

Chapter 09-10

1. What is the primary responsibility of the transport layer?
 - a. allows access to the network media
 - b. provides data representation and encoding
 - c. selects paths through the network for data to travel
 - * d. defines end-to-end connectivity between host applications
2. Why is IP considered a best-effort protocol?
 - a. IP detects lost packets.
 - b. IP validates the content of the packets.
 - * c. IP does not provide acknowledgment of the data delivery.
 - d. IP reorders the packet as they arrive at the destination host.
3. Which two statements correctly describe the IP address 127.0.0.1? (Choose two.)
 - * a. It belongs to the Class A range of addresses.
 - b. It belongs to the Class B range of addresses.
 - c. It belongs to the Class C range of addresses.
 - * d. It is reserved for loopback testing.
 - e. It is reserved for multicast group testing.
 - f. It is reserved for unicast testing.
4. Refer to the exhibit. Which two statements are correct in reference to the output shown? (Choose two.)
 - a. The LAN segment is subnetted to allow 254 subnets.
 - b. The DNS server for this host is on the same subnet as the host.
 - * c. The host automatically obtained the IP addresses 192.168.1.100.
 - * d. The host received the IP address from the router on the local LAN segment.
 - e. The host is assigned an address of 00-50-8D-F1-EA-8D by the administrator.
5. Which three addresses are considered to be private addresses? (Choose three.)
 - * a. 10.45.09.23
 - b. 15.87.234.87
 - c. 172.32.45.90
 - * d. 172.17.78.98
 - e. 192.169.89.56
 - * f. 192.168.45.23
6. What is the purpose of a DHCP server on a network?
 - a. to resolve MAC addresses to IP addresses
 - b. to resolve IP addresses to MAC addresses
 - c. to resolve host names to IP addresses
 - * d. to assign IP addresses dynamically to hosts
 - e. to assign a MAC address to a host
7. Refer to the exhibit. The small office LAN shown in the exhibit may eventually be connected to the Internet. According to Cisco best practice, which IP network addresses should be used?
 - a. 12.0.0.0
 - b. 172.0.0.0
 - c. 172.168.0.0
 - d. 192.32.17.0
 - * e. 192.168.67.0
 - f. 225.1.5.0
8. Refer to the exhibit. Which devices are recommended to have the IP addresses manually configured?
 - a. PC1 and PC2
 - * b. all servers
 - c. only PC2 Laptop
 - d. all hosts and all servers

9. Refer to the exhibit. Based on the information shown, which two statements are true? (Choose two.)
- a. An ARP request must be used to obtain an address that is placed in the ARP table.
 - b. Frames from other hosts in the network to this host will use a destination address of 00-06-25-25-6e-5d.
 - c. The only remote locations that can be reached from this host are 192.168.1.97 and 192.168.1.254.
 - * d. If a packet is sent to a network device other than 192.168.1.97 and 192.168.1.254, an ARP request must be used.
 - * e. If the computer with the IP address of 192.168.1.94 sends a packet to the device with the IP address 192.168.1.97, no ARP request is required.
10. Which TCP/IP model layer supports both LAN and WAN technologies?
- * a. network access layer
 - b. internet layer
 - c. transport layer
 - d. application layer
11. Which subnet mask would be assigned to the network address of 192.168.32.0 to provide 254 useable host addresses per subnetwork?
- a. 255.255.0.0
 - * b. 255.255.255.0
 - c. 255.255.254.0
 - d. 255.255.248.0
12. Refer to the exhibit. Host A pings host B. When R4 accepts the ping into the Ethernet interface, what two pieces of header information are included? (Choose two.)
- a. source IP address: 192.168.10.129
 - b. source IP address: BBBB.3333.5677
 - c. source MAC address: 5555.AAAA.6666
 - d. destination IP address: 192.168.10.33
 - * e. destination IP address: 192.168.10.134
 - * f. destination MAC address: 9999.DADC.1234
13. What header address information does a router change in the information it receives from an attached Ethernet interface before information is transmitted out another interface?
- a. only the Layer 2 source address
 - b. only the Layer 2 destination address
 - c. only the Layer 3 source address
 - d. only the Layer 3 destination address
 - * e. the Layer 2 source and destination address
 - f. the Layer 3 source and destination address
14. Host A is connected to the LAN, but it cannot connect to the Internet. The host configuration is shown in the exhibit. What are the two problems with this configuration? (Choose two.)
- * a. The host subnet mask is incorrect.
 - b. The host is not configured for subnetting.
 - c. The default gateway is a network address.
 - * d. The default gateway is on a different network than the host.
 - e. The host IP address is on a different network from the Serial interface of the router.
15. An IP network address has been subnetted so that every subnetwork has 14 usable host IP addresses. What is the appropriate subnet mask for the newly created subnetworks?
- a. 255.255.255.128
 - b. 255.255.255.224
 - * c. 255.255.255.240

- d.255.255.255.248
- e.255.255.255.252

16. A company is using a Class B IP addressing scheme and expects to need as many as 100 networks. What is the correct subnet mask to use with the network configuration?

- a.255.255.0.0
- b.255.255.240.0
- * c.255.255.254.0
- d.255.255.255.0
- e.255.255.255.128
- f.255.255.255.192

17. Refer to the exhibit. The network administrator has assigned the internetwork of LBMISS an address range of 192.168.10.0. This address range has been subnetted using a /29 mask. In order to accommodate a new building, the technician has decided to use the fifth subnet for configuring the new network. By company policies, the router interface is always assigned the first usable host address and the workgroup server is given the last usable host address. Which configuration should be entered into the IP server properties to get connectivity to the network through the router?

- a.IP address: 192.168.10.38 Subnet mask: 255.255.255.240 Default gateway: 192.168.10.39
- b.IP address: 192.168.10.38 Subnet mask: 255.255.255.240 Default gateway: 192.168.10.33
- * c.IP address: 192.168.10.38 Subnet mask: 255.255.255.248 Default gateway: 192.168.10.33
- d.IP address: 192.168.10.39 Subnet mask: 255.255.255.248 Default gateway: 192.168.10.31
- e.IP address: 192.168.10.254 Subnet mask: 255.255.255.0 Default gateway: 192.168.10.1

18. Refer to the exhibit. A technician is planning an addressing scheme for a branch office as shown in the exhibit. What is the status of the intended network?

- a.The configuration will work as planned.
- b.The subnet mask of host A is incorrect.
- c.The default gateway of host A is a network address.
- * d.The addresses on the router LAN interfaces are on the same subnetwork.
- e.The IP address of host A is on a different subnetwork than the subnetwork that the Ethernet router interface is on.

19. Refer to the exhibit. After host 2 is connected to the switch on the LAN, host 2 is unable to communicate with host 1. What is the cause of this problem?

- a.The subnet mask of host 2 is incorrect.
- * b.Host 1 and host 2 are on different networks.
- c.The switch needs an IP address that is not configured.
- d.The router LAN interface and host 1 are on different networks.
- e.The IP address of host 1 is on a different network than is the LAN interface of the router.

20. Refer to the exhibit. A network administrator is planning the addressing scheme for the LAN using 172.25.14.0/26. The hosts are to be assigned addresses 172.25.14.1 - 172.25.14.25. The LAN interface of the router is to be configured using 172.25.14.63 as the IP address. What would describe this addressing scheme?

- a.The LAN is being addressed properly.
- b.The subnet that is being assigned is not a usable subnet address.
- * c.The router LAN interface is being assigned a broadcast address.
- d.The subnet mask does not allow enough host addresses in a single subnet.

21. Which type of routing allows routers to adapt to network changes?

- a.static routes
- * b.dynamic routing
- c.only default routes
- d.No routing is necessary.

22. How does a router decide where the contents of a received frame should be forwarded?
- * a.by matching destination IP addresses with networks in the routing table
 - b.by matching the destination IP address with IP addresses listed in the ARP table
 - c.by matching the destination MAC address with MAC addresses listed in the CAM table
 - d.by forwarding the frame to all interfaces except the interface on which the frame was received
23. What do switches and routers use to make forwarding decisions?
- a.Switches and routers both use IP addresses.
 - b.Switches and routers use both MAC and IP addresses.
 - c.Switches use IP addresses. Routers use MAC addresses.
 - * d.Switches use MAC addresses. Routers use IP addresses.
 - e.Switches use MAC and IP addresses. Routers use IP addresses.
24. Refer to the exhibit. A newly hired technician is testing the connectivity of all hosts by issuing a ping command. The technician notices that a default gateway is not configured on all the hosts, but all hosts have connectivity between hosts, a fact which seems to confuse the technician. How would you explain the connectivity to the technician?
- a.The hosts are detecting the default gateway configured on the hub.
 - * b.The hosts are all in one LAN, so default gateway information is not needed.
 - c.The hosts in the network only require that one host has a gateway configured.
 - d.The hosts in the network would only need a gateway if a switch replaces the hub.
 - e.The hosts are using broadcast to reach each other since no gateway is configured.
25. Given a host with the IP address 172.32.65.13 and a default subnet mask, to which network does the host belong?
- a.172.32.65.0
 - b.172.32.65.32
 - * c.172.32.0.0
 - d.172.32.32.0