

CCNA 1: Network Fundamentals Final Set A

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

Switch

router

2. How many collision domains are shown in the diagram?

Seven

3. Refer to the exhibit. The physical documentation shows a portion of the internetwork of the ABC Company. Which segments will be free of collisions?

segments 3, 4, and 5

4. Refer to the exhibit. Which diagram represents the network topology that an administrator would prefer, and why would the administrator prefer it?

Diagram A. It will better provide available bandwidth to the hosts.

5. After an unsuccessful ping to the local router, the technician decides to investigate the router. The technician observes that the lights and fan on the router are not operational. In which layer of the OSI model is the problem most likely occurring?

Physical

6. Refer to the exhibit. How many broadcast domains are shown?

Three

7. Refer to the exhibit. A network associate needs to establish an Ethernet connection between Host A and Host B. However, the distance between the two hosts is further than the cabling standards allow. Which two devices that operate at the physical layer of the OSI can be used to allow Host A and Host B to communicate? (Choose two.)

hub

repeater

8. Refer to the exhibit. What must be configured on Host B to allow it to communicate with the file server? (Choose three.)

a unique host IP address

the subnet mask for the LAN

the default gateway address

9. Refer to the exhibit. Host A pings Host B. What can be concluded about the source and destination addresses contained in the communication sent by Router R5 when it forwards the ping out the Ethernet interface to Host B? (Choose two.)

source MAC address: 5555.AAAA.6666

destination IP address: 192.168.10.134

10. What is the correct number of usable subnetworks and hosts for the IP network address 192.168.35.0 subnetted with a /28 mask?

14 networks / 14 hosts

11. Refer to the exhibit. The network administrator wants to create a subnet for the point-to-point connection between the two routers. Which subnet mask would provide enough addresses for the point-to-point link with the least number of wasted addresses?

255.255.255.252

12. Refer to the exhibit. A network technician is trying to determine the correct IP address configuration for Host A. What is a valid configuration for Host A?

IP address: 192.168.100.20; Subnet Mask: 255.255.255.240; Default Gateway: 192.168.100.17

13. Two peer hosts are exchanging data using TFTP. During the current session, a datagram fails to arrive at the destination. Which statement is true regarding the retransmission of the datagram?

Datagram retransmission is controlled by the application.

14. Which protocols are TCP/IP application layer protocols? (Choose two.)

TFTP

DNS

15. When using Category 5 UTP cable, which RJ-45 pin pairs are used to exchange data between hosts on an Ethernet network?

1 and 2; 3 and 6

16. In the exhibit, the connections between the devices are labeled A, B, C, D, and E. For each connection, what is the correct UTP cable to use?

A=rollover, B=straight, C=straight, D=crossover, E=crossover

17. Which cable diagram displays the end to end pinout for a crossover cable used with Cisco devices?

Cable C

18. Which subnet masks could be used when subnetting a Class B IP address? (Choose two.)

255.255.255.240

255.255.192.0

19. Which physical network topology is easy to monitor and troubleshoot, easy to add new devices to as the network expands, but subject to complete failure when a central hub or switch ceases to work?

Star

20. A computer technician is asked to make a network cable. One end of the cable is pinned as a 568A and the other as a 568B. For what purposes can this cable be used? (Choose two.)

to connect a switch to a switch

to connect a hub to a switch

21. Refer to the exhibit. Workstation 1 pings the Fa0/1 interface of Router 1. Which MAC address will workstation 1 obtain during the ARP request for this communication?

00-08-A3-B6-CE-02

22. Refer to the exhibit. A network administrator has configured a network after subnetting the network number 192.168.0.0/28. Workstation 1 is not able to communicate with Workstation 2. What is the cause of this loss in communications?

Workstation 1 is not on the same network that the Router 1 LAN interface is on.

23. Which network device creates the highest amount of latency?

Router

24. An Ethernet host receives a frame, calculates the FCS, and compares the calculated FCS to the FCS received in the frame. The host finds that the two FCS values do not match. What action will be taken by the host?

The host discards the frame.

25. A user initiates three simultaneous FTP connections from the local host to the same FTP server. Which OSI layer is responsible for establishing and managing these different FTP connections?

Session

26. A network administrator has installed a 24 port switch and connected 10 computers with 10/100 NICs. If the NICs are operating at 100 Mbps, how much bandwidth is available for each computer to receive data?

100 Mbps

27. Based on the graphic above, which of the following occurs as each host system comes on line in the topology?

The switch adds MAC address to the bridge table as each host sends a frame.

28. Consider the networks shown in the exhibit. Host A is sending packets to host B. Which layer of the OSI model is being used when the router is making the calculated decision to determine which interface to send the packet out?

Network

29. Why would a company install a switch instead of a hub when building or expanding a corporate network?

A switch provides more bandwidth by sending frames only out the port to which the destination device is attached. A hub sends the frame out all ports except the source port.

30. Refer to the exhibit. The hub and the switch are operating using factory default settings. Which hosts will receive the frame if host A transmits a broadcast frame?

Workstations B, C, D, E, and the router will receive the data.

31. Refer to the exhibit. What kind of Ethernet cable is represented?

straight-through cable

32. The ping command can be used to test connectivity between hosts. Which OSI model

layers are verified by this test?

Layers 1, 2 and 3

33. A technician is testing connectivity between the devices using the ping command. Pings between Host B and Host A were successful. The technician could not ping the R3 address 172.16.3.2 from Host A. The technician issued ipconfig from Host A and saw the information displayed in the exhibit. What is the most likely problem?

The default gateway of Host A is incorrect.

34. Why do vendors utilize the OSI model when designing networking products?

It ensures greater compatibility and interoperability with equipment from different vendors.

35. A router determines the path to deliver a packet. What layer of the OSI model does this fact represent?

Network

36. How does a switch learn the addresses of hosts connected to its ports?

The switch reads the source MAC address on incoming frames and records it in CAM.

37. Refer to the exhibit. The connections in the exhibit are labeled A through E. Which of these indicate LAN links? (Choose two.)

link A

link E

38. A large company has a network that is constantly changing. The routing tables in the routers need to be adjusted to reflect the changes in the routing paths. What type of routing would the network administrator implement?

dynamic routing protocols

39. A network administrator has added a new switch to the network. The new switch connects to an existing switch that is already installed. Which UTP cable correctly connects the new switch to the existing switch?

crossover

40. Refer to the exhibit. A newly hired technician has a task of terminating CAT 5 UTP cables. The network administrator visually examined the cables the technician

terminated. Some of the cables have connectors as shown in the exhibit. What should the network administrator explain to the technician about the cables?

The cable in Graphic A will produce more crosstalk.

41. Refer to the exhibit. What is the order of the TCP/IP Protocol Data Units as data is moved as indicated through the OSI model?

bits, frames, packets, segments, data

42. Refer to the exhibit. Which type of UTP cable should be used to connect Host A to Switch1?

straight-through

43. Which technologies are considered to be LAN technologies? (Choose two.)

Token Ring

Ethernet

44. Refer to the topology in the graphic. Which characteristic does this type of topology possess?

Communication continues in the event of a break in any one connection.

45. Which characteristics are common to both UDP and TCP? (Choose two.)

uses port numbers

classified as a transport layer protocol

46. A router interface has been assigned an IP address of 172.16.192.166 with a mask of 255.255.255.248. To which subnet does the IP address belong?

172.16.192.160

47. Which type of address is 192.168.170.112/28?

subnetwork address

48. What is the decimal representation of the binary number 11111000?

248

49. What are important characteristics to consider when purchasing a network interface

card? (Choose two.)

media used on the network system

bus used on the computer

50. Which of the following statements are correct about CSMA/CD? (Choose three.)

It is a media access method used in LANs.

When a device needs to transmit, it checks to see if the media is available.

Only one device can successfully transmit at a time.