CCNA Exploration: LAN Switching and Wireless (Version 4.0)

Chapter 7- Basic Wireless Concepts and Configuration

1 Why are wireless LAN networks more vulnerable than wired Ethernet networks?

- ○ Wireless network bandwidth is much slower.
- ◉ Wireless networks transmit data over the open space.
- ○ Wireless signals share the same RF frequencies as household devices.
- ○ Wireless networks use the CSMA/CA access method, which is less secure than CSMA/CD.

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2 Which wireless technology standard provides the most compatibility with older wireless standards, but has greater performance?

- ○ 802.11a
- ○ 802.11b
- ○ 802.11g
- ◉ 802.11n

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3 Which major problem does CSMA/CA overcome in wireless networks?

- ○ bandwidth saturation
- ○ privacy concerns
- ◉ media contention
- ○ device interoperability

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4 What wireless security feature allows a network administrator to configure an access point with wireless NIC unique identifiers so that only these NICs can connect to the wireless network?

- ○ authentication
- ○ SSID broadcasting
- ◉ MAC address filtering
- ○ EAP (Extensible Authentication Protocol)
- ○ Radius (Remote Authentication Dial-In User Service)

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5 Which two statements characterize wireless network security? (Choose two.)

- ☑ A rogue access point represents a security risk for the local network.
- ☐ Wireless networks offer the same security features as wired networks.
- ☐ Using encryption prevents unauthorized clients from associating with an access point.
- ☐ An attacker needs physical access to at least one network device to launch an attack.
- ☑ With SSID broadcast disabled, an attacker must sniff the SSID before being able to connect.

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6 What does a wireless access point use to allow WLAN clients to learn which networks are available in a given area?

- ○ association response
- ◉ beacon
- ○ key
- ○ probe request

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7 What will a wireless client transmit to discover the available WLAN networks?

- ○ beacon
- ○ password
- ◉ probe request
- ○ association request

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8 Which two conditions have favored adoption of 802.11g over 802.11a? (Choose two.)

- ☑ 802.11a suffers from a shorter range than 802.11g.
- ☐ The 2.4 GHz frequency band is not as crowded as the 5 GHz band.
- ☐ 802.11a is more susceptible to RF interference from common commercial items.
- ☐ 802.11a uses a more expensive modulation technique than 802.11g.
- ☑ 802.11g is backward compatible with 802.11b, but 802.11a is not.

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9 Wireless users on a network complain about poor performance within a small area of a room. Moving away from this area in any direction improves performance dramatically. What is the first step in designing a solution to this problem?

- ◉ This might be RF channel overlap, so the technician should verify the channels in use on each wireless access point and change to non-overlapping channels.
- ○ The RF power settings might be set too low on the wireless access points servicing the room. Increase the RF output power on all wireless access points.
- ○ Install a new wireless access point in this center area to provide coverage.
- ○ Verify that the wireless access points have sufficient in-line power and connectivity to the wired network.

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10 On a wireless network in a corporate environment that is using the CSMA/CA access method, how is the successful transmission of data packets by client stations indicated?

- ◉ The access point sends an acknowledgment to the sending client station that data has been received.
- ○ The receiving host sends an acknowledgment to the sending client station that data has been received.
- ○ The sending client monitors the RF energy change while transmitting data packets and making sure no other clients are transmitting data.
- ○ The sending client station monitors the RF energy change for a pre-determined time period after it completes transmitting data to make sure its transmission is successful.

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11 Which two statements concerning network security are accurate? (Choose two.)

- ☐ 802.11i uses 3DES for encryption.
- ☑ Open authentication uses no client or AP verification.
- ☐ The 802.11i protocol is functionally identical to WPA.
- ☑ 802.11i incorporates a RADIUS server for enterprise authentication.
- ☐ A wireless client first associates with an AP and then authenticates for network access.

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12 What occurs when a rogue access point is added to a WLAN?

- ○ Authorized access points can transmit excess traffic to rogue access points to help alleviate congestion.
- ◉ Unauthorized users can gain access to internal servers, thus causing a security hole.
- ○ All traffic that uses the same channel as the rogue access point will be encrypted.
- ○ All traffic that uses the same channel as the rogue access point will be required to authenticate.

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13 A network administrator is deploying three 2.4 GHz access points for the exhibit area of a large car dealer facility. What channel selection can be used on the three access points to avoid signal interference?

- channels 1, 5, 10
- channels 1, 6, 11
- channels 1, 7, 11
- channels 1, 8, 12

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14 Which three devices do many wireless routers incorporate? (Choose three.)

- [x] gateway for connecting to other network infrastructures
- [x] built-in Ethernet switch
- [ ] network management station
- [ ] VTP server
- [x] wireless access point
- [ ] VPN concentrator

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15 What procedure can prevent man-in-the-middle attacks?

- Force all devices on a WLAN to authenticate and monitor for any unknown devices.
- Enable access points to send an SSID to each device wanting to use the network.
- Configure MAC filtering on all authorized access points.
- Disable SSID broadcasts.

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16 Which network design process identifies where to place access points?

- site survey
- risk assessment
- scalability design
- network protocol analysis

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17 A network administrator is designing the wireless network for a law office. The security policy requires that the access to the wireless network must be authenticated with the credentials of employees. The administrator decides to use the PSK2 Enterprise authentication method. Which server is a requirement to deploy PSK2 Enterprise?

- TFTP
- HTTPS
- RADIUS
- IEEE 802.1x

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18 Which statement is true about the SSID configuration of a wireless access point?

- The SSID is not case-sensitive.
- The SSID cannot exceed 32 characters.
- An SSID string cannot contain a space.
- Turning off SSID broadcasting makes the wireless network inaccessible.

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19 Which installation method will allow connectivity for a new wireless network?

- set up WEP on the access point only
- set up open access on both the access point and each device connected to it
- set up full encryption on the access point while leaving each device connected to the network open
- set up full encryption on each device of the WLAN while leaving the access point settings open

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20 Which two statements are true regarding wireless security? (Choose two.)

- [ ] MAC address filtering prevents the contents of wireless frames from being viewable.
- [ ] Providing a wireless client with the network key allows an available network to be visible.
- [ ] Disabling an access point from broadcasting the SSID prevents the access point from being discovered.
- [x] Default SSIDs on specific manufacturer APs are generally known and may permit hostile wireless connections.
- [x] Manually adding a network and setting the known SSID on a wireless client makes the network visible even if the SSID is not being broadcast.

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21 Which function is provided by a wireless access point?

- dynamically assigns an IP address to the host
- provides local DHCP services
- converts data from 802.11 to 802.3 frame encapsulation
- provides a gateway for connecting to other networks
