

Chapter 08

1. What is characteristic of the operation of a Layer 2 switch?
 - a. selectively drops packets that represent potential security risks
 - b. dynamically learns the interfaces to which all devices are attached based on IP address
 - c. during switch initialization, queries the devices on all interfaces to learn the MAC addresses of the attached devices
 - * d. uses the destination MAC address to determine the specific interface to forward a frame

2. Two newly hired technicians are discussing the implementation of a new LAN. One technician proposes installing a hub. The other technician advises installing a switch. Which statements are true about the differences between a hub and a switch? (Choose two.)
 - a. A hub operates at Layer 2 of the OSI model.
 - b. A hub reduces the number of collisions on a LAN.
 - c. A hub works at a higher OSI model layer than a switch.
 - * d. A switch provides more throughput to hosts on a LAN.
 - * e. A switch provides a collision-free environment on a LAN.
 - f. The number of collisions on a LAN are the same whether a hub or a switch is used.

3. Refer to the exhibit. Forty-eight workstations are connected to a hub. The users are able to connect to the network, but access is very slow. An entry-level technician replaces the 10 Mbps hub with 100 Mbps hub but the problem still exists. What is the most economical way to correct the problem?
 - * a. Replace the hub with a switch.
 - b. Replace the hub with a router.
 - c. Replace the hub with a 1 Gbps hub.
 - d. Replace the hub with a 10 Mbps fiber hub.

4. Exhibited is a portion of ABC Company internetwork. Which of the connections can be full duplex?
 - a. segments 1 and 2
 - b. segment 2
 - c. segments 3 and 4
 - * d. segments 2, 3, and 4
 - e. segments 1, 2, 3, and 4

5. Refer to the exhibit. The switch and the hub have default configurations, and the switch has built its CAM table. Which of the hosts will receive the data when workstation A sends a unicast packet to workstation C?
 - * a. workstation C
 - b. workstations B and C
 - c. workstations B, C, and the E0 interface of the router
 - d. workstations B, C, D, E, F, and the E0 interface of the router

6. An administrator would like to connect ten workstations on a 192.168.0.0/24 network. The device selected by the administrator must allow connectivity between hosts without sharing bandwidth. Which device would be appropriate?
 - a. hub
 - b. router
 - * c. switch
 - d. repeater

7. Which networking devices use the MAC address to make forwarding decisions? (Choose two.)
 - a. NIC
 - * b. bridge
 - c. hub
 - * d. switch

e.repeater

8. Which devices are primarily used to extend cable segments within a collision domain by regenerating the data signals? (Choose two.)

- a.switch
- * b.repeater
- c.router
- d.bridge
- * e.hub

9. Which devices will create multiple collision domains in an Ethernet network? (Choose two.)

- a.NIC
- b.hub
- * c.switch
- * d.router
- e.repeater

10. Refer to the exhibit. How many broadcast domains exist in classroom 240?

- * a.1
- b.2
- c.5
- d.12
- e.13
- f.15

11. A PC receives a frame. Which situation will cause the NIC on the receiving host to pass the frame contents up the OSI layers to be processed by the PC?

- a.The frame is a runt frame.
- * b.The destination MAC address of the frame is FFFF.FFFF.FFFF.
- c.The transmitting host generated a jam signal during the frame transmission.
- d.The recalculated checksum for the frame does not match the FCS on the frame.

12. A network administrator has a multi-floor LAN to monitor and maintain. Through careful monitoring, the administrator has noticed a large amount of broadcast traffic slowing the network. Which device would you use to best solve this problem?

- a.bridge
- b.hub
- * c.router
- d.transceiver

13. What will a bridge do if it receives a frame with a MAC address that is not within the table?

- a.discard frame
- b.ignore frame
- c.send frame to appropriate port
- * d.send frame to all ports except source port

14. Which networking device reduces the size of both collision domains and broadcast domains?

- a.hub
- b.Layer 2 switch
- * c.router
- d.bridge
- e.repeater

15. What is used to prevent Layer 2 switching loops?

- a.bridging
- b.segmentation
- c.Address Resolution Protocol
- * d.Spanning-Tree Protocol

