings
C. SSID
D. data rate

Answer: A, C

QUESTION 129:

In adhoc mode, the Cisco Aironet wireless PCMCIA client can talk to which two devices? (Choose two.)

A. Cisco Aironet Access Points
B. Cisco Aironet PCI wireless adapter
C. Cisco Aironet PCMCIA wireless adapter
D. Cisco Aironet Workgroup Bridge (WGB)

Answer: B, C

QUESTION 130:

What is the total maximum length of Ethernet cabling that can be used when powering a Cisco Aironet Access Point?

A. 50 meters
B. 100 meters
C. 300 meters
D. no limit

Answer: B

QUESTION 131:

When performing a site survey, the BSA is known as the _____.

A. Basic Service Area
B. Building Service Area
C. Broadcast Service Area
D. Broadband Switched Access

Answer: A

QUESTION 132:

What is the performance impact of 802.11b client in cell coverage of an 802.11g AP?

A. forces the AP to load balance
B. reduces the throughput of 802.11g clients associated to that AP
C. slows the throughput of 802.11g clients to that of the fastest 802.11b client in the cell
D. forces the AP adhering to the 802.11g specification to turn off 802.11g data reates

Answer: B

QUESTION 133:

Which three settings in a repeater Access Point are necessary to match the root

Access Point? (Choose three.)

A. SSID
B. DNS name
C. IP address
D. Radio Channel
E. WEP configuration
F. Role in radio network

Answer: A, D, E

QUESTION 134:

A customer has an installed 4-mile wireless link using Cisco Aironet 350 Series wireless bridges in the U.S. It is currently running at 2 Mb, with 13.5 Yagi antennas (vertically polarized), and 50 ft. of Cisco cabling on each side. The customer now needs the wireless pipe to be increased to 11 Mb. The cabling cannot be shortened due to physical limitations.
What can be done legally to make this a solid 11 Mb pipe?

A. utilize an amplifier on each site
B. replace the Yagis with dish antennas
C. rotate the antennas 90 degrees and use horizontal polarization
D. increase the power output of the radios using firmware 10.10 T or greater

Answer: B

QUESTION 135:

What two do Wireless Site Surveys determine? (Choose two.)

A. the SSID setting of an AP
B. the data rate setting of an AP
C. the transmit power setting of an AP
D. the RADIUS Server login procedure

Answer: B, C
Not D: A survey has nothing to do with the radius server login procedure.

QUESTION 136:

Why are diversity antennas used indoors?

A. They are smaller in size.
B. They are designed to handle multi-path.
C. They have lower transmit signal strength than standard antennas.

D. They have higher transmit signal strength than standard antennas.

Answer: B

QUESTION 137:

Your radio transmits at 20 dBm and you are using a 13.5 Yagi with 50 feet of cabling. The cabling has a loss of 6.8 dBi per feet.
What is your EIRP in dB? (Type the answer)

Answer: 30.15

Explanation:
(20 + 13.5 - 3.4 = 30.15)
Effective Isotropic Radiated Power
The radiated (transmitted) power is rated in either dBm or Watts. Power coming off an antenna is measured as Effective Isotropic Radiated Power (EIRP). EIRP is the value that regulatory agencies such as the FCC or European Telecommunications Standards Institute (ETSI) use to determine and measure power limits in applications such as 2.4 GHz wireless equipment. EIRP is calculated by adding the transmitter power (in dBm) to antenna gain (in dBi) and subtracting any cable losses (in dB.)

QUESTION 138:

If an antenna is rated at 3 dBd, what is its rating in dBi? (Type the correct answer)

Answer: 5.2

Explanation:
(3 + 2.2 = 5.2)
Antennas
The dB notation can also be used to describe the power level rating of antennas:
dBi for use with isotropic antennas (theoretical antennas that send the same power density in all directions)
dBd when referring to dipole antennas
Antennas are compared to this ideal measurement, and all FCC calculations use this measurement (dBi.) Dipole antennas are more real world antennas. While some antennas are rated in dBd, the majority use dBi.
The power rating difference between dBd and dBi is approximately 2.2; that is, 0dBd = 2.2dBi. Therefore, an antenna rated at 3dBd is rated by the FCC (and Cisco) as 5.2dBi.
http://www.cisco.com/en/US/tech/ CK7 22/ CK8 09/technologies_tech_note09186a00800e90f e.shtml

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QUESTION 139:

If the gain of the antenna goes up, the beamwidth _____.

A. increases
B. decreases
C. changes polarity
D. becomes circularly polarized

Answer: B

Explanation:
As the gain of the antenna increases, so does the antenna's ability to focus radio waves into a narrow beam.
A very large antenna will produce a very large gain and a very narrow "pencil beam". On the downside, the beam will need to be precisely pointed towards the satellite to ensure that full advantage can be taken of the high gain. In contrast, a small antenna will produce a wider beam, and also lower gain, but demands far less precision when it is pointed towards the satellite.
http://www.eutelsat.com/tools/3_2_5_3.html

QUESTION 140:

Which "cipher" is configured on the Cisco Aironet Access Point to enable WPA?

A. CKIP
B. CCKM
C. WEP 128
D. CKIP + CMIC

Answer: A

Explanation:
Client and Access Point Security Settings

Security Feature	Client Setting	Access Point Setting
Static WEP with open authentication	Disable Network Authentication, enable Static WEP and Open Authentication and create a WEP key	Set up and enable WEP and enable Open Authentication for the SSID
Static WEP with shared key authentication	Disable Network Authentication, enable Static WEP and Shared Key Authentication and create a WEP key	Set up and enable WEP and enable Shared Key Authentication for the SSID

LEAP authentication	Enable LEAP	Set up and enable WEP and enable Network-EAP for the SSID
LEAP authentication with WPA	Enable LEAP and Wi-Fi Protected Access (WPA) Note To allow the client to associate to both WPA and non- WPA access points, enable Allow Association to both WPA and non- WPA authenticators.	Select a cipher suite that includes CKIP, set up and enable WEP, and enable Network-EAP and WPA for the SSID

QUESTION 141:

Local Authentication Service on the Cisco Access Point allows a maximum of how many users?

A. 10
B. 25
C. 50
D. 100

Answer: C
Explanation
IEEE 802.1X Local Authentication Service
Q. How many users does IEEE 802.1X local authentication support?

A. IEEE 802.1X local authentication can support the authentication of up to 50 users in the local Cisco LEAP authentication database on the access point.

QUESTION 142:

You are the network administrator at Certkiller . Certkiller has two offices. Each office consists of a single building. Two buildings are one mile apart. A Cisco Aironet Access Point is installed at each site connecting to the Ethernet LAN in each building. There is a 21 dBi dish antenna using 20 ft. cabling in each building and the antennas are aimed at each other. The buildings have clean line of sight. However, there is no network connection between the two networks.

What could be the probable cause of this problem?

A. The root parameters have not been set properly.
B. Access Points cannot be used for this mode of operation.
C. The dish antennas are too high of gain for the 1 mile distance.
D. The cables are too long for this distance/antenna combination.

Answer: B

Explanation: A WLAN bridge must be used.

QUESTION 143:

You newly appointed Certkiller trainee wants to know what the typical line of site is, without the use of towers, buildings, etc.
What would your reply be?

A. 2 miles
B. 6 miles
C. 8 miles
D. 12 miles

Answer: B
Reference: Cisco WLAN PowerPoint

QUESTION 144:

You are a technician at Certkiller . Certkiller has a single office located in San Francisco, C
A. You need to run 150 ft. coaxes on both ends of a point-to-point bridge link with BR350s. You decide to use LMR-600, which has a loss of 4.4 db/100 feet.
What is the EIRP of the system if running at 11 Mb with the Aironent 21 dBi dish antennas?

A. 34.4 dBm
B. 36.2 dBm
C. 45.3 dBm
D. 47.6 dBm

Answer: A

Explanation: EIRP in U.S is not more than 36 dBm so calculation for EIRP= power output(dBm)+antenna gain(dBi)-cable loss which mean that 21 dBi should have only 15 dBm and with cable loss is 6.6 dB from

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QUESTION 145:

When installing antennas, which methods can you use to determine the direction in which to align the antennas? (Choose all that apply.)

A. Cellular triangulation
B. Balloon and binoculars
C. Stroke light and binoculars
D. Global Positioning System (GPS)

Answer: B, C, D

Explanation: Global Positioning System (GPS) Another "nice to have" item is a GPS device. Although you can use the odometer in your car to get fairly accurate distances between antennas in a point-to-point survey, a GPS will give extremely accurate readings as well as altitude. A GPS can also aid you in determining vehicle speeds in a highly mobile wireless installation and survey.

QUESTION 146:

You are the network administrator at Certkiller . Certkiller has a 4-mile wireless link using Cisco Aironet wireless bridges in the U.S. The network is currently running at 2 Mb, with 13.5 Yagi antennas (vertically polarized), and 50 ft. of Cisco cabling on either side. Certkiller wants to increase the wireless pipe by 11 Mb. However, the cabling cannot be shortened due to physical limitations.
What can you do to make this a solid 11 Mb pipe?

A. Implement an amplifier on each site.
B. Replace the Yagi antennas with dish antennas.
C. Rotate the antennas 90 degrees and use horizontal polarization.
D. Increase the power output of the radios using firmware 10.10T or greater.

Answer: B

QUESTION 147:

Your Certkiller trainee wants to know how many authentication servers can be configured on the Access Point.
What will your reply be?

A. 1
B. 2
C. 3
D. 4
E. 5

Answer: D
Reference: aironet 1200 configuration guide

QUESTION 148:

You have been instructed by the network administrator at Certkiller to set up a user through User Manager on the Access Point Menu screen.
Which of the following rights will that user need if the network is a SNMP community with read-only privileges? (Choose all that apply.)

A. Indent
B. Write
C. SNMP
D. Read
E. Admin
F. Firmware

Answer: C, D

Explanation:
Note: Configuring SNMP Community Access to configure specific access rights and privileges to an SNMP community, select the "access" menu option from the Communities menu and then select the appropriate option: "read" or "write." The "read" option supports gets and get-nexts SNMP requests from readable variables. The "write" options supports set, gets, and get-nexts on all available variables. The default configuration is for all SNMP communities to have "read" access only.

QUESTION 149:

Which of the following statements regarding Cisco's server-based authentication process is true?

A. It is a one-way authentication process from client to server.
B. It is a one-way authentication process from server to client.
C. It is mutual authenticating process between server and client.
D. The authentication method is dependent upon which 802.11 authentication method is used (open vs. shared key).
E. It is an independent one-way authentication process that vacillates between server and client.

Answer: C
Reference: Cisco WLAN PowerPoint

Explanation: Mutual Authentication the middle types of devices.
When using 802.1x and EAP, you should use some form of mutual authentication. This

will make the client and the authentication servers mutually authenticating end-points and will assist in the mitigation of attacks from man in

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QUESTION 150:

Which of the following is used by an Infrastructure AP when registering with WDS AP?

A. PEAP
B. EAP-TLS
C. LEAP
D. STATIC WEP

Answer: C

QUESTION 151:

The newly appointed Certkiller trainee technician wants to know which authentication method is authenticated in cases where Fast Secure Roaming requires WDS AP and Infrastructure Aps. What will your reply be?

A. CKIP
B. WEP
C. LEAP
D. none of the above

Answer: C

QUESTION 152:

Due to their need of maintaining end-to-end delay under what length of time, are voice applications most likely to benefit from Fast Secure Roaming?

A. 70 ps
B. 10 ms
C. 150 ms
D. 1 second

Answer: C

QUESTION 153:

You make changes to a specific page in the CLI. Which of the following commands can you use to activate those changes?

A. Save

B. Apply
C. Enable
D. Allow
E. Configure

Answer: B

QUESTION 154:

Which of the following can you use to discover an IP address for a given Access Point? (Choose all that apply.)

A. CDP
B. IPSU
C. browser
D. telnet
E. the console port

Answer: A, B, E
Not D: You cannot Telnet to a device that you don't know the IP address of, but if you were to type "show CDP neighbour" you would learn the IP address of the neighbour device.

QUESTION 155:

Which of the following methods can you use to reduce unnecessary traffic from being transmitted across the RF from an Access Pont?

A. By enabling packet filtering
B. By enabling MAC address authentication
C. By setting the buffer size in the Access Point to a lower value
D. By reducing the cell size by setting the transmit power to a lower setting

Answer: A

QUESTION 156:

Which tree methods can be used to initially configure an AP? (Choose all that apply.)

A. console cable
B. Web Interface
C. ACU
D. IPSU
E. ACAU

Answer: A, B, D

QUESTION 157:

Under which web interface page will you be permitted to configuration a single SSID?

A. VLAN
B. SNMP
C. Security Page
D. Express Setup

Answer: D

QUESTION 158:

What role does a lightning arrestor fulfill that is used in conjunction with Cisco Aironet wireless bridges? (Choose all that apply.)

A. It bleeds of static discharges to help prevent a direct lightning strike
B. It adds attenuation to the signal and separates data from the lightning strikes' energy
C. It dissipates any energy from a near lightning strike
D. It dissipates all the energy from a direct lightning strike

Answer: A, C

QUESTION 159:

In a retail application, which two statements are true? (Choose two.)

A. One 802.11b AP can handle more than 250 users
B. One 802.11b AP can handle 7-8 concurent voice calls
C. One 802.11b AP can handle 20-30 data collection devices
D. One 802.11b AP can handle a maximum of 2-3 wireless phones

Answer: B, C
Network SizingIP Telephony network sizing is essential to ensure that adequate bandwidth and resources are available to carry mission-critical voice traffic. In addition to the usual IP Telephony design guidelines for sizing components such as PSTN gateway ports, transcoders, WAN bandwidth, and so forth, also consider the following 802.11b issues when sizing your Wireless IP Telephony network:
Number of 802.11b Devices per AP
Cisco recommends that you have no more than 15 to 25 802.11b devices per AP.
Number of 802.11b Phones per AP

Before any discussion about network planning can take place, it helps to understand the basics of the overall network capacity.
The following network capacity guidelines apply to sizing the Wireless IP Telephony network:
No more than 7 concurrent G.711 calls per AP.
No more than 8 concurrent G.729 calls per AP.

QUESTION 160:

What are two functions of a lightning arrestor that is used in conjunction with Cisco Aironet wireless bridges? (Choose two)
A. dissipates any energy from a near lightning strike
B. dissipates all the energy from a direct lightning strike
C. bleeds off static discharges to help prevent a direct lightning strike
D. adds attenuation to the signal and separates data from the lightning strike's energy

Answer:

QUESTION 161:

You are a technician at Certkiller . Your newly appointed Certkiller trainee wants to know what the maximum transmission speed of 802.11b in Mbps?
What would your reply be?

A. 16 Mbps
B. 24 Mbps
C. 36 Mbps
D. 10 Mbps
E. 11 Mbps

Answer: E

Explanation: The 802.11b access speed ranges from 1 Mbps up to 11 Mbps. 802.11b supports the true 802.11 data rate of 2 Mbps as well as speeds up to 11 Mbps.

QUESTION 162:

You are the network administrator at Certkiller . Your newly appointed Certkiller trainee wants to know which 802.11 standard is referred to as a Wi-Fi?
What would your reply be?

A. 802.11a
B. 802.11b
C. 802.11c
D. 802.11g
E. 802.11i

Answer: B

Explanation: To ensure that consumers can build interoperating 802.11 wireless networks, an organization called the Wireless Ethernet Compatibility Alliance (WECA) tests and certifies 802.11 devices. Their symbol of approval means that the consumer can be assured that the particular device has passed a thorough test of interoperations with devices from other vendors. They have announced the "wireless fidelity" standard that is an awarded "seal of approval" for those WLAN products that have successfully completed prescribed interoperability testing. The Wi-Fi seal is to provide customers the assurance that products bearing this logo will work together.

QUESTION 163:

Which of the following does 802.11a use? (Choose all that apply.)

A. orthogonal frequency division multiplexing
B. 2.4 GHz band.
C. 3.2 GHz band.
D. DSSS

Answer: A

Explanation: 802.11a is one of the physical layer extensions to the 802.11 standard. Abandoning spread spectrum completely, 802.11a uses an encoding technique called Orthogonal Frequency Division Multiplexing (OFDM).

QUESTION 164:

Which of the following methods can be used to send more data across the airwaves? (Choose two.)

A. utilize lower band frequencies
B. use more complex modulation
C. use better filtering on the receiver
D. use more frequency (wider bandwidth)
E. utilize upper band frequencies

Answer: B, D

QUESTION 165:

Your newly appointed Certkiller trainee wants to know at which GHz band 802.11 works?
What would your reply be?

A. 3.2GHz
B. DSSS
C. 1.7 GHz
D. 2.4 GHz

Answer: D

Explanation: The 802.11 standards are responsible for defining the Physical and MAC layers of operation in a WLAN. The primary standard we focus on in the 802.11b standard, which is an extension to the original 802.11 standard. 802.11b's primary objective defines the use of the 2.4 GHz band in radio frequency (RF) for high-speed data communications.

QUESTION 166:

You are a network administrator for Certkiller . Your newly appointed Certkiller trainee wants to know what Access Point Mode is used in a 802.11 networking framework through which devices communicate with each other?
What would your reply be?

A. central
B. peer-to-peer
C. client server
D. infrastructure

Answer: D

QUESTION 167:

Which of the following does 802.11b use? (Choose all that apply.)

A. DSSS
B. 3.2 GHz
C. FHSS
D. orthogonal frequency division multiplexing
E. 2.4 GHz band

Answer: A, E

Explanation: The RF physical layer is composed of FHSS and DSSS in the 2.4 GHz band.
There are three unlicensed bands within the industrial, scientific, and medical frequency range. They are the 900 MHz, 2.4 GHz, and 5.8 GHz frequencies. Cisco Aironet products currently use the 2.4 GHz frequency range, which adheres to the IEEE 802.11b standard.
Not D: D is incorrect as 802.11b cannot associate with an AP that is running OFDM.

This is one of the ways that you can prevent 802.11b clients from associating with 802.11g AP's

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QUESTION 168:

Which of the following statements regarding non-overlapping channels is valid?

A. To improve roaming, non-overlapping channels share the same frequencies.
B. To improve roaming, non-overlapping channels make use of different frequency bands.
C. They share the same frequency but make use of different modulations to avoid interference.
D. To avoid interference, non-overlapping channels make use of the same frequency band but use non-shared frequencies.

Answer: D

QUESTION 169:

When radiating the RF signal to create the cell structure which part of WLANs is used?

A. client
B. antenna
C. radio
D. Access Point
E. none of the above

Answer: B

QUESTION 170:

Is it possible to configure the maximum transmitting power threshold for the APs participating in the AP Radio Scan?

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: C

QUESTION 171:

The newly appointed Certkiller trainee technician wants to know what happens to an antenna's radiation pattern as the gain of the antenna increases. What will your

reply be? (Choose all that apply.)

A. The angle of radiation increases.
B. The angle of radiation decreases.
C. The coverage distance from the antenna increases.
D. The coverage distance from the antenna decreases.

Answer: B, C

QUESTION 172:

You are an administrator at Certkiller . You want to send more data across the airwaves. What can you do? (Choose all that apply.)

A. use lower band frequencies
B. use a more complex modulation
C. improve filtering on the receiver
D. use a wider bandwidth

Answer: B, D

Explanation: In order to be sending more data, complex modulation schemes require optimal signal-to-noise ratios (more signal with less noise).
All radio signals move at the speed, regardless of frequency, the wavelength of a signal with a higher frequency passes a receiving antenna more frequently.

QUESTION 173:

What was the Wi-Fi alliance previously known as?

A. LANA
B. WAPA
C. WECA
D. WANA

Answer: C

Explanation: To ensure that consumers can build interoperating 802.11 wireless networks, an organization called the Wireless Ethernet Compatibility Alliance (WECA) tests and certifies 802.11 devices. Their symbol of approval means that the consumer can be assured that the particular device has passed a thorough test of interoperations with devices from other vendors. They have announced the "wireless fidelity" standard that is an awarded "seal of approval" for those WLAN products that have successfully completed prescribed interoperability testing. The Wi-Fi seal is to provide customers the assurance that products bearing this logo will work together.

QUESTION 174:

With regard to the 2.4 GHz ISM band, what is the total bandwidth?

A. 72.5 MHz
B. 83.5 MHz
C. 95.6 MHz
D. 96.6 MHz

Answer: B

Explanation: ISM Unlicensed Frequency Bands are,
902 - 928 MHz 26 MHz
2.4 - 2.4835 GHz 83.5 MHz [802.11 & 802.11b]
5.725 - 5.850 GHz 125 MHz [802.11a]

QUESTION 175:

With FHSS, which code determines the transmission frequencies?

A. Frequency Hopping
B. Hop Sequence
C. Dwell Frequency
D. Hop Time

Answer: B

Explanation:
The first type of spread spectrum developed is known as frequency hopping spread spectrum (FHSS). Simply put, frequency hopping is the process of jumping quickly from one frequency to another. A communications signal (voice or data) is split into separate parts. This technique broadcasts the signal over a seemingly random series of radio frequencies. A receiver, hopping between frequencies in synchronization with the transmitter, receives the message. The message can be fully received only if the series of frequencies is known.
At "Fundamentals of Wireless LANs Companion Guide" (Pub. by Cisco Press in 2004, ISBN: 1-58713-119-6), page 150, one can read "In FHSS systems, the carrier changes frequency, or hops, according to a pseudorandom sequence. This is cometimes called a hopping code".

QUESTION 176:

With which IEEE standard is a Cisco Aironet 1200 Series compliant with? (Choose all that apply.)

A. 802.11a

B. 802.11b
C. 802.11g
D. 802.11i

Answer: A, B, C
With simultaneous support for both 2.4 GHz and 5 GHz radios, the Cisco Aironet 1200 Series preserves existing IEEE 802.11b investments and provides a migration path to future IEEE 802.11a and IEEE 802.11g technologies.

QUESTION 177:

How much of the 2.4 GHz ISM band is used for radio transmission with 802.11b?

A. 45 MHz
B. 30 MHz
C. 22 MHz
D. 10 MHz

Answer: C

Explanation: DSSS wireless LANs have 11 total channels that can be used for RF transmission. Each channel is 22 MHz wide, and all channels combined equal the entire spectrum that can be used for 802.11b wireless LANs.,

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QUESTION 178:

Access Point 10 in root mode (SSID = '123') results in the provision of a connection to repeater Access Point 20 (SSID = '123'). In a scenario where Access Point 10 is using Channel 1, what channel will Access Point20 use?

A. Channel 1
B. Channel 6
C. any channel except Channel 1
D. Channel is not a concern in this application.

Answer: A

QUESTION 179:

Which channel is used by the standby Access Point, when deploying Access Points in hot-standby mode?

A. It will scan all available channels.
B. It will make use of the same channel as the primary Access Point.
C. It will make use of a channel adjacent to the primary Access Point.
D. The radio is off until an SNMP trap is sent by the primary.

Answer: B

QUESTION 180:

What is the total bandwidth of the 2.4GHz ISM band?

A. 70 MHz
B. 83.5 MHz
C. 90 MHz
D. 100 MHz

Answer: B

Explanation:
LOBO Wireless LAN RF Usage in Elkhorn Slough.

	Acess Point Location(s)	Intended Coverage Area	WLAN Mfg and Model	WLAN Type /Standard	WLAN Freq/band	Radio Xmit Power	Antenna Gain / Type	Operational Duty Cycle	RF Bandwidth Load	Data Rate	Number of Field Nodes Serviced
LOBO WIRELESS LAN	Sea Harvest Restaurant	Seal Bend to Hwy 1 Bridge	Cirronet SNAP 2410	Frequency Hopping Spread Spectrum (FHSS)	2.4 GHz ISM band.	10 or 100 mWatt	14 dB / Corner Reflector	8% typ (5 min per hr)	1% (750 kHz over 83 MHz)	460 kbaud (Radio Rate)	Up to 124 per Access Point
802.11b Comparison	Nowhere	Somewhere	Zippy LAN	Direct Sequence Spread Spectrum (DSSS) / 802.11b	2.4 GHz ISM band.	?	?	?	35% (30 MHz over 83 MHz)	5 Mbaud ?	

http://www.mbari.org/staff/coletti/rf_alloc.html

QUESTION 181:

In 802.11, how does a client use a null value for their SSID and still associate to an Access Point?

A. through the use of LEAP
B. through open authentication
C. through shared-key authentication
D. through the use of Broadcast SSID
E. by the use of a null character string in the Access Point's SSID field

Answer: D

Explanation:
If you leave this parameter blank, your client adapter can associate to any access point on the network that is configured to allow broadcast SSIDs (refer to your access point documentation). If the access point with which the client adapter is to communicate is not configured to allow broadcast SSIDs, the value of this parameter must match the SSID of the access point. Otherwise, the client adapter is unable to access the network.
http://www.cisco.com/en/US/products/hw/wireless/ps4555/products_administration_guide_chapter09186a00801d65c8.html#1072990

QUESTION 182:

Which data rate is covered under the 802.11g specification?

A. 10 Mbps
B. 24 Mbps
C. 54 Mbps
D. 108 Mbps

Answer: C

QUESTION 183:

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: A D E

QUESTION 184:

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

Explanation:

The Wi-Fi Alliance is a nonprofit international association formed in 1999 to certify interoperability of wireless Local Area Network products based on IEEE 802.11 specification
Reference: www.wi-fi.org

QUESTION 185:

Which of the following can you use to access the CLI screens on an Access Point? (Choose all that apply.)

A. IPSU
B. Console port
C. Telnet session
D. Browser window
E. Command Prompt window

Answer: B, C

Explanation:
Enter the commands in the command-line interface (CLI) to display the information. You can open the CLI with Telnet or with a terminal emulator through the access point's or bridge's serial port.
http://www.cisco.com/univercd/cc/td/doc/product/wireless/airo_350/accsspts/ap350rn/rn1108t1.htm
Reference: configuration guide for aironet 1200
Note: The Telnet session or console port connection, is a quick and simple method for configuring the AP.

QUESTION 186:

Consider the following scenario: You have a wireless LAN that you want to set up to stop traffic generated from one client on the Rf. You then decide to set up a filter.
What do you need to set up on the exhibits?
Exhibit 1:

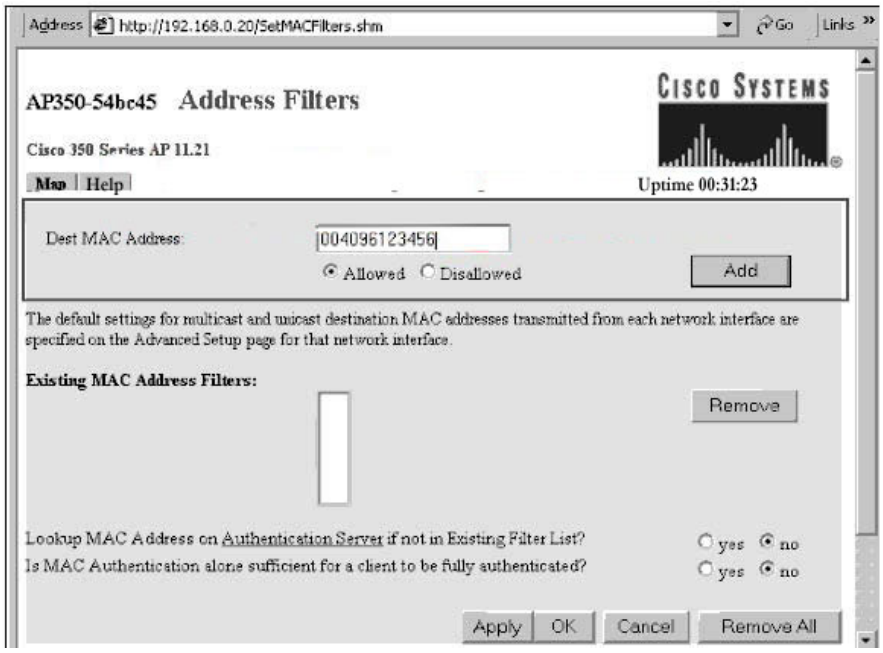
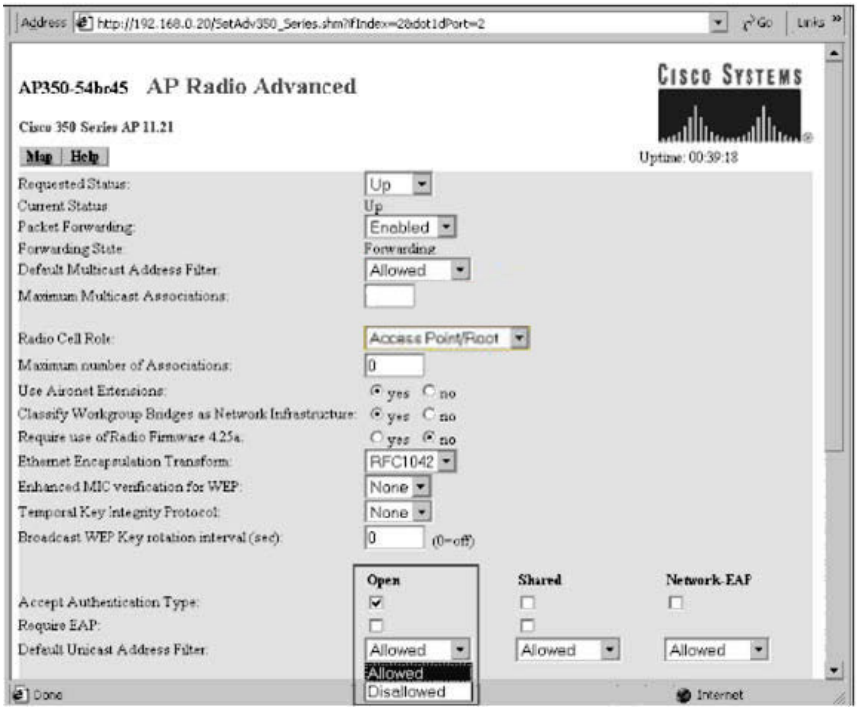


Exhibit 2:

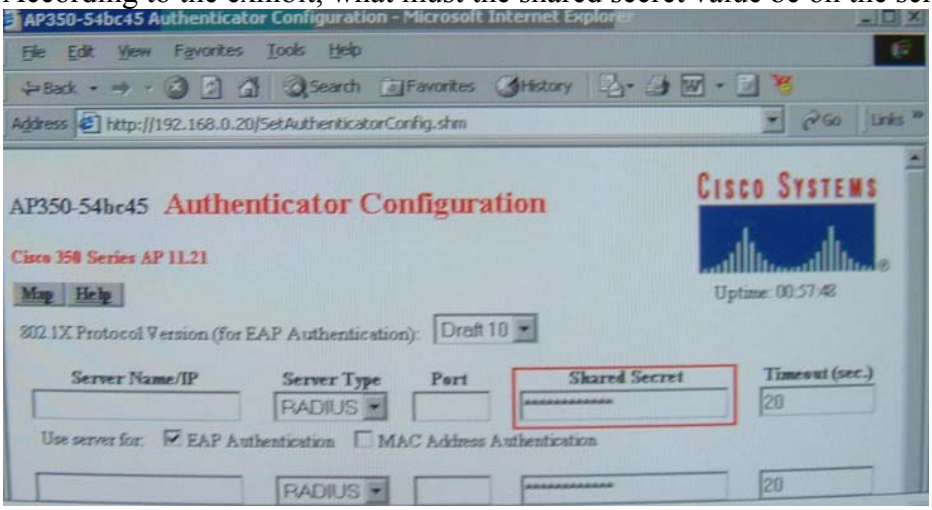


A. Address Filter Page: Allowed; Access Point Radio Advanced page: Disallowed
B. Address Filter Page: Disallowed; Access Point Radio Advanced page: Disallowed
C. Address Filter Page: Allowed; Access Point Radio Advanced page: Allowed
D. Address Filter Page: Disallowed; Access Point Radio Advanced page: Allowed

Answer: D

QUESTION 187:

According to the exhibit, what must the shared secret value be on the screen?



A. the multicast WEP key
B. a self generating value that the authentication server distributes when first enabled
C. a key that is user created which must be identical on the both the authentication server and the Access Point
D. the Mac address of the Access Point

Answer: C

QUESTION 188:

Which of the following operating systems support WPA with the aid of Cisco Aironet Client Adapter? (Choose all that apply.)

A. Linux
B. Microsoft Windows XP
C. Microsoft Windows 2000
D. Sun Solaris
E. Microsoft Windows 98

Answer: B, C

QUESTION 189:

What are the values that you would need to configure in ACS when adding an AP to the ACS database? (Choose three.)

A. Configure broadcast WEP key
B. Configure RADIUS shared secret
C. Configure a unique name for AP (AAA client) in ACS database

D. Configure AP hostname or IP address
E. Configure session key expiration interval

Answer: B, C, D

QUESTION 190:

What are the necessary parameters needed to be configured on a Cisco Aironet 1100 Series Access Point when making use of dynamic WEP keying? (Choose all that apply.)

A. enable encryption/cipher
B. RADIUS Server IP address
C. 128-bit WEP key
D. EAP / Network EAP authentication
E. none of the above

Answer: A, B, D
It is not needed to introduce a static WEP key when keying is dynamic. It can be confirmed at "http://www.cisco.com/en/US/products/hw/wireless/ps4570/products_configuration_guide_chapter09186a0080184aca.html.". So, in our opinion, the right answers are A, B and D.

QUESTION 191:

Which of the following statements regarding the transmit key is valid when configuring static WEP keys on an AP?

A. the transmit key number must be set for index 1
B. the transmit key number must be unique per client
C. the transmit key number must be set the same as the client key number
D. the transmit key number must be set differently that the client key number

Answer: C

QUESTION 192:

Which of the following represents the features in WPA (Version 1) for an Enterprise Class Access Point? (Choose all that apply.)

A. 256 bit encryption
B. WPA Migration mode
C. unicast and broadcast key management
D. 802.1X authentication
E. pre-shared key authentication

Answer: B, C, D
We think that right answers are B, C and D. E is characteristic of 802.11, not of WPA. However, with WPA, it is not necessary to configure static keys; they can be derived after 802.11X authentication, included in WP
A. Explanation is available at Microsoft article "http://support.microsoft.com/?kbid=815485#3".

QUESTION 193:

The Certkiller trainee technician is curious as to how WEP keys are generated with Cisco's server-based authentication method. What can you tell her?

A. WEP keys are statically entered.
B. WEP keys are generated dynamically.
C. WEP KEYS are random values that are independent from one another.
D. WEP keys are placed in a database and sent out to the client during the association process.

Answer: B

QUESTION 194:

Fast Secure Roaming is enabled by a WDS that services up to 30 APs on _____.

A. all VLANs in the WLAN
B. all single Layer 2 network
C. no more than 254 subnets
D. any subnet attached to its immediate upstream router

Answer: B

Explanation:
The WDS are control path technologies that you must activate on an AP in each layer-2 domain; you can also define a backup WDS in each layer-2 domain. The WDS allows for the following:
Fast, secure layer-2 roaming is achieved because the WDS acts as an 802.1x proxy authenticator for wireless clients within the layer-2 network.

QUESTION 195:

Radio Management is designed to collect information from _____.

A. AirMagnet
B. APs registered with the WDS
C. The CiscoSecure ACS Server
D. Switches providing backbone service to APs

Answer: B

Explanation:
Understanding Radio Management
When you configure access points on your wireless LAN to use WDS, the access points automatically play a role in radio management when they interact with the WDS device. To complete the radio management configuration, you configure the WDS device to interact with the WLSE device on your network.
Access points participating in radio management scan the radio environment and send reports to the WDS device on such radio information as potential rogue access points, associated clients, client signal strengths, and the radio signals from other access points. The WDS device forwards the aggregated radio data to the WLSE device on your network.

QUESTION 196:

Radio Management information passed to the WLSE Server must _____.

A. pass through the WDS
B. come directly from all APs
C. be formatted with a text editor
D. use TCP for reliable transmission

Answer: A

Explanation:
Understanding Radio Management
Access points participating in radio management scan the radio environment and send reports to the WDS device on such radio information as potential rogue access points, associated clients, client signal strengths, and the radio signals from other access points. The WDS device forwards the aggregated radio data to the WLSE device on your network. Access points participating in radio management also assist with the selfhealing wireless LAN, automatically adjusting settings to provide coverage in case a nearby access point fails. Refer to the "Configuring Radio Management" section for instructions on configuring radio management.

QUESTION 197:

What is the only optional step in the SWAN configuration?

A. configure wireless client devices
B. enable WDS on the selected APs
C. use a RADIUS Server that will provide authentication services
D. configure specific features on the WDS and Infrastructure APs

Answer: D

Explanation:
There are six steps for setting up SWAN:
Configure read and read-write SNMP on all APs ·
Configure the WLSE ·
Configure RADIUS servers ·
Configure WDS on the appropriate APs ·
Configure infrastructure APs to register and authenticate with the WDS ·
Configure wireless client devices ·
http://www.cisco.com/warp/public/477/CWW/setupwlse46528.pdf

QUESTION 198:

What does Radio Management require?

A. WLSE
B. Cisco Secure ACS
C. Spectrum Analyzer
D. VxWorks and IOS Access Points

Answer: A

Explanation:
Understanding Radio Management
When you configure access points on your wireless LAN to use WDS, the access points automatically play a role in radio management when they interact with the WDS device. To complete the radio management configuration, you configure the WDS device to interact with the WLSE device on your network.

QUESTION 199:

Filtering can be performed on an Access Point at which three layers of the OSI model? (Choose three.)

A. Layer 2
B. Layer 3
C. Layer 4
D. Layer 5

Answer: A, B, C
Broadcast and multicast filtering also enhance scalability. Filtering allows 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/en/US/products/hw/wireless/ps458/products_data_sheet09186a008009247c.html

QUESTION 200:

What information is needed when using the IP Setup Utility (IPSU) to determine the IP address of a specific Access Point?

A. DNS name of the Access Point
B. MAC address of the Access Point
C. serial number of the Access Point
D. the switch and switch port it is attached to

Answer: B

QUESTION 201:

The IP Setup Utility (IPSU) can be used to configure which two Access Point parameters? (Choose two.)

A. SSID
B. user name
C. IP address
D. RF channel

Answer: A,C

Explanation:
Access Point Configuration Options
Access points include a wide variety of configuration settings, and the following represents the more common items you can change:
IP address. Every access point (indeed, every client and server as well) must have a unique IP address to enable proper operation on the network. The access point will come with a pre-assigned IP address, but you'll probably need to change it to match the address plan of your corporate network. In most cases, the use of static IP addresses in access points is best, mainly to make operational support easier. Some access points allow you to use dynamic host configuration protocol (DHCP) so that the access point automatically obtains an IP address from a DHCP server. This may be beneficial for some home applications if the broadband service provide offers addresses via DHCP.
Service set identifier (SSID). The SSID defines the name of a WLAN that users associate with. By default, the SSID is set to a common value, such as tsunami for Cisco products. In order to improve security, you should change the SSID to a non-default value to minimize unauthorized users from associating with the access point. For even better security, some access points let you disable SSID broadcasting. This keeps most client device operating systems (e.g., Windows XP) from sniffing the SSID from access point beacons and automatically associating with the access point. Someone could, however, obtain the SSID using other sniffing tools that obtain the SSID from 802.11 frames when

users first associate with the access point.
http://www.wi-fiplanet.com/tutorials/article.php/2026541

QUESTION 202:

Under which web interface page can a user configure a single SSID?

A. VLAN
B. SNMP
C. Security Page
D. Express Setup

Answer: D

Explanation:
SNMP community names entered on the Express Setup page have limited access to access point configuration information. To provide full access to the SNMP community you specify on the Express Setup page, use the User Manager pages to assign firmware privilege to the community name.

QUESTION 203:

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

Explanation:
802.11g is an extension to 802.11b, the basis of the majority of wireless LANs in existence today. 802.11g will broaden 802.11b's data rates to 54 Mbps within the 2.4 GHz band using OFDM (orthogonal frequency division multiplexing) technology. Because of backward compatibility, an 802.11b radio card will interface directly with an 802.11g access point (and vice versa) at 11 Mbps or lower depending on range. You should be able to upgrade the newer 802.11b access points to be 802.11g compliant via relatively easy firmware upgrades.
Range at 54 Mbps will likely be less than existing 802.11b access points operating at 11 Mbps. As a result, don't count on upgrading your existing access points that currently provide 11 Mbps throughout all areas. You'll probably need to move the access points closer together and include additional ones to accommodate higher data rates.
http://www.wi-fiplanet.com/tutorials/article.php/1009431

QUESTION 204:

What does the 802.11g protection mechanism do?

A. use 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 802.11g clients are in the same cell
D. uses CTS (clear to send) to protect 802.11g clients from the collisions with 802.11b clients

Answer: D

QUESTION 205:

What does the Network Access Server represent when configuring the Cisco Secure ACS server for use with WLANs?

A. The IP address of the ACS server
B. The DNS name of the ACS server
C. Individual Access Points on the network
D. The master Access Point on the network

Answer: C
Reference: configuration guide for aironet 1200

QUESTION 206:

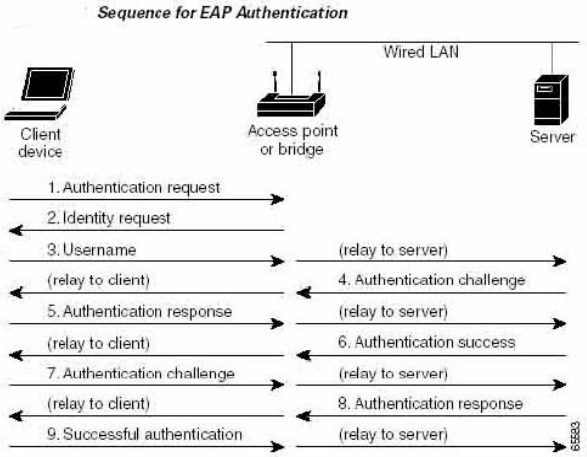
Before a client is authenticated with server-based authentication, which types of packets are able to get through? (Choose all that apply.)

A. Data packets
B. DHCP packets
C. EAP authentication packets
D. 802.11 open authentication packets

Answer: C, D

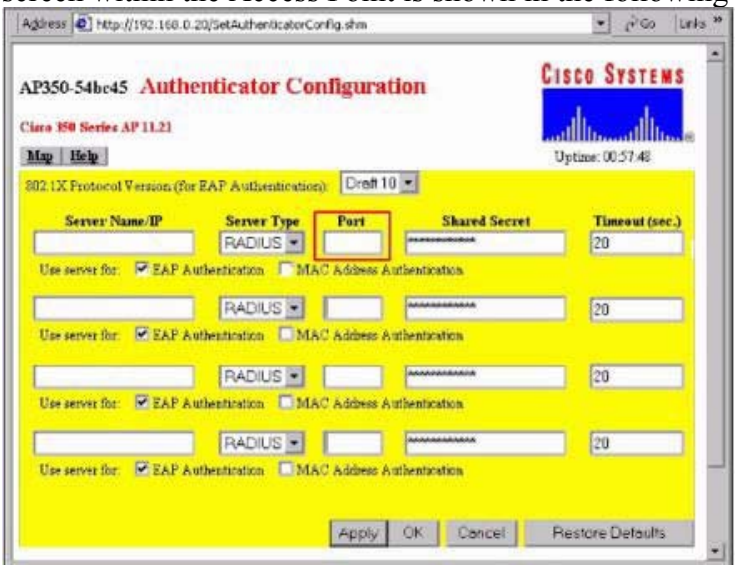
Explanation: During EAP authentication only EAP packets can be passed, not data packets or DHCP packets.

Reference: Cisco security suit



QUESTION 207:

You are the network administrator at Certkiller . The Authentication Configuration screen within the Access Point is shown in the following exhibit:



Certkiller uses EAP authentication with Cisco Secure ACS. What value should you use for the port setting on the Authentication Configuration screen?

A. 1218
B. 1564
C. 1645
D. 1820

Answer: C

Explanation: Enter the name or IP address of the authentication server in the Server Name/IP entry field if not already there, then enter the port number the server uses for

authentication. Use the default (1812) for RADIUS servers; 1645 is the port setting for Cisco's RADIUS server, the Cisco Secure Access Control Server (ACS)."

QUESTION 208:

At which layers of the OSI model can filtering be performed on an Access Point? (Choose all that apply.)

A. Application
B. Presentation
C. Sessions
D. Transport
E. Network
F. Data-Link
G. Physical

Answer: D, E, F

QUESTION 209:

What information is needed to determine the IP address of a specific Access Point when using the IP Setup Utility (IPSU)?

A. The Access Point's DNS name
B. The Access Point's MAC address
C. The Access Point's serial number
D. The switch and switch port the Access Point is attached to

Answer: B
Reference: configuration guide for aironet 1200

Explanation: IP Setup Utility
In order to simplify the initial configuration of the AP, Cisco provides a network application called IPSU, or IP Setup Utility. This program allows the administrator to determine the IP address of the AP if the AP was assigned an address via a DHCP server. In order to obtain an IP address, select the Get IP add option on the right-hand side of the screen, then input the MAC layer address, identified on the bottom of the AP, and select the Get IP Address button.

QUESTION 210:

What is the maximum EIRP that is allowed in a 5 GHz UNII-1 RF system in the United States?

A. 100 mW
B. 250 mW

C. 400 mW
D. 500 mW

Answer: A

QUESTION 211:

What organization was made up to certify all 802.11-based products for interoperability?

A. WECA
B. LANA
C. LEAP
D. WLANA

Answer: A

Explanation: To ensure that consumers can build interoperating 802.11 wireless networks, an organization called the Wireless Ethernet Compatibility Alliance (WECA) tests and certifies 802.11 devices. Their symbol of approval means that the consumer can be assured that the particular device has passed a thorough test of interoperations with devices from other vendors. They have announced the "wireless fidelity" standard that is an awarded "seal of approval" for those WLAN products that have successfully completed prescribed interoperability testing. The Wi-Fi seal is to provide customers the assurance that products bearing this logo will work together.

QUESTION 212:

Which 5 GHz bands are designated for outdoor use only in the United States? (Choose all that apply.)

A. 2.42-2.45 GHz
B. 5.15-5.25 GHz
C. 5.25-5.35 GHz
D. 5.725-5.825 GHz

Answer: D

QUESTION 213:

What is the maximum power output of a 2.4 GHz radio according to FCC regulations?

A. 18 dBm
B. 27 dBm
C. 30 dBm

D. 32 dBm

Answer: C

QUESTION 214:

At what band do 802.11a devices operate?

A. 5 GHz
B. 11 GHz
C. 24 GHz
D. 54 GHz

Answer: A

Explanation: 802.11a equipment will operate at 5 GHz and support up to a 54 Mbps data rate.

QUESTION 215:

What is the transmission technology used in a WLAN transmission where data signal at the sending workstation is combined with chipping code that is responsible for dividing the user data according to a spread ratio?

A. DSSS
B. FHSS
C. Orthogonal frequency division multiplexing
D. ISM

Answer: A

Explanation: DSSS is the acronym for Direct Sequence Spread Spectrum. In DSSS, the digital data signal is inserted in a higher data rate chipping code according to a predetermined spreading ratio.

QUESTION 216:

After the month of June 1994, The FCC and DOC regulations required all antenna connectors to be proprietary (unique and any-standard). The Cisco/Aironet has since used which connector as its Access Points and bridges?

A. BNC
B. RP-SMA
C. 100 Base TX
D. RP-TNC
E. N-connector

F. 10 BaseT

Answer: D

Explanation: Cisco APs, bridges, and accessories use primarily the RP-TNC connector. The RP-TNC connector is a normal TNC connector that has been modified to fit FCC regulations.
A connectorized version of the Cisco Aironet 1300 Series Outdoor Access Point/Bridge provides professional installers with RP-TNC type connectors that allow the deployment of nodes with omnidirectional

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QUESTION 217:

The current WLAN product manufacturers are required to use how much more frequencies per transmission channel?

A. 12
B. 46
C. 60
D. 75

Answer: D

Explanation: The FCC has made some rules for FHSS technologies. The FCC dictates that the transmitters must not spend more than 0.4 seconds on any one channel every 20 seconds in the 902 MHz band and every 30 seconds in the 2.4 GHz band. Also, the transmitters must hop through at least 50 channels in the 902 MHz band and 75 channels in the 2.4 GHz band. A channel consists of a frequency width, which is determined by the FCC.

QUESTION 218:

The following FHSS, data signal is modulated with which carrier signal?

A. zeroband
B. broadband
C. neutralband
D. narrowband

Answer: D

QUESTION 219:

Access Point10 in root mode (SSID = '123') on the Certkiller network provides connection to repeater Access Point20 (SSID = '123').
Access Point10 is using Channel 1, what channel should Access Point20 use?

A. Channel 1
B. Channel 2
C. Channel 10
D. Any channel except Channel 1.

Answer: A

Explanation: The repeater must use the same channel with root/access point

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QUESTION 220:

You are the network administrator at Certkiller . Certkiller has two offices in Berlin, Germany. The two offices are 20 km apart. You want to make a wireless bridge link with BR350s.
With regard to this scenario, which of the following statements is true?

A. This cannot be done.
B. This requires the use of 21 dBi dish antennas and an amplifier.
C. This requires the use of a repeater site and four bridges.
D. This requires the use of 6 dBi patch antennas.

Answer: C

Explanation: In Europe you can't use 21 dBi dish but we can set up a repeater site

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QUESTION 221:

What is the elliptical immediately surrounding the visual path of an RF signal is often referred to as?

A. Line of sight
B. The footprint
C. The Fresnel zone
D. Free space path loss
E. Atmospheric absorption

Answer: C
Reference: Cisco antenna reference

QUESTION 222:

You are a technician at Certkiller . You are installing two new, factory default BR352s.
To enable these BR323s to pass traffic, what should you do?

A. Set the Ethernet port to active.
B. Set the Root to off on the remote bridge.
C. Do nothing. The BR323s will be able to communicate with default settings.
D. Set the frequency of the remote bridge to match the master bridge frequency.

Answer: B
Reference: Cisco WLAN bridge 350 configuration guide

QUESTION 223:

You are a technician at Certkiller . Certkiller uses 128-bit data encryption. How many bits is the Initialization Vector (IV)?

A. 4
B. 16
C. 24
D. 48
E. 64

Answer: C
Reference: Cisco WLAN powerpoint

Explanation: A 24-bit initialization vector (IV) is used to create the identical cipher streams in 128-bit data encryption

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QUESTION 224:

Which port will an Access Point pass data traffic through if it is set up as a repeater?

A. The Radio port
B. The Bridge port
C. The Console port
D. The Ethernet port

Answer: A
Reference: configuration guide for aironet 1200

QUESTION 225:

A Certkiller client will be aware of how much WEP keys in each cell using Cisco's server-based authentication method?

A. 1
B. 3
C. 4

D. 5
E. 7

Answer: C

QUESTION 226:

You are the network engineer for Certkiller . You are deploying Access Points in hotstandby mode. Which channel will be used by the standby Access Point?

A. Any available channels.
B. The same channel as the primary Access Point.
C. A channel adjacent to the primary Access Point.
D. The radio is off until an SNMP trap is sent by the primary Access Point.

Answer: B

QUESTION 227:

Which Access Point parameters can you configure using the IP Setup Utility (IPSU)? (Choose all that apply.)

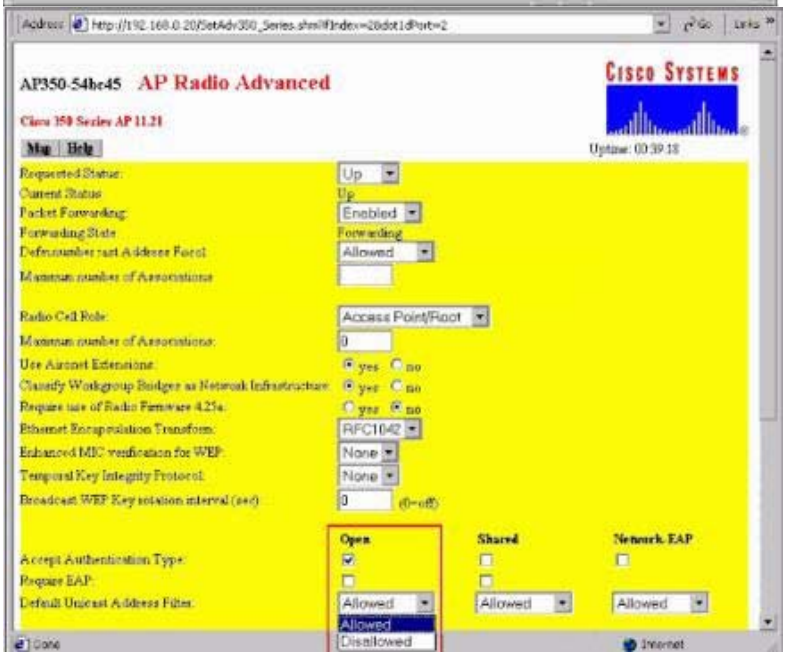
A. The SSID
B. The user name
C. The IP address
D. The RF channel

Answer: A, C

Explanation: IP Setup Utility allows the administrator to determine the IP address or assign the IP address statically of the AP. In order to obtain an IP address, select the Get IP add option on the right-hand side of the screen, then input the MAC layer address, identified on the bottom of the AP, and select the Get IP Address button. To configure the IP address or SSID, the administrator will select the Set Parameters radio button and then enter the values.

QUESTION 228:

You are the network administrator at Certkiller . Certkiller has a wireless LAN that you want to set up to only pass traffic from one client to the RF. You have decided to set up a filter. The Access Point Radio Advanced Configuration screen is shown in the following exhibit:



What do you need to set up on the Access Point Radio Advanced Configuration screen and on the Address Filter page?

A. Address Filter page: Allowed; Access Point Radio Advanced page: Allowed
B. Address Filter page: Disallowed; Access Point Radio Advanced page: Allowed
C. Address Filter page: Allowed; Access Point Radio Advanced page: Disallowed
D. Address Filter page: Disallowed; Access Point Radio Advanced page: Disallowed

Answer: C

QUESTION 229:

You are the network administrator at Certkiller . Certkiller uses the Message

Integrity Check (MIC) feature to enhance security. Your newly appointed Certkiller trainee wants to know where the MIC information is placed in the 802.11 packets. What would your reply be?

A. In the Trailer
B. In the Header
C. In the Payload
D. In the Initialization Vector (IV)

Answer: C
Reference: Cisco WLAN powerpoint

QUESTION 230:

You are a network administrator at Certkiller . Your client machine is configured as follows:
SSID1 = 1234
Encryption Key 1 = 0246897531
Authentication Type = Open
Which Access Point configuration will work with your client?

A. SSID = 1234, Encryption Key 1 = 0246897531, Authentication Type = Close
B. SSID = 1234, Encryption Key 1 = 0246897531. Authentication Type = Open
C. SSID = 1234, Encryption Key 1 = 0246897531. Authentication Type = Shared Key
D. SSID = 1234, Encryption Key 1 = 0246897531, Authentication Type = Shared Key

Answer: B
Reference: configuration guide for aironet 1200

QUESTION 231:

When using a Cisco Aironet 1200 Series it allows for both single- and dual-band configuration. (True or False.)

A. True
B. False
C. True and False
D. This is not always true - must be judged case by case

Answer: A

QUESTION 232:

You are the network administrator for Certkiller . Your newly appointed Certkiller

trainee wants to know according to what the chipping code divides user data when using DSS.
What would your reply be?

A. Output parameter.
B. Spreading ratio.
C. Input parameter.
D. Data rate.
E. User rate.

Answer: B

Explanation: DSSS is the acronym for Direct Sequence Spread Spectrum. In DSSS, the digital data signal is inserted in a higher data rate chipping code according to a predetermined spreading ratio.

QUESTION 233:

Which of the following 2.4 GHz RF channels for DSSS are available in Japan?

A. 2
B. 9
C. 7
D. 5
E. 14

Answer: E

Explanation: 802.11b Radio Frequency Bands by Geography

Channel	Frequency	N America	Europe	Spain	France	Japan
1	2.412 GHz	X	X			
2	2.417 GHz	X	X			
3	2.422 GHz	X	X			
4	2.427 GHz	X	X			
5	2.432 GHz	X	X			
6	2.437 GHz	X	X			
7	2.442 GHz	X	X			
8	2.447 GHz	X	X			
9	2.452 GHz	X	X			
10	2.457 GHz	X	X	X	X	
11	2.462 GHz	X	X	X	X	
12	2.467 GHz		X		X	
13	2.472 GHz		X		X	
14	2.483 GHz					X

Note: Only one channel is available in Japan. The channel number is 14.

QUESTION 234:

Cisco has recently developed an 802.1X authentication type called EAP Cisco Wireless. What is this authentication type also known as?

A. TCP/IP
B. EAP/TLS
C. Cisco LEAP
D. IPX/SPX

Answer: C

Explanation: LEAP (Lightweight Extensible Authentication Protocol) to authenticate nonroot bridges. This feature will allow the nonroot bridges to authenticate to the network so that they can receive and use dynamic WEP keys.
802.1x and EAP
One type of wireless security is focused on providing centralized authentication and dynamic key distribution area. By using the IEEE 802.1x standard, the EAP, and the Cisco Lightweight Extensible Authentication Protocol (LEAP) as an end-to-end solution, you can provide enhanced functionality to your wireless network.

QUESTION 235:

Which of the following ports will be used to pass traffic data by an Access Point set up as a repeater?

A. the bridge port
B. the console port
C. the radio port
D. the Ethernet port

Answer: C

QUESTION 236:

The newly appointed Certkiller trainee technician wants to know what can be done to protect a wired LAN infrastructure from being damaged if there is a direct lightning strike on the antenna itself. What will your reply be?

A. placing a lightning arrestor in-line with the antenna cabling
B. placing a link of fiber with transceivers on the data port of the wireless bridge
C. grounding the antenna cabling prior to it entering the building
D. placing a link of fiber between the antenna cabling and the wireless bridge

Answer: B

QUESTION 237:

The Certkiller trainee technician wants to know what the maximum Ethernet run from the Cisco Aironet 1400 Series Bridge to the switch or router is. What will your reply be?

A. 10 km (maximum distance for single mode fiber)
B. 100 meters (maximum distance for Fast Ethernet)
C. 500 meters (Cisco Aironet 1400 Series use a hybird Ethernet/fiber interface)
D. 200 meters (100 meters from Switch to Power Injector, then another 100 meters to Bridge outdoor Unit (ODU)

Answer: B

QUESTION 238:

A Certkiller customer in Europe needs and 11 Mb wireless bridge link that is 1.3 km. You run the range calculation and determine that the BR 350 product at 5 mW with 13.5 dB yagis at both sites would work. Fifty feet of standard Cisco cabling is long enough to connect the bridge to the antenna. There is a small grove of tree between sites.
What can you do to successfully bring up this link?

A. An amplifier has to be installed at one of the sites.
B. A 21 DBi dish needs to be used for its narrower beam width to accommodate the trees in the grove between the sites.
C. The antenna must be raised sufficiently to clear the trees.
D. The Yagis need to be used in a horizontally polarized orientation.

Answer: C

QUESTION 239:

Consider the following scenario: Two buildings have a Cisco Aironet Access Point installed at each site connecting to the Ethernet LAN in each building. There is a 21 dBi dish antenna using 20 ft. cabling in each building and the antennas are aimed at each other. The buildings are one mile apart with clean line of sight. There is no network connection between the two networks.
What would you identify as a potential problem?

A. The root parameters have not been set properly.
B. The cables are too lengthy for this distance/antenna combination.
C. Access Points cannot be used for this mode of operation.

D. The dish antennas are too high of gain for the 1 mile distance.

Answer: C

QUESTION 240:

What is the most efficient and effective method of protecting the seals of the connectors exposed to the environment?

A. RTV
B. duct tape
C. insulation tape
D. COAX-SEAL
E. electrical tape

Answer: D

QUESTION 241:

In which of the following modes does Cisco Aironet 1400 Series Wireless Bridge have the ability to pass Ethernet traffic? (Choose all that apply.)

A. Workgroup Bridge mode
B. Install Root/Non-Root mode
C. Root/Non-Rood mode
D. Install automatic mode

Answer: A, C

QUESTION 242:

What type of antenna would be most suitable for the primary site when considering the following scenario? A hospital wants to offer wireless connectivity to some remote health care centres that are located near their primary site. Some of the se remote health care centres are located within a block of the primary (root) location with the farthest one being 1 km away. The antenna needs to be mounted on the roof, which is 14 stories high.]

A. 5.2 dBi omni
B. 12 dBi omni
C. 6.5 dBi patch
D. 8 dBi patch

Answer: A

QUESTION 243:

Which of the following statements regarding Cisco Aironet 1400 Series Bridge is valid?

A. It is capable of supporting wireless clients only on a root bridge pre IEEE specification.
B. It is capable of supporting wireless clients only on a non-root bridge with valid links to a root bridge.
C. It is incapable of supporting wireless clients.
D. It is a capable of supporting wireless clients on a root bridge when a wireless client MAC address is set to forward.

Answer: C

QUESTION 244:

The elliptical area immediately surrounding the visual patch of an RF signal is also known as the following.

A. the line of sight
B. the Fresnel zone
C. the free space path loss
D. atmospheric absorption

Answer: B

QUESTION 245:

One of Certkiller 's customers has an existing point-to-point bridge link with dish antennas and needs to increase the distance because their locations are moving a greater distance apart. However, they seem to be unable to bring up the new link with their current antenna and cabling configuration.
What advice can you offer the trainee technician who is assigned to troubleshoot this customer's problem and help meet the customer's needs and make this link? (Choose all that apply.)

A. Making use of a 1 watt amplifier at each location in conjunction with the dish antennas
B. Making use of a lower loss cabling solution for both sites
C. To reduce the data rate on the bridges to make the connection
D. Making use of version 10.10T of the bridge firmware and increasing the power output of the radio to 250 mW

Answer: B, C
B is in fact correct, as the range can be increased without raising the power. C is also

correct. You can see EIRP levels at "Fundamentals of Wireless LANs Companion
Not A: If you combine a 1 W. amplifier and a dish antenna, the EIRP would exceed the levels permitted by the international regulations.
Guide" (Pub. by Cisco Press in 2004, ISBN: 1-58713-119-6), page 486 and 487.

QUESTION 246:

What distance is the typical line of site, without the use of towers, buildings, etc.?

A. 2 miles
B. 6 miles
C. 18 miles
D. 24 miles
E. 36 miles

Answer: B

QUESTION 247:

Which of the following statements best describes the Structured Wireless Aware Network (SWAN) solution?

A. It manages the configurations on WLAN clients
B. It makes use of dumb APs that are managed by a central AP controller
C. It is a structured WLAN manager installed on Cisco switches for non-Cisco APs
D. It focuses on the management of configurations for radios, mobility, security, QoS, and the overall WLAN network

Answer: D

QUESTION 248:

Given that the Cisco Aironet 802.11 a/b/g Wireless LAN Client Adapter has two LEDs, which of the following indicate that a properly working card (not necessarily associated)? (Choose all that apply.)

A. green LED off; amber LED solid
B. green LED off; amber LED blinking sporadically
C. green LED blinking fast; amber LED blinking sporadically
D. green LED blinking slowly; amber LED blinking sporadically
E. none of the above

Answer: C, D

QUESTION 249:

Of the following what are the basic components necessary for Fast Roaming? (Choose all that apply.)

A. WLSE
B. WDS enabled Access Point
C. Cisco Access Registrar
D. Cisco Compatible Client (v2)

Answer: B, D

QUESTION 250:

What does the acronym WLCCP stand for?

A. Wireless LAN Context Control Protocol
B. Wireless Local Configuration and Command Protocol
C. Windows Local Context Control Protocol
D. Wireless LAN Control and Configuration Principles

Answer: A

QUESTION 251:

The Certkiller trainee technician wants to know what the functions are that WLSE accomplishes with Radio Management information. What will your reply be? (Choose all that apply.)

A. To perform Assisted Site Surveys
B. To detect and locate rogue APs
C. To copy the local configuration and push to neighbor APs
D. To scan a wired environment for appropriate wireless VLANs

Answer: A, B

QUESTION 252:

Which of the following is the correct DC voltage used to power the Access Points through the use of in-line power to the Ethernet port?

A. -5 VDC
B. -9 VDC
C. -12 VDC
D. -48 VDC

Answer: D

QUESTION 253:

Which of the following statements best describes the relationship between data rate and cell size (coverage area)?

A. The highest data rate has the largest cells size.
B. The lowest data rate has the smallest cell size.
C. The highest data rate has the smallest cell size.
D. Only the transmit power and antenna gain control the cell size not the data rate.

Answer: C

QUESTION 254:

What channel will repeater Access Point use to associate to it, if root Access Point is set at channel 6?

A. any channel
B. any other non-overlapping channel
C. Channel 6
D. It depends on the SSID.

Answer: C

QUESTION 255:

The newly appointed Certkiller trainee technician wants to know what the performance impact of 802.11b client in cell coverage of an 802.11g APs is. What will your reply be?

A. It forces the AP to load balance
B. It reduce the throughput of 802.11g clients associated to that AP
C. It slows the throughput of 802.11g clients to that of the fastest 802.11b client in the cell.
D. It forces the AP adhering to the 802.11g specification to turn off 802.11g data rates.

Answer: B

QUESTION 256:

Which of the following is responsible for the connection of computers in a WLAN in a local area network?

A. T 1 lines
B. fiber optics

C. radio frequencies
D. twisted-pair cables

Answer: C

QUESTION 257:

Which two steps are used to set up Fast Secure Roaming? (Choose two.)

A. configure the WDS options on the client
B. configure Fast Roaming parameters of the WLSE Server
C. enable APs on the subnet to allow CCKM authenticated key management for at least one SSID
D. configure the authentication server to authenticate the WDS AP and the APs that use the WDS AP

Answer: A, D

Explanation:
Configuring the Authentication Server to Support Fast Secure Roaming
The WDS access point and all access points participating in CCKM must authenticate to your authentication server. On your server, you must configure usernames and passwords for the access points and a username and password for the WDS access point.
The wireless LAN on which your access point/bridge resides must meet these requirements:
• At least one access point available to be configured as the WDS access point
• An authentication server (or an access point configured as a local authenticator)
• Cisco Aironet client devices running Cisco client firmware version 5.20.17 or later

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QUESTION 258:

Your newly appointed Certkiller trainee wants to now what the designator dBm is referenced as. (Type the correct answer)

Answer: milliwatt

Explanation:
Decibel referenced to one milliwatt. dBm is used in communication work as a measure of absolute power values. Zero dBm equals one milliwatt.
http://www.cisco.com/en/US/products/hw/optical/ps2011/prod_technical_reference09186a00800a8655.html

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QUESTION 259:

You are the network engineer at Certkiller . Your Certkiller trainee wants to know if your radio transmits at 20 dBm and you are using a 13.5 dBi Yagi with 50 feet

cabling, and the cabling has a loss of 6.7dB per 100 feet.
What would your EIRP be in dB? (Type the correct answer)

Answer: 30.15

Explanation:
(20 + 13.5 - 3.35 = 30.15)
Effective Isotropic Radiated Power
The radiated (transmitted) power is rated in either dBm or Watts. Power coming off an antenna is measured as Effective Isotropic Radiated Power (EIRP). EIRP is the value that regulatory agencies such as the FCC or European Telecommunications Standards Institute (ETSI) use to determine and measure power limits in applications such as 2.4 GHz wireless equipment. EIRP is calculated by adding the transmitter power (in dBm) to antenna gain (in dBi) and subtracting any cable losses (in dB.)

QUESTION 260:

What are two basic components needed for Fast Roaming? (Choose two)
A. WLSE
B. Cisco Access Registrar
C. WDS enabled Access Point
D. Cisco Compatible Client (V2)

Answer: C, D

Explanation:
http://www.cisco.com/application/pdf/en/us/guest/products/ps4612/c2001/ccmigration_09186a0080184b11.pdf , page 158, Requirements for Fast Reassociation.
"To setup fast association, you must have these items on your wireless lan:
* At least one access point that you can configure as the WDS access point
* Cisco Aironet client devices running Cisco client firmare version 5.20.17 or later

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QUESTION 261:

What are two functions the WLSE accomplishes with Radio Management Information (Choose two)
A. performs a Assisted Site Surveys
B. detects and locates rogue APs
C. copies the local configuration and push to neighbor APs
D. scans a wired environment for appropriate wireless VLANS

Answer: A, B, C
Explanation
CiscoWorks Wireless LAN Solution Engine (WLSE)

IntroductionSimplifying the Deployment and Operation of Wireless LANs
Ease Cisco Aironet wireless LAN (WLAN) deployments, enhance network security, maximize network availability, and reduce operating expenses with the CiscoWorks Wireless LAN Solution Engine (WLSE). CiscoWorks WLSE is a centralized, systems-level application for managing and controlling an entire Cisco Aironet WLAN infrastructure.
Features and Benefits:
1. Reduces deployment and operating expenses
2. Simplifies daily operation and management of small to large-scale Cisco Aironet WLANs
3. Enhances network security:
4. 1. Detects, locates, and mitigates rogue access points and unauthorized ad-hoc networks
2. Helps ensure the consistent application of security policies
3. Improves WLAN performance and availability:
4. 1. Detects RF interference
2. Optimizes radio coverage and settings
3. Monitors performance and faults
4. Saves time and resources:
*
1. Automating the configuration of Cisco Aironet access points and bridges
2. Assisted site survey to determine optimal antenna selection and access point settings such as transmit power and channel selection
Reference: : http://www.cisco.com/en/US/products/sw/cscowork/ps3915/

QUESTION 262:

Which of the following is a consequence of the AP Radio Scan process? (Choose two.)

A. All client associations with the AP are severed.
B. The disabling of Radio Scan measurements.
C. Transmit power is set to the maximum defined threshold.
D. A backup of the current AP configuration is created and saved.

Answer: A, C

QUESTION 263:

What role does the channel filter fulfill when reviewing survey data in Display mode?

A. The channel filter blocks data collection from any channel value selected.
B. The channel filter will collect site survey data on the selected channel values only.
C. The channel filter will view data collected from APs on the selected channels only.
D. The channel filter will set the test AP channel used for the survey to the selected value

Answer: C

QUESTION 264:

What is the purpose of an RF attenuator?

A. To remotely power the AP
B. To add gain to the antenna
C. To remotely manage the AP
D. To simulate different lengths of cable

Answer: D

QUESTION 265:

What is Cisco Aironet 1200 Series antenna extension cable manufactured from?

A. LMR-400 and LMR-600
B. LMR-400 and LMR-500
C. LMR-300 and LMR-600
D. LMR-100 and LMR-400

Answer: A

QUESTION 266:

What is the setting in the firmware that has to be configured on the Cisco Aironet wireless bridge to enable the changing of the timing of the acknowledge packets to allow for further distances than a mile?

A. Timing
B. Distance
C. ACK Timeout
D. No Acknowledge
E. All of the above

Answer: C
At page 205 of "Fundamentals of Wireless LANs Companion Guide" (Pub. by Cisco Press in 2004, ISBN: 1-58713-119-6) it can be seen that the timeout for packet aknowledgements must be changed in bridges in order to perform as such. So, the reply should be C.

QUESTION 267:

Which of the following mechanisms can be employed to secure administrative access

to the AP?

A. static WEP keys
B. TaCACS+ control
C. 802.1X authentication
D. Kerberos authentication
E. none of the above

Answer: B

QUESTION 268:

The Certkiller trainee technician wants to know what the advantages for WLAN networks are when using EAP/802.1X authentication. What will your reply be? (Choose all that apply.)

A. providing mutual authentication between the user and the network
B. allowing the IT administrator to implement user or user-group based policies (such as dynamic VLAN assignment)
C. detecting 802.11 radio interference
D. detecting Denial of Service (DOS) attacks on the WLAN network
E. dynamically generating key material for encrypting data packets

Answer: A, B, E

QUESTION 269:

Which of the following security practices will you recommend for deploying Cisco APs? (Choose Three.)

A. Making use of SSH encryption for Telnet
B. Creating VLAN for traffic management
C. Disabling admin authentication on the APs/bridges
D. Making use of RADIUS or TACACS+ for admin user authentication

Answer: A, B, D
Just disabling administration authentication is against security practices. This answer can be replaced by D, as using AAA (RADIUS, TACACS+, etc.) for authentication is advisable by security reasons. The right answers are A, B and D.

QUESTION 270:

Which three values may be used to control WEP key timeout when using dynamic WEP keys with ACS? (Choose three.)

A. external database group mapping

B. RADIUS IETF 027 Session
C. RADIUS Network Access Restriction
D. Cisco Aironet Session Timeout per User
E. Cisco Aironet Session Timeout per Group

Answer: B, D, E

QUESTION 271:

Which of the following types of authentication servers may be used for 802.1X wireless clients?

A. LDAP
B. Kerberos
C. RADIUS
D. TACACS+

Answer: C

QUESTION 272:

The range of frequencies that an antenna is tuned for is referred to as the antenna's ____.

A. bandwidth
B. beamwidth
C. Fresnel range
D. Frequency separation

Answer: A

QUESTION 273:

How can rate shifting affect the site survey?

A. Rate shifting is only available with 802.11a technology.
B. Rate shifting may increase the coverage area of an AP.
C. Rate shifting has no effect on the coverage area of an AP.
D. Rate shifting increases the maximum number of client associations on the AP.

Answer: B

Explanation:
Data rates - Sensitivity and range are inversely proportional to data bit rates. Therefore, the maximum radio range is achieved at the lowest workable data rate, and a decrease in receiver threshold sensitivity occurs as the radio data increases.

http://www.cisco.com/en/US/products/hw/wireless/ps4555/products_installation_and_configuration_guide_chapter09186a008007f8f1.html

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QUESTION 274:

What two do Wireless Site Surveys determine? (Choose two.)

A. the size of cell
B. the throughput of a cell
C. the data rate / range relationship in a cell
D. the number of users than can associate to the AP

Answer: A, C

Explanation:
Data rates - Sensitivity and range are inversely proportional to data bit rates. The maximum radio range is achieved at the lowest workable data rate. A decrease in receiver threshold sensitivity occurs as the radio data increases.
Ref:
http://www.cisco.com/en/US/products/hw/wireless/ps458/products_installation_guide_chapter09186a008007f747.html

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QUESTION 275:

The most common occurrence of miltipath interference comes from____.

A. a point-to-point bridge link
B. in-building open air coverage
C. a point-to-multipoint bridge link
D. in-building cluttered environment

Answer: D

QUESTION 276:

Which of the following statements is valid in a retail application environment? (Choose all that apply.)

A. One 802.11b AP is capable of handling more than 250 users.
B. One 802.11b AP is capable of handling 7-8 concurrent voice calls.
C. One 802.11b AP is capable of handling 20-30 data collection devices.
D. One 802.11b AP is capable of handling a maximum of 2-3 wireless phones.

Answer: B, C

QUESTION 277:

A Certkiller customer has a current site with an omni-directional antenna. What will the result be when the customer has 50ft. of cabling that they want a Certkiller technician to increase to 100 ft.

A. An increase the data rate
B. An increase the coverage area
C. A decrease the coverage area
D. A decrease the angle of radiation from the antenna

Answer: C

QUESTION 278:

What are the important variables that should be maintained at the outside fringes of the cells when performing a manual site survey? (Choose all that apply.)

A. high signal to noise ratio
B. high signal strength with any signal quality
C. 50% retries
D. high signal quality
E. none of the above

Answer: A, D

QUESTION 279:

Which of the following are determined by Wireless Site Surveys? (Choose all that apply.)

A. the best possible location for an AP antenna
B. the best type of AP antenna for a cell
C. the most appropriate WEP key length for the AP
D. the best encryption rate performance for an AP for a cell.

Answer: A, B

QUESTION 280:

There are two antenna connectors on the Cisco Aironet Access Points. What is the rationale behind using antennas on both ports? (Choose all that apply.)

A. It helps to eliminate null zones
B. Two antennas used for diversity purposes can overcome multipath distortion
C. It allows for full-duplex operation of the radio

(one antenna for transmit and one for receive)
D. It will reduce the number of Access Points needed in an area by suing directional antennas aimed in two different directions

Answer: A, B

QUESTION 281:

What happens to a signal when a tree or other foliage is in the direct path between the transmitter and receiver of 2.4 GHz signal?

A. It is reflected.
B. It is refracted.
C. It is absorbed.
D. It is diffracted.

Answer: C

QUESTION 282:

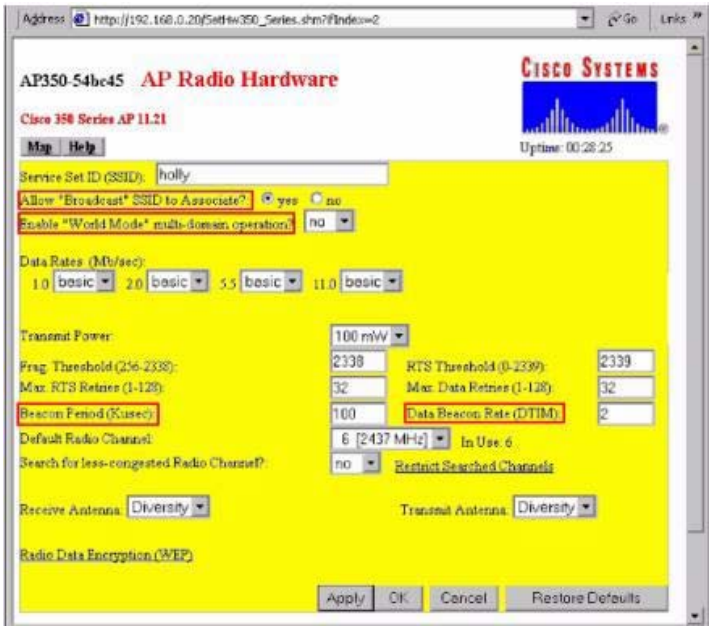
Which is the most systematic way to conduct a site survey when using omnidirectional antennas?

A. Use 2.412 GHz when surveying.
B. Perform a two dimensional survey.
C. Start from every corner of the floor and move inward
D. Start from the center of the floor and move outward to every corner.

Answer: C
Reference: Cisco site survey guide

QUESTION 283:

You are the network administrator at Certkiller . The Access Point Radio Hardware page is shown in the following exhibit:



You want the Access Point to attach its Channel Set information to the beacon packets.
Which option on the Access Point Radio Hardware page enables this?

A. Beacon Period (Kusec)
B. Data Beacon Rate (DTIM)
C. Allow "Broadcast" SSID to associate
D. Enable "World Mode" multi-domain operation

Answer: D

QUESTION 284:

You have a Cisco Aironet wireless bridge. The center LED (status) on the bridge flashes amber. What does this indicate?

A. A beacon packet is transmitted.
B. The light sequence of the Find utility.
C. An association from a client is established.
D. An error occurred and was written in the log.

Answer: D
Reference: Cisco WLAN bridge 350 configuration guide

QUESTION 285:

You are the network administrator at Certkiller . You want to increase the distance that two bridges can communicate. What can you do to accomplish this goal? (Choose all that apply.)

A. Lower the data rate transmission.
B. Increase the data rate transmission.
C. Use an antenna with a decreased beamwidth.
D. Use an antenna with an increased beamwidth.

Answer: A, C

Explanation: By lowering data rate and use high gain antenna like Yagi or Dish with a narrow beam width (compare to other omni and non directional antennas) the communication distance can be increased up to 40 km.
Reference: Cisco WLAN PowerPoint

QUESTION 286:

What is the most efficient and effective method of sealing connectors that are exposed to the environment?

A. Use RTV
B. Use duct tape
C. Use COAX-SEAL
D. Use electrical insulation tape

Answer: C
Reference: Cisco WLAN PowerPoint

QUESTION 287:

The root Access Point on the Certkiller network is set at channel 2. You need to install a repeater Access Point. What channel will the repeater Access Point use to associate to it?

A. Channel 1
B. Channel 2
C. It depends on the SSID
D. Any other non-overlapping channel

Answer: B

Explanation: The repeater must use the same channel with root/access point.

QUESTION 288:

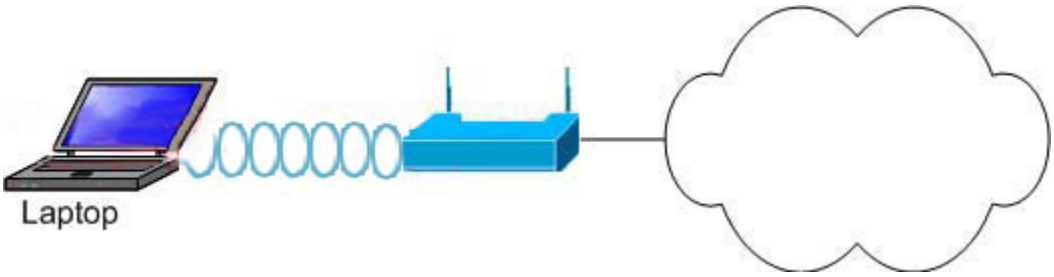
You are the network administrator at Certkiller . The Certkiller network has several Cisco Aironet wireless bridges. Your newly appointed Certkiller trainee wants to know what functions the lightning arrestor provides on the Certkiller network. What will your reply be?

A. It dissipates any energy from a near lightning strike.
B. It absorbs all the energy from a direct lightning strike.
C. It dissipates all the energy from a direct lightning strike.
D. It bleeds of static discharges to help prevent a direct lightning strike.
E. It adds attenuation to the signal and separates data from the lightning strike's energy.

Answer: A, D
Reference: Cisco antenna reference

QUESTION 289:

Network topology exhibit



Exhibit, Cisco Aironet Desktop Utility, Current Status

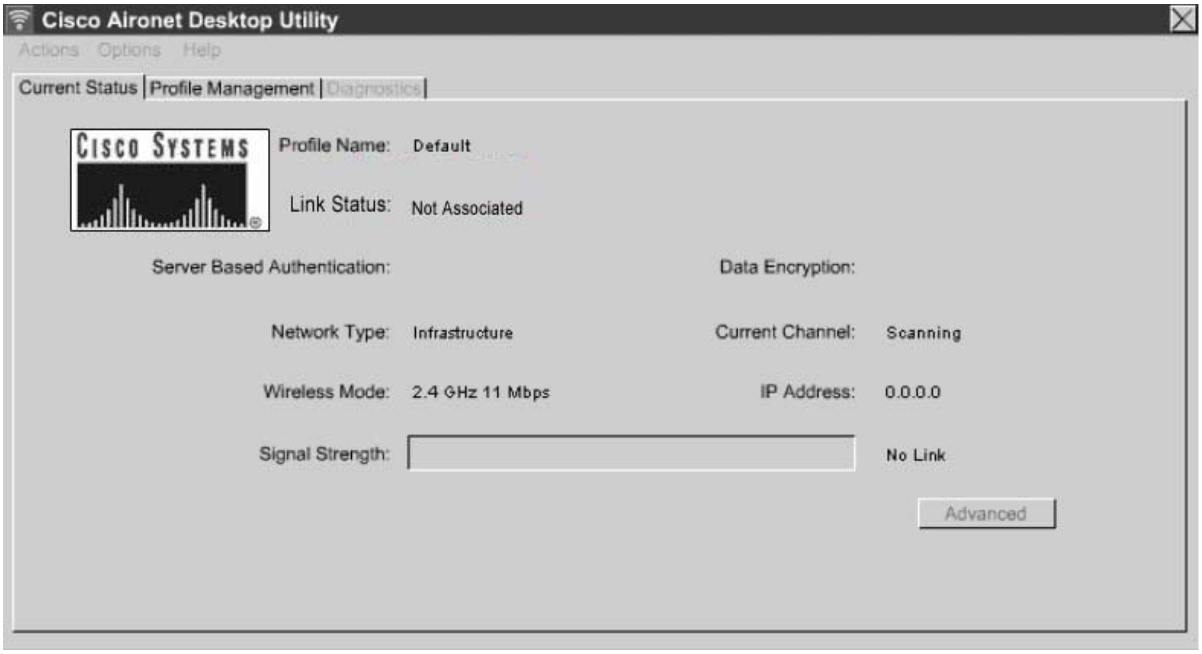


Exhibit #3

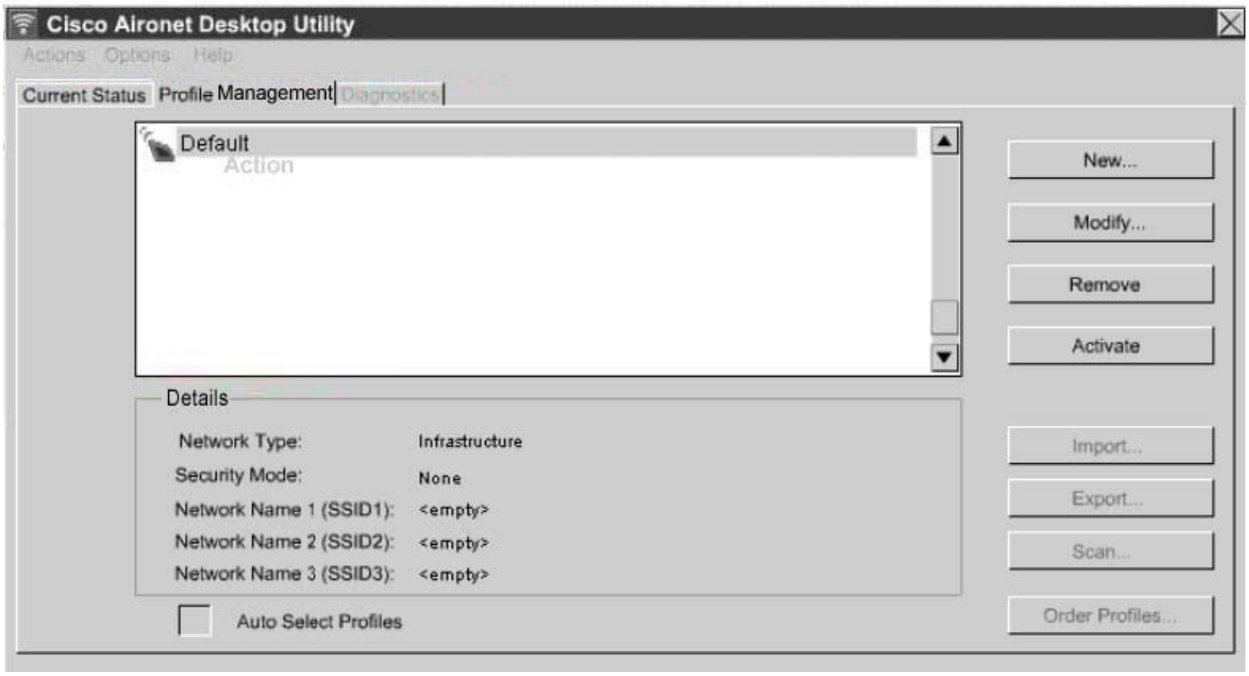


Exhibit #4

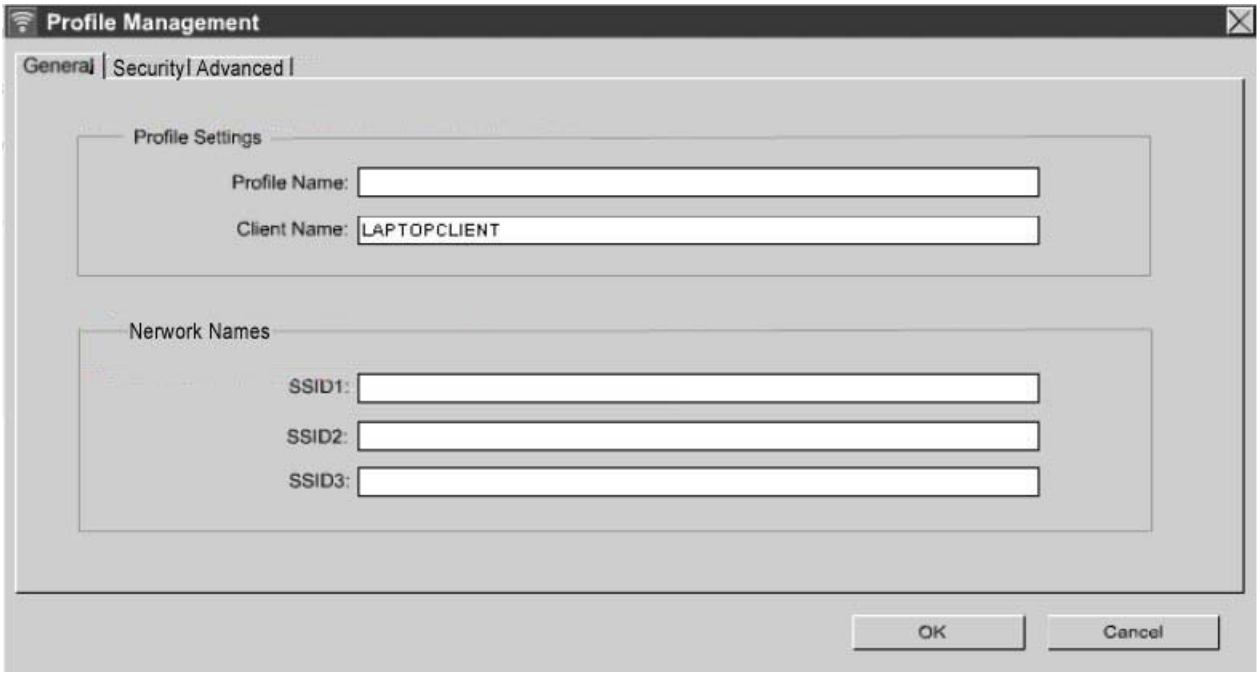


Exhibit #5

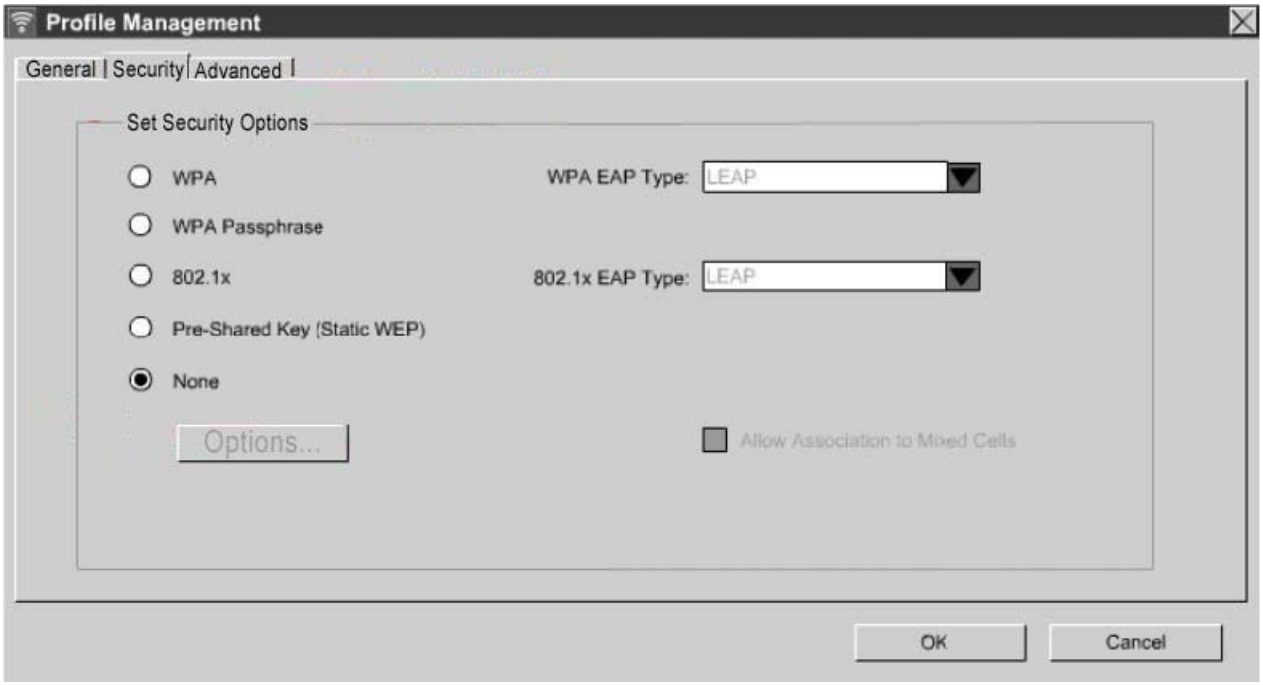
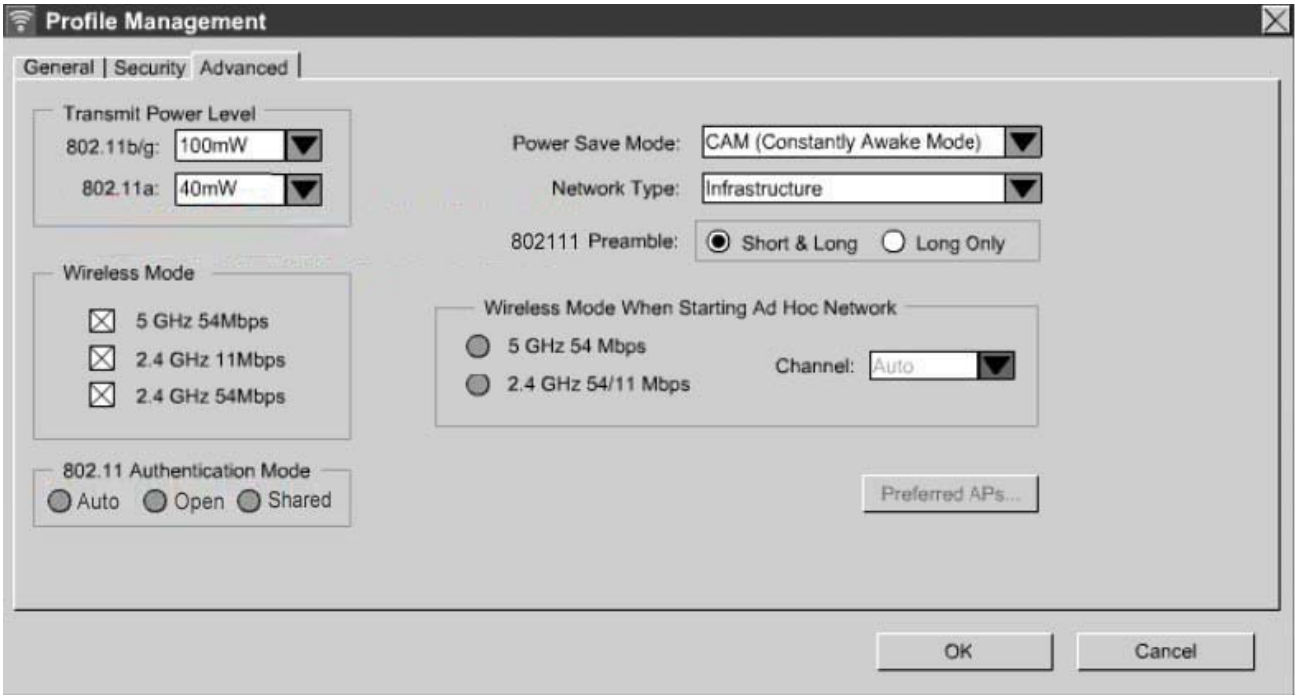


Exhibit #6



Exhibit, LEAP Authentication status

Certkiller .com has added several new employees who require wireless access. New laptops have been purchased, but need to have the CB21AG card configured for operation with both the Certkiller corporate network, as well as their home networks. LEAP is used for the Certkiller corporate network and the login credentials are provided by their windows username and password. The home network uses standard 128 bit WEP encryption with no authentication. Use the information below to properly configure a profile called work for the corporate office an another profile called home for the home office. You can access the Aironet Desktop Utility and the LEAP Authentication Tool by clicking on the laptop.
Home Network
* Profile name: home
* Authentication: None
* Encryption: WEP
* SSID: aphome
* WEP Key Size: 128 bit
* WEP Key: 123456790abcdef123456790
Corporate Network
* Profile Name: work
* Authentication Type: LEAP
* Username/Password: Windows Logon
* SSID: Certkiller office
* Access Point IP: 172.16.186.21

Answer: