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Exam : 642-577

Title : Wireless LAN for System Engineers (WLANSE)

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QUESTION 1:

When deploying Access Points in hotstandby mode. Which channel is used by the standby Access Point?

- A. It scans all available channels.
- B. It uses the same channel as the primary AccessPoint .
- C. It uses a channel adjacent to the primary Access Point.
- D. The radio is off until an SNMP trap is sent by the primary.

Answer: B

Explanation:

Utilizing the hot standby mode, the redundant access point can be set to monitor the main access point. This monitoring is done via both the RF and the Ethernet connection. In the event that either fails, the redundant access point will take over.

In the hot standby mode, the redundant access point becomes a client (will not accept associations from clients) of the monitored access point and therefore does not interfere with the monitored access point.

Reference: Aironet Wireless LAN Fundamentals (AWFL) Student Guide

QUESTION 2:

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

- A. MIBs
- B. Windows 2000
- C. Cisco Device Manager
- D. Cisco Element Manager Framework
- E. RFSniffers and Spectrum Analyzers

Answer: A, B, E

QUESTION 3:

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/xray areas

Answer: A, D, E

QUESTION 4:

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

QUESTION 5:

The SWAN feature known as Fast Secure Roaming uses a mechanism known as Cisco Centralized Key Management CCKM, 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:

For each AP served by a Wireless domain Server (including the AP serving as the WDS), Wireless Services must be

Enabled to permit client devices to authenticate to the AP using the CCKM protocol and to permit Fast Secure Roaming to/from the AP.

The Username and Password that the AP uses to authenticate with the WDS (and in turn, the RADIUS server) are

entered from this screen. Note that this username/ password combination must be entered from the server configured in the

WDS under "Infrastructure Authentication".

Reference: Aironet Wireless LAN Fundamentals p. 8-145

QUESTION 6:

The designator dBm is a decibel referenced to a (n) _____ radiator.

Answer: milliwatt

Explanation:

dBm(dBmilliWatt)

A signal strength or power level.0dBm is defined as 1mW(milliWatt) of power into a terminating load such as an antenna

or power meter. Small signals are negative numbers (3.g. 83dBm).

ReferenceAironetWireless LANFundamentalsp.6-3

QUESTION 7:

Access Point10 in root mode (SSID = '123') provides connection to repeat Access Point20 (SSID = '123'). If Access Point10 is using Channel 1, what channel will Access Pint20 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 8:

What information is needed when using the IP Setup Utility (IPSU) to determine the IP address of a static 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 9:

Which two statements are true when the gain of an omnidirectional antenna increases? (Choose two.)

- A. The coverage distance increases.
- B. The coverage distance decreases.
- C. The coverage increases directly above and below the antenna.
- D. The coverage decreases directly above the below the antenna.

Answer: A, D

Explanation:

MiltirateImplemetnation

Bandwidth requirements factor into coverage mappings, since the distance from an access point affects the available

bandwidth. The above example provides for seamless roaming, but not at a constant speed. To take advantage of the MultiMate technology a client can step down in bandwidth in order to gain greater coverage distances with a single access point. On the other hand, if 11 Mbps is required everywhere, the access point would need to be relocated so that ONLY the 11 Mbps circles were touching each other. This would require a greater amount of access points but consistent bandwidth would be achieved. Notice that the data rate decreases as the coverage distance increases. Reference: Aironet Wireless LAN Fundamentals p. 3-18.

QUESTION 10:

What is the rating in dBi of an antenna that is rated at 0 dBd?

- A. 0 dBi
- B. 1.1 dBi
- C. 2.14 dBi
- D. 5.5 dBi

Answer: C

Explanation:

For distance calculations, the following rules apply:

1) Antenna gains are given in dBi (based upon a theoretical isotropic antenna) not dBd (based upon a dipole antenna).

2) To convert from dBd to dBi, add 2.14 to the dBd

3) 0 dBd =
2.14 dBi

4) Cable lengths are a loss and are subtracted

The antenna and radio parameters include cable losses at the receiver and transmitter sites, the antennas used at both sites,

and the performance of the receiver and transmitter. Receiver gain changes with data rate. Always use maximum data

rate values needed by the customer.

Reference: Aironet Wireless LAN Fundamentals p. 4-37.

QUESTION 11:

802.11 supports the use of frequency hopping spread spectrum. (True or false?)

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

Answer: A

Explanation:

The first type of spread spectrum developed is known as frequency hopping spread spectrum (FHSS). The IEEE 802.11 committee has drafted a standard that limits FHSS transmitters to the 2.4 GHz band.

QUESTION 12:

You are the network administrator at Certkiller . Your newly appointed Certkiller trainee wants to know why WLANs are used on the Certkiller network.

What would your reply be?

- A. It is used to enhance security
- B. It is used to improve performance
- C. It is used to provide flexibility
- D. It provides cost savings

Answer: C

Explanation:

Properly deployed WLANs can provide instant access to the network from anywhere in facility. Users can roam without losing network connection.

The Cisco Aironet WLAN provides complete flexibility. Wireless bridges allow two or more networks that are physically separated to be connected on one LAN, without the time or expense of dedicated cable or T1 lines.

Reference: Aironet Wireless LAN Fundamentals p. 3-3

QUESTION 13:

You are the network administrator at Certkiller . You want to determine the placement of the 7 individual Access Points for the Certkiller network. What would you require?

- A. A site survey
- B. A program analysis
- C. The hop count to gateway
- D. Nothing needs to be done if fewer than 11 Access Points are used.

Answer: A

Explanation:

You will need to do a site survey to see what you will need to support to get the coverage you want. This site survey will usually take into account what the building is composed of, what the layout of the space is, what is

considered line of sight, whether the signal will need to go through ceilings and floors, where users are going to be, and so on.

QUESTION 14:

Most wireless LAN technologies in use today are based on RF field propagation.(True or false?)

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

Answer: A

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 resulting electromagnetic field (sometimes called an RF field) and subsequent electromagnetic radiation is then used for wireless broadcasting and/or communications

QUESTION 15:

What does the acronym EIRP stand for?

- A. Effective Intermittent Radio Power
- B. Effective Isotropic Radiated Power
- C. Elevated Intermittent Radiated Power
- D. Effective International Radiated Power

Answer: B

Explanation:

Effective Isotropic Radiated Power EIRP is a measurement of power from an RF system (transmitter, cabling, and antenna).

QUESTION 16:

Which variables directly affect the EIRP value of an RF system (Choose all that apply.)

- A. The power of the radio
- B. The gain of the antenna
- C. The length of the cabling
- D. The receiver sensitivity of the radio

Answer: A, B, C

Explanation:

EIRP is a measurement of power from an RF system (transmitter, cabling, and antenna).

Calculation for EIRP= power output (dBm) + antenna gain (dBi) - cable loss

QUESTION 17:

How many of the channels defined within the North American Direct Sequence channel set do not overlap?

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

Answer: C

See <http://www.computer.org/internet/v6n1/w102wire.htm>

QUESTION 18:

The 802.11 standard supports open and sharedkey authentication when RADIUS is configured properly. (True or false?)

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

Answer: B

Explanation:

The 802.11 standard supports open & sharedkey authentication of client authentication.

NOT RADIUS

QUESTION 19:

You are the network administrator at Certkiller . You are installing antenna extension cables. What will this cause? (Choose all that apply.)

- A. A decrease in the coverage distance
- B. A decrease in the antenna's bandwidth
- C. A decrease in the antenna's angle of radiation
- D. A decrease in the effective isotropic radiated power

Answer: A, D

The strength decreases as the distance from the antenna increases.

QUESTION 20:

You work as a network consultant. You are contracted by Certkiller to install a wireless network in their building. They do not want any Ethernet cabling to be installed.

When doing your site survey you find that one will not cover the whole building.

What is your recommendation?

- A. use various antenna systems to improve coverage
- B. use a wireless repeater to cover the other areas
- C. place an amplifier on the Access Point for more power
- D. increase the power output of the radio with version 10.10T (or greater) of the Access Point firmware.

Answer: B

Explanation:

You can extend the coverage for a client by using an AP in repeater mode to extend the coverage of an existing AP. The

repeater AP does not have a wired connection to the network, instead, the client associates to the wired, root AP through

the AP acting as a repeater.

QUESTION 21:

You make changes to a specific page in the CLI. What command is used to activate those changes?

- A. Save
- B. Apply
- C. Enable
- D. Configure

Answer: B

QUESTION 22:

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

- A. SSID
- B. data *****C.
- Role in Radio Network
- D. *****Leading

the way in IT testing and certification tools, [www. Certkiller .com](http://www.Certkiller.com)

Answer: A, C

Explanation:

The Express Setup page allows the configuration of the AP's basic parameters. These parameters may be set for either

of the AP's radio interfaces:

1)SSID: Configure the primary SSID for use on the specified radio interface

2)Broadcast SSID in Beacon: Set Yes to send SSID in AP's beacon information, which permits association by "guest"

users

3)Role in Radio Network: Set AP for either Root or Repeater.

4)Optimize Radio Network for: AP's data rates may be set to send broadcast packets at more data rates for "Range" or

less data rates for "Throughput". Data rates permitted may also be explicitly configured via "Custom" link

5)Aironet Extensions: Enabled or Disabled. Aironet extensions permit function of Cisco client's specific features such as

roaming/ loadbalancing

and security features such as Cisco CKIP and MIC.

Reference: Aironet Wireless LAN Fundamentals p. 811

QUESTION 23:

You are the network administrator at Certkiller . Certkiller currently has a site with an omni directional antenna. The network has 50 ft. of cabling. Certkiller want to increase the cabling to 100 ft. what would this cause?

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

Answer: B

Explanation:

As the distance from the energy source of electromagnetic radiation increases, the area over which the electromagnetic

radiation is spread is increased, so that the available energy from the electromagnetic radiation in a given area is decreased.

QUESTION 24:

The 350 series Access Points programmed with U.S. channel sets have the option to reduce the power output to control the area of coverage. The power settings are 100mW, 50mW, 30mW, 20mW, 5mW, and 1mW. How does this affect the scalability of the Access Points? (Choose all that apply.)

- A. It reduces receiver sensitivity.

- B. It increases receiver sensitivity.
- C. It allows you to create smaller coverage patterns.
- D. It allows you to increase the ratio of Access Points to clients when it is set at 1mW rather than 100mW while covering the same floor.

Answer: C, D

QUESTION 25:

In what formats are Cisco Aironet 350 Series Client Adapters for notebook computers available? (Choose all that apply.)

- A. PCI
- B. ISA
- C. VISA
- D. PCMCIA

Answer: A, D

Explanation:

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

QUESTION 26:

An antenna appears to increase the energy of an RF signal. What is this increase in energy referred to as?

- A. gain
- B. VSWR
- C. bandwidth
- D. beamwidth
- E. polarization

Answer: A

Explanation:

Antennas are differentiated by their propagation patterns, gain, and transmission power.

QUESTION 27:

Certkiller has a trailer that houses a temporary office. There are six computers in the temporary office that need to connect to the main building. Certkiller already has a Cisco Access Point infrastructure located within the main building.

What wireless product would best connect the temporary office to the main building?

- A. bridge
- B. Access Point
- C. WorkgroupBridge(WGB)
- D. wireless PCI clients in every computer

Answer: C

Explanation:

Workgroup bridges WGB
are used to connect smaller remote location back to a central location.

QUESTION 28:

It is generally not easy for a network administrator to detect that an unauthorized user has infiltrated the WLAN.(True or false?)

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

Answer: A

QUESTION 29:

In what fashion are the antennas that Cisco sells for theAironetproduct line polarized?

- A. spatially
- B. vertically
- C. horizontally
- D. antenna dependent

Answer: B

QUESTION 30:

Which of the following devices can be powered by the inline
power injector that is supplied with the 350
series Access Point? (Choose all that apply.)

- A. CiscoAironet350 series bridge
- B. CiscoAironet350 series Access Point
- C. CiscoAironet340 series Access Point
- D. CiscoAironet350WorkgroupBridge(WGB)

Answer: A, B

Explanation:

In addition to the power injector, the 350 series products can also obtain their power from inline power capable Catalyst 3524PWRXL switch or by using an inline power patch panel.

QUESTION 31:

Which of the following technologies are used in Wireless LAN?

- A. collision avoidance
- B. collision recovery
- C. collision detection
- D. all of the above

Answer: A

Explanation:

The basic access mechanism for 802.11 is Carrier Sense Multiple Access Collision Avoidance (CSMA/CA) with

binary exponential backoff.

This is very similar to the Carrier Sense Multiple Access Collision Detection (CSMA/CD) that we are familiar with

when dealing with standard 802.3 (Ethernet), but with a couple of major differences.

QUESTION 32:

What is the vertical beamwidth of the 2.4 GHz 6dBi patch antenna?

- A. 45 degrees
- B. 65 degrees
- C. 85 degrees
- D. 90 degrees
- E. 170 degrees

Answer: B

Explanation:

6dBi Patch Antenna wall mount patch antenna is not omnidirectional.

The vertical coverage area for this antenna is 65 degree.

The 6dBi patch provides excellent coverage with a wide radiation pattern.

QUESTION 33:

Which of the following can power the Cisco Aironet 350 series Access Points? (Choose all that apply.)

- A. Cisco 1751 router
- B. Cisco 2924XL switch
- C. Cisco 3524PWRXL switch
- D. Cisco Cat6K switch with WSX6348 blade

Answer: C, D

Explanation:

The Cisco Aironet 350 series APs are powered inline. This means that they receive their power through Ethernet cables.

The Cisco Aironet 350 series products can also obtain their power from inline power capable Catalyst 3524PWRXL,

Cisco Catalyst 6000 series switch or by using an inline power patch panel.

QUESTION 34:

Which of the following Cisco Aironet antennas are directional antennas? (Choose all that apply.)

- A. 6dBi patch
- B. 2.14 dipole
- C. 13.5dBi Yagi
- D. 5.2dBi Diversity pillar mount

Answer: A, C

Explanation:

Patch antennas are directionally based and are designed to be placed at the edge of the coverage area. Yagi and dish

antennas are used for long range, outdoor connectivity.

These antennas allow for two buildings to be connected even if they are miles apart.

QUESTION 35:

Which of the following devices allow for the wireless connection of two wired LANs? (Choose all that apply.)

- A. bridge
- B. Access Point
- C. wireless client
- D. Workgroup Bridge (WGB)

Answer: A, D

Explanation:

Workgroup bridges WGB
are used to connect smaller remote office back to a central location.

QUESTION 36:

What does the acronym ACU stand for?

- A. AironetCisco Utility
- B. AironetClient Utility
- C. AironetCombo Utility
- D. AironetConnection Utility

Answer: B

Explanation:

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

QUESTION 37:

Which of the following Cisco antennas has the narrowest angle of radiation?

- A. 21dBidish
- B. 6dBipatch
- C. 13.5dBiYagi
- D. 8.5dBipatch

Answer: A

Explanation:

Satellite dishes that are used for television transmission, the dish antenna provides that longest range of any of the Cisco antennas. Specifically, it has a maximum range of 25 miles at 2 Mbps and 11.5 miles at 11 Mbps. As is the case with any antenna, the dish antenna was able to get its longer range by reducing the radiation angle.

QUESTION 38:

You are the network administrator at Certkiller . You need to provide wireless 802.11b clients with the ability to communicate with a wired Certkiller LAN. Which of the following devices can you use? (Choose two.)

- A. bridge
- B. Access Point
- C. 802.11b PCMCIA card
- D. WorkgroupBridge(WGB)

Answer: A, B

Explanation:

There are two main types of devices on a WLAN: the AP and the bridge. The AP is a device that connects the wired

LAN to the WLAN, and allows the data to go from one media to the other. The second wireless device type is a wireless bridge. Much like its wired namesake, a wireless bridge is a WLAN device that connects two or more remote

networks into a single LAN.

QUESTION 39:

In which of the following is hopping code found?

- A. BSSS
- B. FHSS
- C. DSSS
- D. CDDS
- E. CSMA/CD

Answer: B

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 40:

You are a network technician at Certkiller . You tell your newly appointed Certkiller trainee about the anomaly that occurs when RF signals bounce off of objects and are received out of phase at the receiver end. Your trainee now wants to know what this anomaly is referred to as.

What would your reply be?

- A. multipath
- B. signal bounce
- C. a Fresnel zone
- D. signal absorption
- E. microwave interference

Answer: A

Explanation:

Multipath distortion is caused, as the name implies, by the transmitted signal traveling to the receiver via more than one path:

QUESTION 41:

Which of the following products would be classified as WiFi compliant?

- A. 802.11 FHSS products
- B. 802.11b DSSS products
- C. 802.11b FHSS products
- D. 802.11 DSSS 1 and 2 Mbps products

Answer: B

QUESTION 42:

What is the maximum time that current FCC regulations require WLAN product manufacturers to use?

- A. 150 ms
- B. 250 ms
- C. 400 ms
- D. 500 ms

Answer: C

Note: Probably referring to the EAPFAST timer reducing roaming association times from 500ms to less than 150ms

QUESTION 43:

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 through 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 44:

What seal is issued by WECA to show that an 802.11b product has passed interoperability testing with other manufacturer's products?

- A. HiFi
- B. WiFi
- C. WLAN
- D. WECA

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 45:

You are a network technician at Certkiller. You recently appointed Certkiller trainee wants to know what DSSS is. What will your reply be?

- A. It is a spread spectrum radio
- B. It is a user rate radio
- C. It is a spreading ratio
- D. It is an input parameter
- E. It is an output parameter

Answer: A

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 46:

Which of the following antenna architectures 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 47:

Which IEEE 802.11 task group is responsible for developing WLAN security standards?

- A. 802.11a
- B. 802.11b
- C. 802.11g
- D. 802.11h
- E. 802.11i

Answer: E

Explanation:

802.11i new

specifications for WLAN security.

QUESTION 48:

True or false, 802.11b operates using lower frequencies than 802.11a?

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

Answer: B

Explanation:

ISM Unlicensed Frequency Bands are,
Ø902 928
MHzà26 MHz
Ø2.4 2.4835
GHzà83.5 MHz [802.11 & 802.11b]
Ø5.725 5.850
GHzà125 MHz [802.11a]

QUESTION 49:

An SSID prevents access by any client device that does not have the SDID.(True or false?)

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

Answer: A

Explanation:

The SSID is often referred to as the wireless LAN workgroup number or the wireless cell number. It is a unique, case sensitive, and up to 32characterslong identifier that is appended to network packets. The SSID defines the name of the wireless LAN workgroup and is used to authenticate and establish communications with other wireless bridges and wirelessAPssharing the same SSID.

QUESTION 50:

Which of the following best describes a WEP key?

- A. highly secure
- B. unbreakable

- C. always safe
- D. breakable

Answer: D

Explanation:

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 51:

What is the angle of coverage that an antenna radiates called?

- A. gain
- B. diversity
- C. bandwidth
- D. beamwidth
- E. Fresnelzone

Answer: D

Explanation:

The antenna can be designed to concentrate the RF energy into a beam and increase its effectiveness in a given direction.

QUESTION 52:

What is the maximum number of wired clients that can send packets through the WGB342 to an Access point?

- A. 4
- B. 6
- C. 8
- D. 12
- E. unlimited

Answer: C

Explanation:

The CiscoAironetWorkgroup Bridge (WGB) product connects to the Ethernet port of a device that does not have a PCI or PCMCIA slot available. It provides a single MAC address connection into an access point, and onto the LAN backbone. It cannot be used in a peertopeer

mode connection, and must communicate to a CiscoAironetAccess Point orCiscoAironetBridgein access point mode. The CiscoAironetWGB will not operate with othervendorsaccess points. Another configuration of theWorkgroupBridgewill allow up to 8 wired machines to be attached to the same radio device. It is ideal for connecting remote workgroups to a wired LAN. Inorederto use a WGB with multiple MAC addresses, the WGB must be connected to a hub. All users must connect to the hub. The unit will automatically select the first 8 MAC addresses it hears on the Ethernet, or the addresses may be entered manually into a table. The 8 MAC addresses are static.

QUESTION 53:

Any WLAN client within an access point service area can receive data transmitted to or from the access point as long as both devices are of the same brand.(True or false?)

- A. True
- B. This is hard to say depends on the structure
- C. False

Answer: C

Explanation:

The CiscoAironet350 is IEEE 802.11bcompliant so that it will interoperate with other vendor devices within your range of coverage.

QUESTION 54:

What is an omnidirectional antenna that is designated to radiate at a slight angle rather than at 90 degrees from the vertical element said to have?

- A. gain
- B. downtilt
- C. beamwidth
- D. polarization
- E. sectorization

Answer: B

Explanation:

If we continue to push in on the ends of the balloon, it results a pancake effect with very narrow verticalbeamwidth, but

very large horizontal coverage. This type of antenna design can deliver very long communications distances, but has one

drawback poor

coverage below the antenna.

With high gain omnidirectional

antennas, this problem can be partially solved by designing in something called down tilt.

An antenna that uses down tilt is designed to radiate at a slight angle rather than at 90 degrees from the vertical element. This

does help for local coverage, but reduces effectiveness of the long range

ability. Cellular antennas used down tilt. The Cisco

Aironet 12dB omnidirectional antenna has a down tilt of 0 degrees.

Reference: Aironet Wireless LAN Fundamentals p. 610

QUESTION 55:

To which of the following devices can a Cisco Aironet wireless PCMCIA client talk to when in Ad Hoc mode? (Choose all that apply.)

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

Answer: B, C

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 56:

Which of the following statements are true when the gain of an omnidirectional antenna is increased?

(Choose all that apply.)

- A. The coverage distance increases.
- B. The coverage distance decreases.
- C. The coverage increases directly above the antenna.
- D. The coverage decreases directly above the antenna.

- E. The coverage increases directly below the antenna.
- F. The coverage decreases directly below the antenna.

Answer: A, D, F

Explanation:

As the distance from the energy source of electromagnetic radiation increases, the area over which the electromagnetic radiation is spread is increased.

QUESTION 57:

With regard to AdHoc mode, which of the following statements is true?

- A. AdHoc mode requires a bridge to connect two or more wireless clients.
- B. AdHoc mode requires an Access Point to connect two or more wireless clients.
- C. AdHoc mode needs both an Access Point and BR to connect the wireless clients.
- D. AdHoc mode allows you to connect wireless clients without the use of an Access Point or BR.

Answer: D

Explanation:

Ad Hoc network mode provides wireless client nodes with the capability to establish peertopeer 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 peertopeer file exchange between wireless clients over the wireless radio network.

QUESTION 58:

When performing the RF site survey you should choose a location that enables the access point antenna to have minimum line of sight propagation with the clients. (True or false?)

- A. True
- B. False
- C. This is not always true must

be judged case by case

Answer: B

QUESTION 59:

In thus., for which of the following RF bands is no licensing required? (Choose all that apply.)

- A. 902928
MHz
- B. 800820
MHz
- C. 2.4002.483
GHz
- D. 2.5002.600
GHz
- E. 5.1505.350
GHz
- F. 5.7255.825
GHz

Answer: A, C, E, F

Explanation:

ISM Unlicensed Frequency Bands are,

Ø902 928

MHzà26 MHz

Ø2.4 2.4835

GHzà83.5 MHz [802.11 & 802.11b]

Ø5.725 5.850

GHzà125 MHz [802.11a]

QUESTION 60:

After the month of June 1994, the FCC and DOC regulations required all antenna connectors to be proprietary (unique and nonstandard).

Which of the following connectors has the Cisco/Aironet used on its Access Points and bridges since June 1994?

- A. BNC
- B. RPSMA
- C. 100 Base TX
- D. RPTNC
- E. Nconnector
- F. 10BaseT

Answer: D

Explanation: CiscoAPs, bridges, and accessories use primarily the RPTNC connector. The RPTNC connector is a normal TNC connector that has been modified to fit FCC regulations.

QUESTION 61:

What wireless technology brand name does WECA promote?

- A. WECA
- B. WiFi
- C. WLAN
- D. HiFi

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 62:

The wireless medium of Cisco Aironet 350 Series Client Adapters is FHSS. (True or false?)

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

Answer: A

Explanation:

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

QUESTION 63:

What is the maximum transmission speed of 802.11b in 2.4GHz MHz band?

- A. 56
- B. 54
- C. 24
- D. 13
- E. 11

Answer: E

Explanation:

802.11b access speed ranging from 1 Mbps up to 11 Mbps. 802.11b supports the original 802.11 data rate of 2 Mbps as well as higher speeds up to 11 Mbps.

QUESTION 64:

Which of the following statements is true?

- A. CSMA/CA is a feature no longer supported by Cisco
- B. CSMA/CA is a media security protocol
- C. CSMA/CA is a feature no longer supported by the latest WLAN standards
- D. CSMA/CA is a media access protocol

Answer: D

Explanation:

CSMACA

Mechanism

The basic access mechanism for 802.11 is Carrier Sense Multiple Access Collision Avoidance (CSMA/CA) with

binary exponential backoff. This is very similar to the Carrier Sense Multiple Access Collision Detection (CSMA/CD) that

we are familiar with when dealing with standard 802.3 (Ethernet), but with a couple of major differences. Cisco Aironet 350 series client adapters, use CSMA/CA as the MAC protocol for the wireless connection.

QUESTION 65:

To what is the designation dBm decibel referenced to?

- A. volt
- B. ohm
- C. milliwatt
- D. decibel meter

Answer: C

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 66:

In what part of the 802.11 data packet will the transmit key placed when you use a multiple WEP key approach to security?

- A. Trailer
- B. Header
- C. Payload of the packet
- D. Initialization Vector (IV)

Answer: D

Explanation:

Per packet

key hashing ensures that the base key of every packet is hashed with an initialization vector (IV) to create a new key for each packet. In this way, key hashing removes the predictability that an intruder relies on to determine the WEP

key by exploiting weak IVs. Broadcast key rotation eliminates broadcast keys' susceptibility to the same attacks as

unicast static WEP keys. The Cisco Wireless Security Suite interoperates with a range of client devices.

QUESTION 67:

You are the network engineer at Certkiller . You want to monitor your primary Access Point and have another Access Point become active should the primary Access Point fail.

What feature will allow you to accomplish this?

- A. HSRP
- B. Redundancy
- C. Hotstandby
- D. Fault tolerance

Answer: C

Explanation:

Hot standby You

can assign a bridge to be the backup rugged AP, so that you can provide redundancy and reliability in case of AP failure.

Cisco provides the Hot Standby feature as a hardware redundancy system for APs.

QUESTION 68:

Why is shared key authentication a less secure method than open authentication?

- A. Because the encryption key is sent clear text.
- B. Because an unencrypted client can still associate to the Access Point.
- C. Because an incorrect WEP key can be used to associate to the Access Point.
- D. Because of the use of a no encrypted text packet followed by an encrypted response of that packet.

Answer: D

Explanation:

Authentication to the AP is performed using one of two methods: Shared Key Authentication and Open Authentication.

Shared Key Authentication specifies that the client can communicate only with APs that have the same WEP key. Shared key is not the recommended method of authentication due to security risks inherent in the authentication method. The default setting is Open Authentication.

The open setting is slightly preferred to the shared key configuration because shared key transmits a cleartext query. However, either setting will allow for the use of WEP.

QUESTION 69:

Under the 802.11a standard, how many channels are defined for use in the UNII.1 band?

- A.2
- B.4
- C.8
- D.11
- E.13

Answer: B

Explanation:

802.11a has eight channels without overlap of frequency. 802.11b has 11 channels with only three channels that do not

overlap in frequency. UNII1 uses the first 4 channels and UNII2 uses the last 4 channels.

UNII1 5.15 GHz to 5.25 GHz Indoor only, 40mWmax with 6dBi integrated antenna Four 802.11a Channels.

QUESTION 70:

You are a network technician at Certkiller . You recently appointed Certkiller trainee wants to know why antenna diversity is useful.

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

- A. It alleviates null zones.
- B. It helps to overcome multipath distortion.
- C. It allows the Access Point to cover two different cells.
- D. It adds more coverage area by using a directional antenna.

Answer: A, 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 71:

What is the maximum distance that an 802.11 Access Point can reliably connect to a client?

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

Answer: A

Explanation:

Customers may want to save money and use the workgroup bridge and access point in place of a bridge. If the distance is less than 1 mile and remote end (WGB) has less than 8 end devices, this can be done. However, if the distance is greater than 1 mile, it is recommended that a bridge be used instead of the access point. Using an access point at more than 1 mile will not provide reliable communications. This is due to timing constraints that the 802.11 standard puts on the return timers for packets acknowledgements. Remember, 802.11 defines a LAN Local Area Network which is typically a wireless range of up to 1000 feet.
Reference: Aironet wireless LAN fundamentals (AWFL) Student Guide p.4-25

QUESTION 72:

A directional antenna focuses the RF signal more in one direction than others, thus decreasing the range more in that direction.(True or false?)

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

Answer: B

QUESTION 73:

In an ETSI regulated country, how many channels are available in the 2.4 GHz band?

- A.9
- B.10
- C.11
- D.13
- E.14

Answer: D

Explanation:

802.11b Radio Frequency Bands by Geography

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

QUESTION 74:

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/Xrayareas

Answer: A, B, D, E

Structurally, hospitals offer a variety of radio frequency obstacles. You should be aware of Xray areas in particular, because most hospitals have leadlined or extremely thick walls surrounding these areas to prevent Xray bleedthrough.

Consider these areas "dead zones" to radio frequency. Microwave ovens also can potentially cause interference and require you to change your AP channel assignments

QUESTION 75:

802.11b access points generally offer a greater range than 802.11a.(True or false?)

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

Answer: B

QUESTION 76:

Which of the following statements are true with regard to a dipole antenna?

- A. The horizontal bandwidth is 360 degrees, and the vertical beamwidth is 75 degrees.
- B. The horizontal bandwidth is 75 degrees, and the vertical beamwidth is 90 degrees.
- C. The horizontal bandwidth is 90 degrees, and the vertical beamwidth is 75 degrees.
- D. The horizontal bandwidth is 360 degrees, and the vertical beamwidth is 360 degrees.

Answer: A

Explanation:

Isotropic=360/360 Dipole=360/75

QUESTION 77:

Which of the following are possible sources of interference for 802.11b devices in a home environment? (Choose all that apply.)

- A. television sets
- B. cellular phones
- C. cordless phones
- D. microwave ovens
- E. satellite dish receivers

Answer: C, D

There many devices that can potentially cause interference and require you to change your AP channel assignments. The most common culprits are 2.4 GHz cordless phones and microwave ovens.

QUESTION 78:

CiscoAironet1200 Series support both 802.11a and 802.11g.(True or false?)

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

Answer: A

From Cisco's website "With simultaneous support of 802.11a and 802.11g standards, the CiscoAironet1230AG Series delivers up to 108 Mbps of data rate in the 5 GHz and 2.4 GHz bands."

QUESTION 79:

What is the maximum transmission speed of an IEEE 802.11b compatible radio?

- A. 2 Mbps
- B. 11 Mbps
- C. 15 Mbps
- D. 24 Mbps
- E. 56 Mbps

Answer: B

Explanation:

802.11b access speed ranging from 1 Mbps up to 11 Mbps. 802.11b supports the original 802.11 data rate of 2 Mbps as well as higher speeds up to 11 Mbps.

QUESTION 80:

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

- A. UNII1
- B. UNII2
- C. UNII3
- D. 5.15-5.25 GHz
- E. 5.25-5.35 GHz
- F. 5.725-5.825 GHz

Answer: C, F

Explanation:

Assuming a 6dBi antenna (The radiated power is):

1) UNII

50mW in

the US/Japan, 200mW in Europe, 4 Channels (5.15 5.25), Indoor Access Fixed Antenna

2) UNNI

250mW in

US, 4 Channels (5.25 5.35) Indoor/Outdoor Use Flexible Antenna

3) UNNI 1 W in the US, 4 Channels (5.725 5.825) Outdoor Bridging only

4) HiperLAN 200mW in Europe,

8 Channels (5.25 5.35) Indoor Use only

5) HiperLAN 200mW in Europe,

8 Channels (5.25 5.35) Indoor Use only

6) HiperLAN 1W in Europe, 11 channels (5.470 5.725) Indoor/Outdoor Use Flexible Antenna.

QUESTION 81:

When performing the RF site survey, for maximum throughput your goal will be to ensure that access points are placed in a manner where the edge of the access point's propagation overlaps the propagation of the adjacent access point. (True or false?)

A. False

B. This is not always true must be judged case by case

C. True

Answer: C

Explanation:

Each AP and antenna combination produces a single area of coverage. Each of these single areas is referred to as a cell.

Multiple overlapping cells are used to provide wireless coverage for areas larger than a single cell alone can produce.

When configuring APs for cellular coverage, the amount of overlap required to allow a mobile client to seamlessly roam

throughout the coverage area is approximately 15 percent.

QUESTION 82:

You are the network engineer at Certkiller. You want to allow a repeater to associate to a root Access Point. What is the minimum overlap in RF coverage that is needed?

A. 25%

- B. 33%
- C. 50%
- D. 75%
- E. 100%

Answer: C

Explanation:

Wireless Repeater In an environment where extended coverage is needed, but access to the backbone is not practical or available, a wireless repeater can be used. A wireless repeater is simply an access point that is not connected to the wired backbone. This requires a 50% overlap of the AP on the backbone and the wireless repeater.

QUESTION 83:

You are the network engineer at Certkiller . Certkiller uses a server-based authentication scheme. What type of 802.11 authentication method is used on the client to associate to an Access Point on the Certkiller network?

- A. Open
- B. LEAP
- C. Closed
- D. EAP-TLS
- E. Shared key

Answer: B

Explanation:

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 84:

You are the network administrator at Certkiller . You want to control the flow of data packets across the Certkiller RF. What can you do? (Choose all that apply.)

- A. Set packet filtering on the wireless client
- B. Set packet filtering on the wireless bridge
- C. Set packet filtering on the authentication server
- D. Set packet filtering on the wireless Access Point

Answer: B, D

Explanation:

We can filter the packet at the Access Point. The APs also allow you to control the throughput of traffic through the WLAN using Media Access Control (MAC) and protocol based filters. Bridges can also filter data packets originating and destined for network resources located on the local segment.

Reference:

<http://www.cisco.com/univercd/cc/td/doc/pcat/340etbr.htm> 340 Wireless Bridge Wired LAN

Filtering Intelligent packet

filtering by network address, protocol, or packet content

<http://www.cisco.com/univercd/cc/td/doc/pcat/ao350ap.htm#xtocid6350> AP 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.

QUESTION 85:

You are the network engineer at Certkiller . Certkiller uses a Cisco's server based authentication method.

How many different WEP keys will a Certkiller client be aware of in each cell?

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

Answer: A

If the client authentication mode is server based then per user session keys are dynamically generated for the session.

Static WEP keys are not used. The WLAN client only knows about one key at any one time.

QUESTION 86:

Which advantages does server based authentication offer over standard WEP? (Choose all that apply.)

- A. It uses TACACS for authentication.
- B. It uses dynamic session based keys.
- C. Authentication is based upon user name and password.
- D. It keeps the WEP keys the same for all users for ease of use.

Answer: B, C

QUESTION 87:

You are the site survey engineer at Certkiller . You want to reduce the area of coverage of an Access Point. What can you do? (Choose all that apply.)

- A. Add an attenuator.
- B. Use a smaller gain antenna.
- C. Reduce the power setting on the Access Point.
- D. Place the Access Point in the wiring closet next to the switch infrastructure.

Answer: A, B, C

Reference: Cisco Presentation

QUESTION 88:

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

Explanation: Only radio port will send and receive packets

Not D: Ethernet port is blocked when the Access Point is in Repeater mode.

QUESTION 89:

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

- A. User id or login
- B. Encryption key
- C. Master session key
- D. RADIUS shared secret

Answer: A

QUESTION 90:

Which authentication type defined by IEEE 802.11 utilizes a challenge text packet when associating to an AP?

- A. Open authentication
- B. EAPTLS authentication
- C. EAPMD5 authentication
- D. Sharedkey authentication

Answer: D

Explanation:

Shared Key Authentication

- 1)The client sends an Authentication to Access point
 - 2)Access Point sends an authentication response. The authentication response from the access point to the client is sent containin"challenge" text. This packet is unencrypted.
 - 3)The client then uses the text from the authentication response to form another authentication packet, which will be encrypted using one of the client's WEP keys, and sends this as a response to the access point.
 - 4)Access Point will then compare the encrypted "challenge" text against the access point's own copy of the encrypted "challenge" text. If the encrypted text is the same, then the access point allows the client to the WLAN.
- Shared Key Authentication is considered less secure than OPEN Authentication because of the challenge text packet. Because this packet is sent unencrypted and then returned as an encrypted packet, it may be possible to capture both packets and determine the stream cipher.

Reference:

AironetWireless LANFundametlasStudent Guide p.916

QUESTION 91:

What are three components of WAP (Version 1)? (Choose three)

- A. LEAP
- B. 48bitIV
- C. 802.1X authentication
- D. 256bit
- A ES encryption cipher
- E. Perpacket keying and Message Integrity Check

Answer: B, C, E

QUESTION 92:

Which "cipher" is configured on the CiscoAironetAccess Point to enable WPA?

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

Answer: A

Explanation:

To enable WPA on an access point, an appropriate Cipher (or combination of ciphers) must be chosen. CKIP is the

cipher used for WPA compliant devices. The following are valid WPA ciphers:

- 1)CKIP
- 2)CKIP + WEP 128 bit
- 3)CKIP + WEP 40 bit

Also note that when using WPA encryption on an accesspoint, Encryption Key 1 must not be used as the WPA key

negotiation mechanism uses this key position in the AP to transfer authentication data to the client.

QUESTION 93:

Which three are mechanisms for guarding against Basic 802.11 WEP key vulnerabilities? (Choose three)

- A. WPA
- B. Cisco CKIP (CKIP)
- C. Message Integrity Check
- D. Use of two WEP keys on the AP
- E. String authentication passwords

Answer: A, B, C

QUESTION 94:

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 can support the authentication of up to 50 accounts for a given deployment in the

local Cisco LEAP authentication database on the access point. One account is equal to one user name and

password.

The configuration of the IEEE 802.1X local authentication database can be centrally managed with the Cisco Works

WLSE 2.x management appliance. The access point with the IEEE 802.1X local authentication service does not need

to be dedicated to the IEEE 802.1X local authentication service. This access point can function as a regular access

point in addition to providing IEEE 802.1X local authentication.

Reference: Aironet Wireless LAN Fundamentals p.525

QUESTION 95:

Exhibit: ***MISSING***

On the Access Point Radio Hardware page shown in the exhibit, which option enables the Access point to attach its Channel Set information to the beacon packets?

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

Answer: D

Explanation:

Enable World Mode: When you select yes from the worldmode pulldown

menu, the access point adds channel

carrier set information to its beacon. Client devices with world mode enabled receive the carrier set information and

adjust their settings automatically.

QUESTION 96:

What are two benefits that the CiscoAironet1400SeriesBridgeprovides? (Choose two.)

- A. reduced cost to T1/E1
- B. similar speed to T1/E1
- C. superior speed to T1/E1
- D. ability to terminate a serial WAN connection

Answer: AC

Explanation:

The CiscoAironet1400SeriesWirelessBridgeprovides a highperformance

and feature-rich solution for connecting multiple LANs in a metropolitan area. Designed to be a cost-effective alternative to leased lines, it is engineered specifically for harsh outdoor environments, yet also works well in indoor deployments. The Cisco Aironet 1400 Series Wireless Bridge is the premier high-speed, high-performance outdoor bridging solution for line-of-sight applications.

QUESTION 97:

350 series Access Points programmed with U.S. channel sets have the option to reduce the power output to control the area of coverage. Power settings are 100mW, 50mW, 30mW, and 1mW. How will this allow the Access Points to be very scalable? (Choose two.)

- 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 Point to clients when it is at 1mW rather than to 100mW.

Answer: CD

QUESTION 98:

Which statement about non-overlapping channels is true?

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

Answer: D

QUESTION 99:

Which two combinations of devices from Cisco allow for the wireless connection of two wired LANs? (Choose two)

- A. Bridge, bridge

- B. Access Point, bridge
- C. WorkgroupBridge(WGB), WGB
- D. Access Point, WorkgroupBridge(WGB)

Answer: A, D

QUESTION 100:

What is the relationship between data rate and cell size (coverage area)?

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

Answer: C

Explanation:

Multirate Implementation

Bandwidth requirements factor into coverage mappings, since the distance from an access point affects the available

bandwidth. The above example provides for seamless roaming, but not at a constant speed. To take advantage of the

MultiRate

technology a client can step down in bandwidth in order to gain greater coverage distances with a single access point. On the other hand, if 11 Mbps is required everywhere, the access point would need to be relocated so

that ONLY the 11 Mbps circles were touching each other. This would require a greater amount of access points but

consistent bandwidth would be achieved.

Notice that the data rate decreases as the coverage distance increases.

Reference: Aironet Wireless LAN Fundamentals p. 3-18.

QUESTION 101:

Which three methods can be used to initially configure an AP? (Choose three)

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

Answer: B, D, E

QUESTION 102:

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:

The Express Setup page allows the configuration of the AP's basic parameters. These parameters may be set for either

of the AP's radio interfaces:

6) SSID: Configure the primary SSID for use on the specified radio interface

7) Broadcast SSID in Beacon: Set Yes to send SSID in AP's beacon information, which permits association by "guest"

users

8) Role in Radio Network: Set AP for either Root or Repeater.

9) Optimize Radio Network for: AP's data rates may be set to send broadcast packets at more data rates for "Range" or

less data rates for "Throughput". Data rates permitted may also be explicitly configured via "Custom" link

10) Aironet Extensions: Enabled or Disabled. Aironet extensions permit function of Cisco client's specific features such as

roaming/ loadbalancing

and security features such as Cisco CKIP and MIC.

Reference: Aironet Wireless LAN Fundamentals p. 8-11

QUESTION 103:

Which two operating systems support WPA with a Cisco Aironet Client Adapter? (Choose two)

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

Answer: D, E

QUESTION 104:

What are three required features in WPA (Version 1) for an Enterprise Class Access Point? (Choose three)

- A. 256 bit encryption

- B .WPA Migration mode
- C. 802.1X authentication
- D. preshared key authentication
- E. Unicast and broadcast key management

Answer: B, C, E

Not A: WPAv1 uses 128 bit RC4 encryption

QUESTION 105:

Which mechanism may be used to secure administrative access to the AP?

- A. static WEP keys
- B. TACACS+ control
- C. 802.1X authentication
- D. Kerberos authentication

Answer: B

QUESTION 106:

What is the purpose of the WPA 4way handshake?

- A. Authenticates users
- B .Negotiates broadcast keys
- C. Derives WPAunicastkeys
- D. Negotiates the encryption cipher types

Answer: C

QUESTION 107:

You have a customer who wants to make a point-to-point bridge link. Between the bridge sites is a grove of trees and a small river with a width of 1000 ft. By doing path analysis you have determined that Yagis would be appropriate for this link. You begin to install the antenna and bridges but are unable to establish an RF connection.

Which statement is true?

- A. Trees add an additional amount of attenuation to the signal. Using a higher gain antenna will solve the problem.
- B. The trees are absorbing the signal and distorting it before it gets to the remote site. You should use a mast or tower to aim over the trees.
- C. Trees add an additional amount of attenuation to the signal. The use of an amplifier to increase the power of

the signal
will solve the problem.

D. Because the link is over a water source you rotate the antenna 90 degrees and use them in a horizontally polarized fashion to avoid reflecting the signal.

Answer: B

QUESTION 108:

In which two modes can the Cisco Aironet 1400 Series Wireless Bridge pass Ethernet traffic? (Choose two)

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

Answer: A, B

QUESTION 109:

Which two cables are used to connect a network device to the RJ 45 port of the Power Injector for the 1400 Series Wireless Bridge? (Choose two)

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

Answer: A, C

QUESTION 110:

The typical antenna for a root bridge in a multipoint deployment is a(n) _____.

- A. Yagi antenna
- B. Sector antenna
- C. Parabolic dish antenna
- D. Omnidirectional antenna

Answer: D

QUESTION 111:

A customer in Europe needs an 11 MB wireless bridge link that is 1.3 km. You run the range calculation and

determine that the BR350 product at 5mW with 13.5 dBi gain 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 trees between sites, What needs to be done to make this link successful?

- A. An amplifier needs to be installed at one of the sites,
- B. The antenna must be raised high enough to clear the trees.
- C. The Yagi needs to be used in a horizontally polarized orientation.
- D. Due to the trees, a 21 dBi dish needs to be used for its narrower beamwidth.

Answer: B

Explanation:

One of the most important concepts for installing Cisco Aironet Bridges is line of sight. Cisco Aironet Bridges are unlicensed devices and are not designed to penetrate objects such as mountains, trees, or buildings. The signal will be either absorbed or reflected, and the end result will be that the bridges are unable to connect.

QUESTION 112:

Which statement is true about the Cisco Aironet 1400 Series Bridge?

- A. It does not support wireless clients.
- B. It supports wireless clients only on a root bridge per IEEE specification.
- C. It supports wireless clients only on a nonroot bridge with valid links to a root bridge.
- D. It supports wireless clients on a root bridge when a wireless client MAC address is set to forward.

Answer: A

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

Answer: B, D

QUESTION 114:

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

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

Answer: B

Explanation:

Antennas have both a horizontal and a vertical beam widths. Some antennas have what is called a "down tilt", meaning that the beam widths are manipulated to provide more coverage below the antenna than above the antenna. This can be particularly important in an outdoor installation. Even though the antenna provides some down tilt, there will still potentially be a "dead spot" becomes.

QUESTION 115:

A customer has a current site with an omnidirectional antenna. It has 50 ft of cabling that they are increasing to 100 ft. This change in cabling could _____.

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

Answer: C

QUESTION 116:

EIRP is a measurement typically calculated in _____.

- A. dBi
- B. dBr
- C. dBd
- D. dBm

Answer: D

QUESTION 117:

A theoretical antenna, which is the basis for ALL other antennas, is called a/an _____ antenna.

Answer: isotropic

The answer is isotropic antenna. See http://www.electronics.radiouk.com/antenna/ant_db.php

QUESTION 118:

When a client is connected to an Access Point in repeater mode, what is the effect on that client's throughput?

- A. no effect in throughput
- B. 25% degradation in throughput
- C. 33% degradation in throughput
- D. 50% degradation in throughput

Answer: D

Explanation:

A repeater can be added to extend the range of a bridge, but not double it. As a repeater, it needs to receive and transmit in more than one direction. Therefore, Yagi typically cannot be used. In such a situation an omnidirectional or semidirectional (panel or patch) antenna would be employed, and they are less effective than a link using two directional antennas. Using the high gain omnidirectional antenna shown in the figure above would only result in a link of just over seven miles.

And again, the throughput is reduced by approximately 50% because the repeater must receive, buffer, and transmit the data.

Reference: Aironet Wireless LAN Fundamentals p.4-62

QUESTION 119:

You have a two cell configuration. One cell's Access Point is configured utilizing channels. what is the best channel selection for the second cell's Access Point.

- A. Channel 4
- B. Channel 8
- C. Channel 9
- D. Channel 11

Answer: D

QUESTION 120:

How can you discover an IP address for a given Access Point?
(Choose three.)

- A. CDP
- B. IPSU
- C. telnet
- D. browser

E. through the console port

Answer: A,B,E

Explanation:

To set an IP address:

- 1)Use DHCP
- 2)Use IPSU
- 3)Set using Console port

QUESTION 121:

Inadhocmode, the CiscoAironetwireless PCMCIA client can talk to which two devices (Choose two.)

- A. CiscoAironetAccess Points
- B. CiscoAironetPCI wireless adapter
- C. CiscoAironetPCMCIA wireless adapter
- D. CiscoAironetWorkgroupBridge(WGB)

Answer: BC

QUESTION 122:

What components must be configured to enable World mode in a WLAN system?
(Choose two.)

- A. Cisco router
- B. Cisco switch
- C. NonCisco
router
- D. NonCisco switch
- E. Cisco Access Point
- F. Cisco wireless client

Answer: E, F

QUESTION 123:

What are two possible sources of interference for 2.4 GHz (802.11b or 802.11g) devices in honor
environment (Choosetwo.)

- A. cellular phones
- B. cordless phones
- C. microwave ovens
- D. satellite dish receivers

Answer: B, C

For 2.4 GHz wireless LANs, there are several sources of interfering signals, including microwave ovens, wireless phones,

Bluetooth enabled devices, and other wireless LANs. The most damaging of these are 2.4 GHz wireless phones that

people are starting to use in homes and some companies. If one of these phones is in use within the same room as an

802.11b wireless LAN, then expect poor wireless LAN performance.

Microwave ovens operating within 10 feet or so of an access point or radio equipped user will generally just cause

802.11b performance to drop. Bluetooth enabled devices, such as laptops and PDAs, will also cause performance

degradations if operating in close proximity to 802.11 stations, especially if the 802.11 station is relatively far (i.e.,

low signal levels) from the station that it's communicating with. The 802.11 and 802.15 standards groups, however, are

working on a standard that will enable the coexistence of Bluetooth and 802.11 devices. Other wireless LANs, such as

one that your neighbor may be operating, can cause interference unless you coordinate the selection of 802.11b channels.

QUESTION 124:

What can you do to reduce necessary traffic from being transmitted across the RF from an Access Point?

- A. enable packet filtering
- B. enable MAC address authentication
- C. set the buffer size in the Access Point to a lower value
- D. reduce the cell size by setting the transmit power to a lower setting

Answer: A

QUESTION 125:

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

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

Answer: A, D

Explanation:

Structured Wireless Aware Network:

1) Scalable WLAN management platform

Managing

up to 2500 of APs is as easy as managing a few APs

For medium to large enterprise campus, vertical (retail and healthcare) and branch office WLANs.

2) Simplifies complex, time consuming, and expensive WLAN operations

Assisted Site surveys Rogue AP/Network detection Interference detection and mitigation

3) Enhances Security Rogue AP/Network Detection Fast Secure Roaming IEEE Local Authentication Service Security Policy Monitoring

4) Effective troubleshooting and diagnostic tools Proactive performance and fault monitoring

QUESTION 126:

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

- A. BNC
- B. RPSMA
- C. RPTNC
- D. Nconnector

Answer: C

Explanation:

Two reverse polarity

threaded naval connectors (RPTNC)

for external 2.4 GHz antenna connection: Diversity support

for the 2.4 GHz radio to improve reliability in high multipath environment.

The RPTNC

connectors are compatible with

the Cisco Aironet optional antennas, enabling WLAN architects to customize radio coverage for specific deployment scenarios.

Reference:

Aironet Wireless LAN Fundamentals (AWFL) Student Guide p.58

QUESTION 127:

When WEP is enabled with shared key authentication, which two packets are encrypted? (Choose two.)

- A. beacons
- B. data packets
- C. association packets
- D. challenge text response

Answer: BD

Explanation:

Shared Key Authentication

5)The client sends an Authentication to Access point

6)Access Point sends an authentication response. The authentication response from the access point to the client is sent

containin"challenge" text. This packet is unencrypted.

7)The client then uses the text from the authentication response to form another authentication packet, which will be

encrypted using one of the client's WEP keys, and sends this as a response to the access point.

8)Access Point will then compare the encrypted "challenge" text against the access point's own copy of the encrypted

"challenge" text. If the encrypted text is the same, then the access point allows the client to the WLAN.

Shared Key Authentication is considered less secure than OPEN Authentication because of the challenge text packet.

Because this packet is sent unencrypted and then returned as an encrypted packet, it may be possible to capture both

packets and determine the stream cipher.

Reference:AironetWireless LANFundametlasStudent Guide p.9-16

QUESTION 128:

Which three featuresare partof the SWAN architecture? (Choose three.)

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

Answer: BCE

Explanation:

Structured Wireless Aware Network:

5)Scalable WLAN management platform

Managing

up to 2500 ofAPsis as easy as managing a fewAPs

For medium to large enterprise campus, vertical (retail and healthcare) and branch officeWLANs.

6)Simplifiescomplex, time consuming, and expensive WLAN operations

Assisted Site surveys Rogue AP/Network detection Interference detection and mitigation

7)Enhances Security Rogue AP/Network Detection Fast Secure Roaming IEEE Local Authentication Service Security Policy Monitoring

8)Effective troubleshooting and diagnostic tools Proactive performance and fault monitoring

QUESTION 129:

Which data rate is covered under the 802.11g specification?

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

Answer: C

Explanation:

A.W.L.F. V4 page 3-19 The 802.11g specifications supports data rates 6, 9, 12, 18, 24, 36, 48, 54.

QUESTION 130:

When using 128bit data encryption, how many bits is Initialization Vector (IV)?

- A. 4bits
- B. 16bits
- C. 24bits
- D. 48bits

Answer: C

Explanation:

The first 24 bits of the frame are the Initialization Vector (IV). The purpose of the IV is to insure that the same plaintext data frame will never generate the same WEP encrypted data frame. The method of changing the IV is dependent upon vendor implementation (Cisco Aironet changes the IV on a per packet basis)

QUESTION 131:

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

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

Answer: D

Explanation:

The next generation of WLAN security is the responsibility of IEEE's 802.11 Task Group I. These enhancements are being added to mitigate WEP vulnerabilities. Once these enhancements are ratified by IEEE 802.11 Task Group

I, the
new standard will be called IEEE 802.11i.
Reference: AWFL p.9-49

QUESTION 132:

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

- A. The signal is reflected.
- B. The signal is refracted.
- C. The signal is absorbed.
- D. The signal is diffracted.

Answer: C

Explanation:

One of the most important concepts for installing Cisco Aironet Bridges is line of sight. Cisco Aironet Bridges are unlicensed devices and are not designed to penetrate objects such as mountains, trees, or buildings. The signal will be either absorbed or reflected, and the end result will be that the bridges are unable to connect.

QUESTION 133:

Antenna gain can be measured in _____.

- A. dBi and jBi
- B. dBi and dB
- C. dBi and dBd
- D. qRt and qSy

Answer: C

Explanation:

For distance calculations, the following rules apply:

1) Antenna gains are given in dBi (based upon a theoretical isotropic antenna) not dBd (based upon a dipole antenna).

2) To convert from dBd to dBi, add 2.14 to the dBd. $0 \text{ dBd} = 2.14 \text{ dBi}$

3) Cable lengths are a loss and are subtracted

Reference: AWFL p.437

QUESTION 134:

The signal propagation of an omnidirectional antenna on a horizontal plane _____.

- A. Is the same as a patch antenna.

- B. Is radiated in a 360 degree patterns.
- C. Has less signal strength than the vertical plane.
- D. Makes the Omnidirectional antenna a good solution for point to point connections.

Answer: B

Explanation:

The omni has a gain of 5dBi and a 360 degree pattern.

Reference:

AWFL Student guide p.6-31

QUESTION 135:

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

Explanation:

The Effective Isotropic Radiated Power (EIRP) of a transmitter is the power that the transmitter appears to have if the

transmitter were an isotropic radiator (if the antenna radiated equally in all directions). By virtue of the gain of a radio

antenna (or dish), a beam is formed that preferentially transmits the energy in one direction. The EIRP is estimated by

adding the gain (of the antenna) and the transmitter power (of the radio).

$EIRP = \text{transmitter power} + \text{antenna gain} - \text{cable loss}$

Reference: AWFL Student Guide p.6-14

QUESTION 136:

Why are diversity antennas used indoors?

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

Answer: B

Explanation:

Dual diversity antennas typically mean if one antenna is in a null, the other one will not be, therefore providing better performance in multipath environments.

QUESTION 137:

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

Answer: 20dBm

QUESTION 138:

When describing an isotropic antenna, the horizontal beamwidth is _____ degrees, and the vertical beamwidth is 360 degrees.

Answer: 360

QUESTION 139:

Which two methods can be used to increase the distance over which two bridge-enabled sites can communicate with each other? (Choose two)

- A. Increase the antenna gain.
- B. Decrease the antenna gain.
- C. Increase the antenna cable length.
- D. Decrease the antenna cable length.

Answer: A, D

QUESTION 140:

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

QUESTION 141:

The Cisco Aironet 1400 Series Bridge can replace an expensive T1 connection because the high speed _____ radio can easily exceed T1 speeds and is cost effective.

- A. 54 MB 802.11a
- B. 54 MB 802.11g
- C. 64 MB 802.11a
- D. 64 MB 802.11g

Answer: A

QUESTION 142:

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

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

Answer: A, D

QUESTION 143:

Which three are recommended security practices for deploying CiscoAPs? (Choose three)

- A. Use SSH encryption for Telnet.
- B. Create VLAN for management traffic.
- C. Disable admin authentication on theAPs/bridges.
- D. Use RADIUS or TACACS+ for admin user authentication.

Answer: A, B, D

QUESTION 144:

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

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

Answer: A, D

QUESTION 145:

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

- A. IR
- B. DSSS

- C. FHSS
- D. OFDM

Answer: D

Explanation:

Orthogonal Frequency Division Multiplexing (OFDM) is the modulation technique used by 802.11a. The OFDM

encoding scheme works by splitting the 20 MHz radio channel into 52 smaller subcarriers.

48 of the 52 subcarriers are

used to transmit data. The remaining 4 subcarriers

are used as pilot carriers for monitoring paths shifts and Inter Carrier Interference (ICI).

These subcarriers

are then transmitted simultaneously at different frequencies to the receiver.

QUESTION 146:

You are setting a user through User Manager on the Access Point menu screen. Which two rights does that user require if it is an SNMP community with read-only privileges. (Choose two.)

- A. Ident
- B. Write
- C. SNMP
- D. Admin
- E. Firmware

Answer: C, D

QUESTION 147:

What functions does the WLSE perform?

- A. rogue AP shutdown and automatic client card configuration
- B. security, configuration, and firmware management Cisco APs
- C. facilitation of automatic configuration and performed firmware management.
- D. Facilitation of automatic configuration and security management, and management of nonCisco APs

Answer: B, C

QUESTION 148:

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

- A. 2 Mbps

- B. 11 Mbps
- C. 15 Mbps
- D. 54 Mbps

Answer: B

Explanation:

The 802.11b standard, most widely deployed wireless standard, operates in the 2.4 GHz unlicensed radio band and delivers a maximum data rate of 11Mbps. The 802.11b standards has been widely adopted by vendors and customers who find its 11 Mbps data rate more than adequate for their applications. Interoperability between many of the products on the market is ensured through the WIFicertification program. Therefore, if your network requirements include supporting a wide variety of devices from different vendors, 802.11b is probably your best choice.

QUESTION 149:

What is the default user *****Exists on a default Access Pont?

- A. user
- B. admin
- C. public
- D. There is *****

Answer: D

QUESTION 150:

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

- A. It is supported by allAPs
- B. WDS serves snaps.
- C. It performs interference detection and isolation.
- D. SNMP Read Only (RO) required while Read Write is optional

Answer: B, C

QUESTION 151:

What does the 802.11g protection mechanism do?

- A. uses the CTS (clear to send) to manage the transmit power of all clients
- B. reduces the data rate for 802.11g clients when 802.11 b 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 collisions with 802.11b clients)

Answer: D

QUESTION 152:

How are the keys generated with Cisco's serverbased authentication method?

- A. WEP keys are statically entered.
- B. WEP keys are dynamically generated.
- 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 153:

The WLSE CiscoAironetConversation Tools allows administrator to _____.

- A. store base AP configuration
- B. convertVxWorksto IOS
- C. store base configuration
- D. convertAPsto eitherVxWorks or IOS

Answer: B

Explanation:

UsingCiscoWorksWLSE 2.x centralized mass conversion of CiscoAironet1200 Series access pointVxWorksoperating system configurationfileswinto Cisco IOS Software configuration files using an expanded version of the CiscoAironet Conversion Tool for Cisco IOS Software.

QUESTION 154:

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

- A. 802.11g clients to roam to 802.11bAPs
- B. 802.11b client cards to transmit at 802.11g data rates
- C. the transmit power of an 802.11g AP to be set at 30mW
- D. 802.11b client cards to transmit in the same cell with 802.11 clients and collisions

Answer: D

QUESTION 155:

Which statement is true about Cisco's serverbased 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

QUESTION 156:

Local Manager is a component of which devices' user interface?

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

Answer: A

QUESTION 157:

What determines the height an antenna must be placed to avoid obstruction in its path? (Choose all that apply.)

- A. Earth bulge
- B. Fresnelzone
- C. Line of sight
- D. Antenna type
- E. Obstruction density

Answer: A, B, C

Explanation:

There should be a clear visible path between the two antennas (you may need binoculars to see from one to the other).

There should be no obstructions between the antennas themselves. These include trees, buildings, hills etc.

Also, you

need to take into account other line of sight factors including the Earth Bulge and theFresnelZone.

QUESTION 158:

You are the network engineer at Certkiller . You are performing a path analysis of a bridge site. You want a

solid link to be made.

Which physical obstructions must you take into consideration? (Choose all that apply.)

- A. Trees
- B. Buildings
- C. Electrical power lines
- D. Standing water (rivers, lakes etc)
- E. Elevation differences between sites

Answer: A, B, E

B: Buildings are obstructions that you need to consider when setting up bridged links.

QUESTION 159:

Certkiller has an existing fiber connection between two buildings. A road is being constructed between the two buildings. As a result, the fiber cable has been cut several times. Certkiller wants a wireless link to be used as a redundant connection between the buildings.

What protocol inherent with the bridges will aid this redundant link application?

- A. 802.1x
- B. 802.1d
- C. 802.11d
- D. 802.11e

Answer: B

802.11d is the standard for World Mode support. 802.1d is the STP standard supporting redundant L2 paths. 802.1x is

not an authentication protocol called EAP

QUESTION 160:

You are a network technician at Certkiller. Certkiller has two BR352s programmed with ETSI channel sets and 1mW. The BR352s are running at 5.5 Mb with 21dBi antennas and 100 ft of standard Aironet cable. What is the EIRP of this system?

- A. 11dBm
- B. 13.4dBm
- C. 14.3dBm
- D. 15.3dBm
- E. 21dBm

Answer: C

Explanation:

Use Cisco wlan calculation utility to do it.

QUESTION 161:

What are three methods within the Cisco Aironet wireless bridge that make the data packet transfer secure? (Choose all that apply.)

- A. PGP
- B. AES
- C. WEP
- D. CKIP
- E. LEAP
- F. 3DES

Answer: B, D, E

QUESTION 162:

Certkiller has two sites that they want to connect. However, there is no line of sight between the two buildings. What should Certkiller do? (Choose all that apply.)

- A. It cannot be done due to line of sight constraints.
- B. Erect a tower to clear the obstructions.
- C. A third site visible to each location can be used as a repeater site to connect the two buildings.
- D. They can use one of the blocking buildings as a reflector site and reflect the signal to the remote site.

Answer: B, C

QUESTION 163:

Certkiller has two offices in London. The two offices are 20 km apart. The company wants to use BR350s to make a wireless bridge link between the two offices.

Which of the following statement is true?

- A. This cannot be done.
- B. Certkiller must use 21dBi antennas and an amplifier.
- C. Certkiller must use two repeater sites and two bridges.
- D. Certkiller must use a repeater site and four bridges.
- E. Certkiller must use 6dBi patch antennas.

Answer: A

Explanation:

It is no way to do it unless at least 3 repeater sites are used.

Not B: Europe has strict regulations and do not permit amplifiers with antennas. Also the 21dBi antenna can already go

40km, so you would not need an amplifier.

QUESTION 164:

Which of the following antennas provides the most flexibility at the central location of a point-to-multipoint bridging application?

- A. Isotropic antenna
- B. 12dBi omnidirectional
- C. 23 dBi grid dish antenna
- D. 21dBi parabolic dish antenna

Answer: B

Explanation:

The 12dBi antenna is ONLY for outdoor long-range applications. The antenna has a short 12" coax pigtail making it necessary to utilize antenna extension cables.

- 1) This antenna is designed to clamp to a mast or pole. The base of the antenna has a metal section giving it enough strength to withstand being clamped.
- 2) This antenna is delivered with a set of U-bolts and friction brackets. You must supply the mast of which the antenna will be clamped.
- 3) This antenna is vertically polarized and must be mounted perpendicular to the ground with the pigtail on the bottom.

QUESTION 165:

You are the network engineer at Certkiller. You want to use the Aironet Client Utility (ACU) to create profiles for use in connecting to separate WLANs. How many profiles can be created?

- A. 1
- B. 4
- C. 8
- D. 16

Answer: D

Explanation:

ACU's profile manager feature allows you to create and manage up to 16 profiles (or saved configurations) for your client adapter. These profiles enable you to use your client adapter in different locations, each of which requires different configuration settings.

Reference:

http://www.cisco.com/en/US/products/hw/wireless/ps4555/prod_release_note09186a008007f820.html#67525
http://www.cisco.com/en/US/products/hw/wireless/ps4555/products_installation_and_configuration_guide_chapter09186a008007f854.

QUESTION 166:

You are a network technician at Certkiller . Certkiller is using WEP key hashing to enhance security. Your newly appointed Certkiller trainee wants to know which values are hashed together to create the per packet WEP key. What will your reply be? (Choose all that apply.)

- A. Zero
- B. WEP key
- C. CRC value
- D. Initialization Vector (IV)
- E. Nearest prime number to WEP key

Answer: B, D

Explanation:

Perpacket

key hashing ensures that the base key of every packet is hashed with an initialization vector (IV) to create a new key for each packet. In this way, key hashing removes the predictability that an intruder relies on to determine the WEP key by exploiting weak IVs. Broadcast key rotation eliminates broadcast keys' susceptibility to the same attacks

asunicastor static WEP keys.

Reference:

AWFL p.5-31

QUESTION 167:

Which 802.11 standard is also referred to as 802.11 Highrate?

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

Answer: B

Explanation:

802.11b access speed ranging from 1 Mbps up to 11 Mbps. 802.11b supports the original 802.11 data rate of 2 Mbps as well as higher speeds up to 11 Mbps

QUESTION 168:

In which modedomost small informal wireless LANs operate in?

- A. Infrastructure

- B. Extended
- C. Adhoc
- D. Native
- E. Basic

Answer: C

Explanation:

Ad Hoc network mode provides wireless client nodes with the capability to establish peertopeer network connections with other wireless client nodes. Wireless system that does not require a Distribution System (DS) would be an adhoc network where wireless stations communicate directly and mutually access services and applications.

QUESTION 169:

What mechanism does an 802.11a radio utilize to transmit its signal?

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

Answer: E

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 170:

DSSS is not used by 802.11a devices.(True or false?)

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

Answer: C

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 171:

What does the acronym BSS stand for?

- A. BRI Service Set
- B. Base Service Set
- C. Basic Service Set
- D. Built-in Service Set

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

QUESTION 172:

The designator dBi is a decibel referenced to a(n) _____ radiator.

Answer: isotropic

Explanation:

dBi value This is the ratio of the gain of an antenna as compared to an isotropic antenna.

QUESTION 173:

What is the maximum throughput of 802.11a devices?

- A. 11 Mbps
- B. 24 Mbps
- C. 54 Mbps
- D. 5.5 Mbps

Answer: C

Explanation:

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

QUESTION 174:

With regard to a WLAN in AdHoc mode, which of the following are true?

- A. An AP is required
- B. An AP is not required
- C. WLANs do not support AdHoc mode.
- D. This is hard to say must be judged case by case.

Answer: B

Explanation:

Ad Hoc network mode provides wireless client nodes with the capability to establish peertopeer network connections with other wireless client nodes. When configured in Ad Hoc, infrastructure components (AP's) are not required to establish the network connection. Wireless system that does not require a Distribution System (DS) would be an adhoc network where wireless stations communicate directly and mutually access services and applications.

QUESTION 175:

An Access Point is required in infrastructure mode.(True or false?)

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

Answer: C

Explanations

The 802.11 networking framework in which devices communicate with each other by first going through an Access Point is known as Infrastructure mode.

QUESTION 176:

What is equivalent rating in dBm for a radio with a power output of 100mW?

- A. 10dBm
- B. 20dBm
- C. 50dBm
- D. 100dBm

Answer: B

Explanation:

The dB scale is used to measure the power of a signal and is logarithmic in nature. In general, every 3 dB

increase in signal strength doubles the power of a signal. For example, increasing the signal strength from 10 dB to 13 dB doubles the power of the signal. This can then be applied to the transmit power ratings associated with the Cisco wireless devices. For example, a 100milliwatttransmit power setting translates to a 20dBm(m standing formilliwatt) signal.

QUESTION 177:

What is Cisco LEAP also known as?

- A. EAP Cisco Wireless
- B. AironetSecure
- C. Cisco Secure Works
- D. Cisco Dialin User Service

Answer: A

Explanations:

Cisco has developed an 802.1X authentication type called EAP Cisco Wireless, which is also known as LEAP

QUESTION 178:

What does the acronym ESS stand for?

- A. Extended Service Set
- B. Enhanced Service Set
- C. Encrypted Service Set
- D. Extendable Service Set

Answer: A

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.

QUESTION 179:

Only when running at the 5Ghzband can 802.11 make use of direct sequence spread spectrum.(True or false?)

- A. False
- B. True
- C. This is not always true must

be judge case by case.

Answer: A

Explanation:

The 802.11b is primary 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 highspeed data communications.

QUESTION 180:

Adhoc mode is generally good for small group of informal use.(True or false?)

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

Answer: A

Explanation:

Ad Hoc network mode provides wireless client nodes with the capability to establish peertopeer network connections with other wireless client nodes. Wireless system that does not require a Distribution System (DS) would be an adhoc network where wireless stations communicate directly and mutually access services and applications.

QUESTION 181:

With regard to 802.11b Wireless LANs, what differentiates the FCC and ETSI regulations? (Choose all that apply.)

- A. power output of the radio
- B. number of defined channels
- C. number of clients allowed per Access Point
- D. type of antenna connector used on Access Points

Answer: A, B

QUESTION 182:

At which band does 802.11b support the use of orthogonal frequency division multiplexing (OFDM)?

- A. 5 GHz

- B. 11 MHz
- C. 2.4 GHz
- D. 1.2 GHz
- E. 802.11b does not support OFDM.

Answer: E

802.11b does not support OFDM, see http://www.webopedia.com/TERM/8/802_11.html

QUESTION 183:

All Cisco Aironet350 Series client adapters are IEEE 802.11g compliant.(True or false?)

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

Answer: B

Explanation:

The Cisco Aironet350 is IEEE 802.11b compliant.

QUESTION 184:

True or false, 802.11 devices work at the 900Mhz band?

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

Answer: B

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 highspeed data communications. Cisco Aironet products currently use the 2.4 GHz frequency range, which adheres to the IEEE 802.11b standard

QUESTION 185:

What is the maximum transmission speed of 802.11 devices?

- A. 1 Mbps
- B. 2 Mbps
- C. 5.5 Mbps
- D. 11 Mbps

Answer: B

Explanation:

802.11a 1 Mbps and 2 Mbps (Max.)

802.11b 5.5 Mbps and 11 Mbps.

QUESTION 186:

You are the network administrator at Certkiller . Certkiller has a wireless network that operates in adhoc mode. Your newly appointed Certkiller trainee wants to know what serves as a communication hub for users of wireless devices to connect to the wired Certkiller LAN.

What would your reply be?

- A. DSS
- B. ISSS
- C. CSD
- D. WAP
- E. SSID

Answer: A

Explanation:

The distribution system, also known as the DS, refers to the topology of the wired network that you may connect to, to access services and applications.

QUESTION 187:

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

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

Answer: BCD

Explanation:

The 802.11g standard has been in draft form since November 2001 and is likely to be finalized until 2003.

802.11g will

deliver the same 54 Mbps maximum data rate as 802.11a, yet it offers an additional and compelling advantage

backward

compatibility with 802.11b equipment. This means that 802.11b client cards will work with 802.11g access points, and 802.11g client cards will work with 802.11b access points. Because 802.11g and 802.11b operate in the same 2.4 GHz unlicensed band, migrating to 802.11g will be an affordable choice for organizations with existing 802.11b wireless infrastructures. It should be noted that 802.11b products cannot be "software upgraded" to 802.11g because 802.11g radios will use a different chipset than 802.11b in order to deliver the higher data rate. However, much like Ethernet and Fast Ethernet, 802.11g products can be commingled with 802.11b products in the same network. Because 802.11g operate in the same unlicensed band as 802.11b, it shares the same three channels, which can limit wireless capacity and scalability.

QUESTION 188:

When using a multiple WEP key approach to security, transmission number is placed in what part of the 802.11 data packet?

- A. header
- B. trailer
- C. Initialization Vector (IV)
- D. Payload of the packet

Answer: A

Explanation:

The reason thereof the keys must match is because a transmit key will have to be chosen. When sending encrypted data, the client (or access point) will use the transmit key to encrypt access point (or client) know which key to use to decrypt the packet.

Reference: AWFL p.9-38

QUESTION 189:

Which two can be used to access the CLI screens on an Access Point?
(Choose two.)

- A. IPSU
- B. console port
- C. telnet session
- D. browser window

Answer: BC

Explanation:

To connect to the Access point you can use:

1)Console port

Requires
rollover
cable

2)Telnet

Requires
an IP address

3)Web Browser

Requires an IP address

Preferred connection

Reference:AironetWireless LAN Fundamentals p.8-7

QUESTION 190:

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

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

Answer: D

QUESTION 191:

Which two types of packets are able to get through prior to a client being authenticated with serverbased authentication? (Choose two.)

- A. data packets
- B. DHCP packets
- C. EAP authentication packets
- D.802.11 open authentication packets

Answer: C, D

QUESTION 192:

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

- A. the client receives a signal strength from a new AP
- B. reauthenticationand resuscitation 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: D

QUESTION 193:

Which data rate is covered under the 802.11g specification?

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

Answer: B

Explanation:

A.W.L.F. V4 page 3-19 The 802.11g specifications supports data rates 6, 9, 12, 18, 24, 36, 48, 54.

QUESTION 194:

How does the client acquire the multicast WEP key is a serverbased authentication method?

- A. The Access Point sends it to the client.
- B. The authentication server sends it to the Access Point.
- C. The key is programmed manually into the client through ACU.
- D. The client generates the key independently based upon an algorithm.

Answer: A

QUESTION 195:

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

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

Answer: D

QUESTION 196:

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

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

Answer: D

Explanation:

The IEEE ratified the 802.11a standard in 1999, but the first 802.11a compliant products did not begin appearing on the market until December 2001. The 802.11a standard delivers a maximum data rate of 54 Mbps and eight nonoverlapping frequency channels resulting in increased network capacity, improved scalability, and the ability to create microcellular deployments without interference from adjacent cells.

Reference: AWFL p.2-4

QUESTION 197:

What is the user name and password for the client in the database when **** up MAC address authentication through the Access Point using Cisco Secure ACS?

- A. The user name is blank and the password is blank.
- B. User name is the MAC address of the client and password is blank.
- C. User name is the MAC address of the client and password is DNS name of the client.
- D. User name is the MAC address of the client and the password is the **** address of the client.

Answer: D

QUESTION 198:

How many different WEP keys will the client configure in each cell using Cisco's server based authentication method?

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

Answer: B

QUESTION 199:

Which two types of packets are forwarded through an AP prior to a client being authenticated with server based authentication? (Choose two)

- A. DHCP packets
- B. Multicast data packets
- C. EAP authentication packets
- D. 802.11 authentication

Answer: C, D

QUESTION 200:

To support WLAN LEAP authentication, the CiscoAironetAccess Point must be configured asa(n) _____ AAA client in the ACS application.

- A. IETF RADIUS
- B. RADIUS WLAN
- C. RADIYSAironet
- D. RADIUS IOS/PIX

Answer: C

QUESTION 201:

What is the maximum number of non root bridges supported in a point to multipoint environment with a CiscoAironet1400SeriesWirelessBridge?

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

Answer: D

QUESTION 202:

What is the maximum Ethernet run from the CiscoAironet1400SeriesBridgeto the switch or router?

- A.10 km (maximum distance for a single mode fiber)
- B.100 meters (maximum distance for Fast Ethernet)
- C.500 meters (CiscoAironet1400 Series uses a hybrid Ethernet/fiber interface)
- D.200 meters (100 meters from Switch to Power injector, then another 100 meters to Bridge Outdoor Unit (ODU))

Answer: D

Explanation:

Remember the standard Cat 5 cable requirements still apply (maximum 328 feet or 100 meters).

QUESTION 203:

A CiscoAironetAccess Point in root mode can accept associations from _____. (Choose two)

- A. WorkgroupBridge(WGB)
- B. CiscoAironetbridge in non root mode
- C. CiscoAironetAccess Point in root mode
- D. CiscoAironetAccess Point in non root mode

Answer: A, C

QUESTION 204:

How far is typical line of site, without the use of towers, buildings,ect?

- A.2 miles
- B.6 miles
- C.18 miles
- D.24 miles

Answer: B

Explanation:

For a typical 6' (183 cm) person, the horizon appears at about 6 miles (9.7 Km). Disappearance is determined by the height of the observer. If you have two 10' (305 cm) structures, the top of one will have line of sight to the other at

about 16 miles 26Km), but it will have minimum clearance at the horizon point.

Reference: AWFL p.4-42

QUESTION 205:

A community wants to give offices access to the station house's server when they are on the road to view police records, which could help avert potential deadly and threatening individuals. The design has several bridges distributed throughout the city to provide coverage in every area of the city.

What antenna would be most appropriate on the police cruiser?

- A. An omnidirectional antenna
- B. A directional antenna (Yagi)
- C. A directional antenna (patch)

D. Anisotropically designed antenna

Answer: A

QUESTION 206:

Which statement is true about a multipoint bridge link using a frequency of 5745 MHz?

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

Answer: A, B

QUESTION 207:

Which type of authentication server may be used for 802.1X wireless clients?

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

Answer: B

Explanation:

With IEEE 802.1X local authentication service, Cisco Aironet access points are configured to act as a local Remote

Authentication Dial In

User Service (RADIUS) server to authenticate wireless clients when the authentication, authorization, and accounting (AAA) server is not available. This provides authentication services for remote or branch

office WLANs without a RADIUS server and backup authentication services during wide area network (WAN) link or

server failure to provide access to local resources like file servers or printers.

QUESTION 208:

When using dynamic WEP keys with ACS, which three values may be used to control WEP key timeout? (Choose three)

- A. RADIUS IETF 027 Session
- B. External database group mapping
- C. RADIUS Network Access Restriction

- D. CiscoAironetSession Timeout per User
- E. CiscoAironetSession Timeout per Group

Answer: A, D, E

QUESTION 209:

What are three benefits of using EAP/802.1X authentication for WLAN networks? (Choose three)

- A. Detects 802.11 radio interference.
- B. Detects Denial of Service (DOS) attacks in the WLAN networks.
- C. Dynamically generates key material for encrypting data packets.
- D. Provides mutual authentication between the user and the network.
- E. Allows the IT administrator to implement user or usergroup based policies (such as dynamic VLAN assignment).

Answer: C, D, E

QUESTION 210:

When configuring static WEP keys on an AP, the transmitkey number must be _____.

- A. Set for index 1.
- B. Unique per client.
- C. Set the same as the client key number.
- D. Set differently than the client key number.

Answer: C

QUESTION 211:

If a root Access Point is set at channel 6, which channel will a repeater Access Point use to associate to it?

- A. Channel 6
- B. Any channel
- C. Any other no overlapping channel
- D. It depends on the SSID.

Answer: A

QUESTION 212:

What is the EIRP of a system using two CiscoAironet3 Series pre programmed with ETSI channel sets and 1mW, running at 5.5 Mb with 21dBi antennas and 100 ft of standardAironet?

- A. 11dBm
- B. 14.3dBm
- C. 15.3dBm
- D. 21dBm

Answer: B

QUESTION 213:

How does a Workgroup Bridge (WGB) connect to Ethernet devices? (Choose two.)

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

Answer: A, D

QUESTION 214:

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 215:

Which three values are required to be configured in ACS when adding an AP to the ACS database? (Choose three.)

- A. broadcast WEP key
- B. RADIUS shared secret
- C. AP hostname or IP address
- D. Session key expiration interval
- E. Unique name for AP (AAA) in ACS database

Answer: B, C, E

QUESTION 216:

A Cisco Workgroup Bridge (WGB) can associate to _____. (Choose two.)

- A. another Cisco WGB
- B. a CiscoAironetAccess Point
- C. a CiscoAironetwireless bridge
- D. a non Cisco 802.11b compatible Access Point

Answer: B, C

QUESTION 217:

Which two ports are monitored within hotstandby mode to determine if the primary Access Point is still online? (Choose two.)

- A. SNMP
- B. Radio port
- C. switch port
- D. Ethernet port

Answer: B, D

Explanation:

Utilizing the hot standby mode, the redundant access point can be set to monitor the main access point. This monitoring is done via both the RF and the Ethernet connection. In the event that either fails, the redundant access point will take over.

QUESTION 218:

What is the minimum required to complete an Assisted Site Survey?

- A. perform AP radio scan
- B. perform client WEP about
- C. configure WEP on AP
- D. terminate all other traffic on the AP

Answer: A

QUESTION 219:

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

- A. approximately 1 mile or 1.6 km
- B. approximately 2 miles or 3.2 km
- C. 25+ miles or 40+ km

D. no limit

Answer: A

Explanation:

Customers may want to save money and use the workgroup bridge and access point in place of a bridge. If the distance is less than 1 mile and remote end (WGB) has less than 8 end devices, this can be done. However, if the distance is greater than 1 mile, it is recommended that a bridge be used instead of the access point. Using an access point at more than 1 mile will not provide reliable communications. This is due to timing constraints that the 802.11 standard puts on the return timers for packets acknowledgements. Remember, 802.11 defines a LAN Local Area Network which is typically a wireless range of up to 1000 feet.

Reference:

Aironet wireless LAN fundamentals (AWFL) Student Guide p.4-25

QUESTION 220:

What is a Metropolitan Mobile Network solution?

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

Answer: D

QUESTION 221:

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

- A. Hyper LAN
- B. IEEE 802.11
- C. WiFi Alliances
- D. Home RF Working Group

Answer: C

Explanation:

WiFi Protected Access (WPA) is the WiFi Alliance standards based mechanism to create secure and interoperable WLAN networks. WPA provides a mechanism to authenticated keys for use in 802.11 environments as well as providing enhancements to WEP encryption to increase the robustness of the security protocol.

QUESTION 222:

How many authentication servers can be configured on the Access Point?

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

Answer: D

QUESTION 223:

What is the functionality of a Network in Motion architecture?

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

Answer: A

QUESTION 224:

What is the benefit of spread spectrum technology OFDM modulation?

- A. Range improves data rate increases.
- B. It makes 802.11 g and 802.11a interoperable.
- C. It requires less spectral bandwidth than CCK modulation.
- D. It has better performance for multipath interferences than CCK modulation.

Answer: D

QUESTION 225:

Exhibit: ***MISSING***

On the Authenticator Configuration screen within the Access Point, what value should you use for the port setting if you were using EAP authentication with Cisco ACS ****

- A. 1218
- B. 1645
- C. 1564
- D. 1812

Answer: B

QUESTION 226:

In a Metropolitan Area Network design, the backbone wireless equipment being used is ____.

- A. APs
- B. wireless bridge
- C. inline power switches
- D. Cisco Aironet Client Adapters

Answer: B

QUESTION 227:

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

- A. 902.9 MHz
- B. 800.820 MHz
- C. 2.4002.483 GHz
- D. 2.5002.600 GHz
- E. 5.150.350 GHz
- F. 5.7255.825 GHz

Answer: A, C, E, F

QUESTION 228:

In a Network in Motion architecture is MAR?

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

Answer: C

QUESTION 229:

The IP Setup Utility (IPS) **** based to configure which two Access Point parameters? (Choose two.)

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

Answer: A, C

QUESTION 230:

Both LEDs are not in the wireless LAN client adapter. What is a possible cause for this?

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

Answer: D

QUESTION 231:

Which two actions can be performed using the system tray icon? (Choose two)

- A. Switch profiles
- B. Update a driver
- C. Configure a profile
- D. Open a client utility

Answer: A, D

QUESTION 232:

Which two operating systems are supported in the Cisco Aironet 802.11g/b/g CardBus client card? (Choose two)

- A. MAC OS X
- B. Microsoft WinCE
- C. Microsoft Windows XP
- D. Microsoft Windows 2000

Answer: C, D

QUESTION 233:

Which two 802.1X security types do the Cisco Aironet drivers on WinCE.NET devices support? (Choose two)

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

Answer: B, D

QUESTION 234:

Which program can be used to push profiles out to multiple Cisco Aironet clients?

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

Answer: D

QUESTION 235:

The Structured Wireless Aware Network (SWAN) solution _____.

- A. Manages the configurations on WLAN clients.
- B. Uses a dumb AP that are managed by a central AP controller.
- C. Is a structured WLAN manager installed on Cisco switches for non-Cisco APs.
- D. Focuses on the management of configurations for radios, mobility, security, QoS, and the overall WLAN network.

Answer: D

QUESTION 236:

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

Explanation:

The basic service area (BSA) is the area of RF coverage provided by an access point, also referred to as a "microcell".

To extend the BSA, or to simply add wireless devices and extend range of an existing wired system, an access point can be added. (As the name "access point" indicates, this unit is the point at which wireless clients can access the network).

QUESTION 237:

A WLAN is a local area network of computers connected by _____.

- A. T1 lines
- B. Fiber optics
- C. Radio frequencies
- D. Twistedpair cables

Answer: C

QUESTION 238:

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 rates.

Answer: B

QUESTION 239:

The intended use of a WLAN is to _____.

- A. Completely replace traditional wired network.
- B. Connect to the corporate network when remote.
- C. Provide a cost free alternative to cellular technologies.
- D. Overlay and/or extend the connections to a wired network.

Answer: D

QUESTION 240:

Which statement about channel reuse is true?

- A. It cannot be used with 802.11g clients.
- B. It must not be used when thereis a large number of clients.
- C. It optimizes the use of available 802.11 spectrum in a given area.
- D. It eliminates duplication of broadcast and multicast packets to a client.

Answer: C

QUESTION 241:

Which of the following statements are true with regard to an isotropic antenna?

- A. The horizontal bandwidth is 360 degrees, and the vertical beamwidth is 90 degrees.
- B. The horizontal bandwidth is 75 degrees, and the vertical beamwidth is 90 degrees.
- C. The horizontal bandwidth is 90 degrees, and the vertical beamwidth is 75 degrees.
- D. The horizontal bandwidth is 360 degrees, and the vertical beamwidth is 360 degrees.

Answer: D

Explanation:

Isotropic=360/360 Dipole=360/75

QUESTION 242:

Which of the following authentication types are defined by 802.11? (Choose all that apply.)

- A. Open authentication
- B. Closed authentication
- C. EAP-TLS authentication
- D. EAP-PMO5 authentication
- E. Shared key authentication

Answer: A, C, E

QUESTION 243:

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

- A. Two Cisco Aironet Access Points can be used to connect a LAN to LAN.
- B. Two Cisco Aironet wireless bridges can be used to connect a LAN to LAN.
- C. Cisco Aironet Access Points are designed to support mobile users.
- D. A Cisco Aironet wireless bridge can be used as an Access Point to allow 802.11b clients wireless access.

Answer: B, C, D

QUESTION 244:

Upon which three aspects does the range of coverage of a Cisco Aironet wireless bridge depend? (Choose all that apply.)

- A. Radio sensitivity
- B. Radio transmit power
- C. Chipping sequence of the transmitter
- D. Antenna system (antenna gain/cabling)
- E. Polarization of the antenna (horizontal/vertical)

Answer: B, D, E

Explanation:

B: The more power the large area can be cover.

D :The more gain, the less area it will cover but it can travel very far)

E: The coverage area also affect by the angles of the antenna)

QUESTION 245:

Certkiller has a wireless link between two buildings using directional antennas. The installation was done in late December and was functioning well for a number of months. In May the following year the link started to have problems. What are the likely causes of the problems? (Choose all that apply.)

A. A cell phone tower was placed near one of the locations.

B. The connectors were not waterproofed and corrosion has built up in the cable.

C. There are trees between the two buildings that are not just starting to bud with new leaves.

D. The local power company has erected power lines that cross the line of sight of the bridge links.

Answer: B, C

Explanation:

Tough question. With the months being November and April it is more clear. November leaves are scarce and falling off, April is the Spring and leaves start to grow back on, thus absorbing the signal.

QUESTION 246:

You are the network engineer at Certkiller. You want a Cisco Aironet wireless bridge to pass IP traffic from one LAN to another LAN. What must you do?

A. Set an IP address on both bridges.

B. Set the MTU size on the bridges to 1518 bytes.

C. No IP address needs to be set in either bridge; it passes all traffic.

D. The root bridge's IP address must be set as the gateway for all the non root bridges' IP stack.

Answer: C

Explanation:

The bridge passes IP, IPX, AT, etc traffic by default. You only need to set radio parameters such as SSID and root mode for the bridge to work. An IP address on the bridge is only required for management. We believe that the most correct answer is C.

QUESTION 247:

What should you do before you perform a site survey (Choose three)

A. Get map of building infrastructure.

- B. Find out how many users and what kind of applications are used.
- C. Use antenna radiation plot to predict maximum Access Point coverage.
- D. Select what kind of Access Point and antenna meet the customer needs.

Answer: A, B, D

QUESTION 248:

What is the minimum overlap in RF coverage that is needed to allow a repeater to associate to a root Access Point?

- A. 25%
- B. 50%
- C. 75%
- D. 100%

Answer: B

QUESTION 249:

A hospital wants to make their heart monitoring equipment wireless using 2.4 GHz (802.11q) technology. The administrator of the hospital fears that if an Access Point goes offline the patients in that area will lose their connection to the backbone. The administrator wants continual access. Which feature of CiscoAironetAccess Points helps facilitate continual access?

- A. HSRP
- B. VLAN
- C. Hotstandby
- D. Spanning Tree (STP)

Answer: C