Chapter 8 – Network Hardware in Depth

Review Questions

1. When a switch receives a frame on a port and floods the frame, what does it do with the frame?
   a. Discards it
   b. Changes the destination address to FF:FF:FF:FF:FF:FF
   c. Forwards it out all other connected ports
   d. Clears the switching table and adds the frame source address to the table

2. You have two eight-port switches. On each switch, seven stations are connected to ports, and the two switches are connected with the eighth port. How many collisions domains are there?
   a. 16
   b. 15
   c. 14
   d. 8
   e. 1

3. Which of the following is considered a Layer 2 device?
   a. Computer
   b. Switch
   c. Router
   d. Hub

4. You just purchased some new switches for your company's network. Your junior technicians are doing most of the work connecting switches to workstations and to each other, and you don't want to confuse them by requiring them to use both patch cables and crossover cables. How can you test the switches to determine whether you need both types of cable, and what's the feature for using only one type of cable for all connections?
   a. Connect the switch to a PC NIC and configure different speeds on the NIC by using the NIC driver. You're okay if the switch links at all speeds. It's called auto-MDIX.
   b. Connect two switches by using a crossover cable. If the connection works, the switch supports auto-negotiate.
   c. Connect the switch to a PC NIC and configure different speeds on the NIC by using the NIC driver. You're okay if the switch links at all speeds. It's called auto-negotiate.
   d. Connect two switches by using a patch cable. If the connection works, the switch supports auto-MDIX.

5. What feature of a switch keeps switching table entries from becoming stale?
   Aging Timestamp

6. Which is the fastest switching method?

   a. Store-and-forward

   b. Fragment-free

   c. Cut-through

   d. Forward-free

7. There can be only one MAC address per port in a switching table. True or False?

8. What does it mean if the first 24 bits of a MAC address are 01:00:5E?

   a. The NIC was manufactured by Intel.

   b. It's a multicast frame.

   c. It's an invalid CRC.

   d. The frame will be flooded.

9. What feature should you look for in switches if your network is cabled like the one in Figure 8-16?

   a. VLANs

   b. Auto-negotiate

   c. STP

   d. Auto-MDIX

10. What should you configure on a switch that's connected to three broadcast domains?

    a. IGMP

    b. VLANs

    c. Port security

    d. STP

11. Which of the following is a Layer 3 device? (Choose all that apply.)

    a. Router

    b. NIC

    c. Switch

    d. Multilayer switch

12. What does a router do after receiving a frame on one of its interfaces? (Choose all that apply.)

    a. Deencapsulates the frame to create a packet

    b. Deencapsulates the packet to create a segment

    c. Encapsulates the frame to create a new packet

    d. Encapsulates the packet to create a new frame

13. Which of the following is found in a routing table? (Choose all that apply.)

    a. Destination MAC address

    b. Port number

    c. Metric

    d. Next hop

    e. Domain name

14. Which of the following accurately describes a distance-vector routing protocol?

    a. OSPF is an example.

    b. It learns from its neighbors.

    c. It sends the status of its interface links to other routers.

    d. It converges the fastest.

15. Which of the following is a characteristic of routing protocols? (Choose all that apply.)

    a. They populate routing tables statically.

    b. Network changes are reflected in the routing table automatically.

    c. They're not a good solution with redundant routes.

    d. They add routing table entries dynamically.

16. Which of the following is the best routing solution for a network that includes redundant links?

    a. RIP

    b. STP

    c. OSPF

    d. Static

17. If you don't want wireless clients to view the name of your wireless network, what feature should you use?

    a. WEP

    b. Disabling SSID broadcasts

    c. MAC filtering

    d. AP isolation

18. To prevent a wardriver from being able to interpret captured wireless network data, you should enable which of the following?

    a. MAC filtering

    b. AP isolation

    c. WPA or WPA2

    d. Repeater mode

19. What feature can you use to wirelessly connect the wired networks in two buildings?

    a. Repeater mode

    b. AP isolation

    c. Bridge mode

    d. VLAN mode

20. Which AP feature is useful when you have many guests accessing your network and you don't want them to be able to access the computers of other guests?

    a. MAC filtering

    b. AP isolation

    c. Bridge mode

    d. VLAN mode

21. Which PC bus uses up to 32 lanes to achieve very high data transfer rates?
    a. PCI
    b. PCI-X
    c. USB
    d. PCIe

22. Which PC bus allows you to connect a NIC to your computer easily without powering off?
    a. PCI
    b. PCI-X
    c. USB
    d. PCIe

23. Which NIC feature do you need to configure on a thin client?
    a. QoS
    b. PXE
    c. IPsec
    d. ACPI

24. Which device is used to communicate between broadcast domains?
    a. Repeater
    b. Switch with VLANs
    c. Router
    d. Switch with STP

25. What feature should you configure to prevent users on one subnet from accessing the Web server on another subnet?
    a. MAC filtering
    b. Access control lists
    c. Dynamic routing
    d. Spanning Tree Protocol