CCNA 1: Network Fundamental s Final Set B

1. Refer to the exhibit. Host B attempts to establish a TCP/IP session with host C. During this attempt, a frame was captured at the FastEthernet interface fa0/1 of the San Francisco router. The packet inside the captured frame has the source IP address 10.10.1.2, and the destination IP address is 10.31.1.20. What is the destination MAC address of the frame at the time of capture?
- 0060.7320.D632
- 0060.7320.D631
- 0040.8517.44C3
- 0009.B2E4.EE03
- 0010.C2B4.3421

2. What are three characteristics of CSMA/CD? (Choose three.)
- It monitors the media for presence of a data signal.
- After detecting a collision, hosts can resume transmission after a random timer has expired.
- A jam signal is used to ensure that all hosts are aware that a collision has occurred.
- Devices can be configured with a higher transmission priority.
- Data is transmitted only when the data signal is present.
- It uses a token system to avoid collisions.

3. Refer to the exhibit. The PC, the routing table of which is displayed, is configured correctly. To which network device or interface does the IP address 192.168.1.254 belong?
- PC
- switch
- router interface fa 0/0
- router interface fa 0/1

4. Refer to the exhibit. Host A wants to access the Internet. Which combination of a Layer 2 address and a Layer 3 address will enable this access from host A?
- Destination MAC: 0030.8596.DE83 Default gateway: 209.165.202.130
- Destination MAC: 0030.8596.DE82 Default gateway: 172.16.9.2
- Destination MAC: 0030.8517.44C4 Default gateway: 172.16.1.1
- Destination MAC: 0030.8517.44C4 Default gateway: 209.165.202.130

5. Refer to the exhibit. Communication between hosts X and Y is restricted to the local network. What is the reason for this?
- The gateway addresses are broadcast addresses.
- Host Y is assigned a multicast address.
- Host X and host Y belong to different networks.
- Host X is assigned a network address.

6. What is the result of using the clock rate 56000 command at the serial interface of the router?
- **The interface is configured as a DCE device.**
- The interface timers are cleared.
- The FastEthernet interface is made to emulate a serial interface by assigning it a timing signal.
- The IP address for the serial interface is configured.

7. Which three addresses belong to the category of public IP addresses? (Choose three.)
- 127.0.0.1
- **196.1.105.6**
- **132.11.9.99**
- 10.0.0.1
- 172.16.9.10
- **46.1.1.97**

8. Which three statements are true about transport layer protocols? (Choose three.)
- **TCP and UDP manage communication between multiple applications.**
- TCP retransmits the packets for which the acknowledgment is not received.
- **TCP acknowledges received data.**
- UDP exchanges frames between the nodes of the network.
- TCP has no mechanism to acknowledge transmission errors.
- **UDP uses windowing and sequencing to provide reliable transfer of data.**

9. Refer to the exhibit. Which logical topology describes the exhibited network?
- star
- ring
- **point-to-point**
- multi-access

10. Which statement is true about the running configuration file in a Cisco IOS device?
- **It affects the operation of the device immediately when modified.**
- It is stored in NVRAM.
- It should be deleted using the erase running-config command.
- It is automatically saved when the router reboots.

11. Refer to the exhibit. Host C is able to ping 127.0.0.1 successfully, but is unable to communicate with hosts A and B in the organization. What is the likely cause of the problem?
- Hosts A and B are not on the same subnet as host C.
- The IP addresses on the router serial interfaces are wrong.
- **The subnet mask on host C is improperly configured.**
- The FastEthernet interface fa0/0 of router 1 is wrongly configured.

12. A host is transmitting a video over the network. How does the transport layer allow this host to use multiple applications to transmit other data at the same time as the video transmission?
- It uses error control mechanisms.
- **It uses a connectionless protocol only for multiple simultaneous transmissions.**
- It uses multiple Layer 2 source addresses.
- It uses multiple port numbers.

13. Refer to the exhibit. PC1 is unable to access PC2. To troubleshoot this problem, the technician needs to confirm that the next hop interface is operational. Which default gateway address should the technician ping from PC1 to confirm this?
- 10.0.0.254
- 192.168.0.249
- **192.168.0.250**
- 10.0.1.254

14. Refer to the exhibit. Cable 1 and Cable 2 are wired for specific physical layer requirements. Which three segments use Cable 2? (Choose three.)
- Segment 1
- **Segment 2**
- Segment 3
- Segment 4
- **Segment 5**
- **Segment 6**

15. Refer to the exhibit. Which two facts can be determined about the topology? (Choose two.)
- Three networks are needed.
- **Two logical address ranges are required.**
- **A single broadcast domain is present.**
- Three collision domains are present.
- Four networks are needed.

16. Refer to the exhibit. Which three statements are true about the IP configuration that is displayed? (Choose three.)
- **The assigned address is a private address.**
- The PC cannot communicate with the DNS server.
- The network can have 126 hosts.
- **The prefix of the computer address is /26.**
- The IP address is routable on the Internet.
- The IP address is a multicast address.

17. Which password restricts Telnet access to the router?
- enable
- enable secret
- console
- VTY

18. Refer to the exhibit. To create the initial configuration, a network technician connected host A to the router using the connection that is shown. Which statement is true about this connection?
- It terminates at the Ethernet port of the router.
- It provides out-of-band console access.
- It terminates at the serial interface of the router.
- It requires a Telnet client on host A to access the router.

19. Which device should be used for routing a packet to a remote network?
- access switch
- DHCP server
- hub
- router

20. Refer to the exhibit. The serial interface of the router was configured with the use of the commands that are shown. The router cannot ping the router that is directly connected to interface serial 0/0/0. What should the network technician do to solve this problem?
- Configure the description at interface serial 0/0/0.
- Configure an IP address on interface serial 0/0/0.
- Remove the no shutdown command at interface serial 0/0/0
- Reboot the router.

21. Refer to the exhibit. In a network, host A is sending data segments to host B. The flow control of the segments that are being exchanged is displayed. Which two statements are true about this communication? (Choose two.)
- The initial window size is determined via the two-way handshake.
- The window size for the TCP session that is represented is initially set to 3000 bytes.
- Acknowledgment number 3001 indicates that host A will send the next segment with sequence number 3001.
- Host B expects that the next received segment number will be 3000.
- No more acknowledgments will be exchanged.

22. Refer to the exhibit. The network administrator wants to remotely access the CLI of the router from PC1 using modem 1. Which port of the router should be connected to modem 2 to enable this access?
- console
- Ethernet
- auxiliary
- serial

23. Which OSI layer uses a connection-oriented protocol to ensure reliable delivery of data?
- application layer
- presentation layer
- session layer
- transport layer

24. What are two functions of the data link layer? (Choose two.)
- It segments and reorders the data.
- It exchanges data between programs that are running on the source and destination hosts.
- It controls how data is placed onto the media.
- It generates signals to represent the bits in each frame.
- It encapsulates each packet with a header and a trailer to transfer it across the local media.

25. Refer to the exhibit. Which list refers only to end devices?
- D,E,F,G
- A,H,B,C
- A,D,E,F
- A,D,E,G

26. Refer to the exhibit. The diagram represents the process of sending e-mail between clients. Which list correctly identifies the component or protocol used at each numbered stage of the diagram?
- 1.MUA 2.MDA 3.MTA 4.SMTP 5.MTA 6.POP 7.MDA 8.MUA
- 1.MUA 2.POP 3.MDA 4.SMTP 5.MTA 6.MDA 7.SMTP 8.MUA
- 1.MUA 2.POP 3.SMTP 4.MDA 5.MTA 6.SMTP 7.POP 8.MUA
- 1.MUA 2.SMTP 3.MTA 4.SMTP 5.MTA 6.MDA 7.POP 8.MUA

27. Refer to the exhibit. Host B was powered off. What change will occur in the MAC table of the switch?
- The table will remain unaffected.
- The switch will remove the MAC address at Fa 0/19 immediately.
- The switch will retain the MAC address until host B is powered on again.
- The switch will rebuild the MAC table by assigning the FFFF.FFFF.FFFF address to port Fa0/19.

28. Refer to the exhibit. A technician has connected the PC to the switch using a Category 6 UTP cable. Which two statements are true about this connection? (Choose two.)
- The cable that is used is an Ethernet crossover cable.
- The transmit pin of the cable is terminated to the receive pin.
- The maximum distance between the switch and the PC can be 100 m.
- The maximum supported bandwidth is 1000 Mb/s.

- The Category 6 cable simulates a point-to-point WAN link and is unusable for this type of connection.

29. Refer to the exhibit. A host is using NAT to connect to the Internet. Which three IP addresses enable this connection? (Choose three.)
- 10.1.1.63
- 10.1.1.37
- 10.1.1.39
- 10.1.1.32
- 10.1.1.60
- 10.1.1.2

30. Refer to the exhibit. A PC is communicating with another PC on a remote network. The two networks are connected by three routers. Which action will help to identify the path between the hosts?
- Use the ipconfig command at the host.
- Use the ipconfig/all command at the destination.
- Use the tracert command at the host.
- Use the ping command at the destination.

31. An organization wants to create a subnet of the IP network 172.16.0.0. This subnet will accommodate 1000 hosts. Which subnet mask should be assigned to this network?
- 255.255.0.0
- 255.255.248.0
- 255.255.252.0
- 255.255.254.0
- 255.255.255.0
- 255.255.255.128

32. Refer to the exhibit. A host is connected to hub 1. Which combination of IP address, subnet mask, and default gateway can allow this host to function in the network?
- IP address: 172.16.31.36 Subnet mask: 255.255.255.240 Default gateway: 172.16.31.35
- IP address: 172.16.31.63 Subnet mask: 255.255.255.224 Default gateway: 172.16.31.35
- IP address: 172.16.31.29 Subnet mask: 255.255.255.248 Default gateway: 172.16.31.35
- IP address: 172.16.31.32 Subnet mask: 255.255.255.224 Default gateway: 172.16.31.35
- IP address: 172.16.31.29 Subnet mask: 255.255.255.240 Default gateway: 172.16.30.1
- IP address: 172.16.31.37 Subnet mask: 255.255.255.224 Default gateway: 172.16.31.35

33. Refer to the exhibit. A technician uses the nslookup command on the PC and views the output that is displayed in the exhibit. What is the IP address of the primary domain name server configured at the host? (Choose two.)
- 192.168.1.99
- 192.168.2.100
- 10.10.10.32
- 192.168.1.5

- the IP address of the website resolver1.xyz.local

34. Which OSI layer offers ordered data reconstruction services?
- application layer
- network layer
- presentation layer
- session layer
- **transport layer**

35. Refer to the exhibit. All devices in the network use default configurations. How many logical address ranges are required in this topology?
- 2
- 3
- 4
- **5**
- 6

36. The network administrator wants to install a private application on a server. Which range of port numbers is normally assigned to this application to make it accessible by clients?
- 0 to 255
- 49152 to 65535
- 1024 to 4915
- **10 to 1023**

37. Because of a security violation, the router password must be changed. What information can be learned from these configuration entries? (Choose two.)
Router(config)# line vty 0 4
Router(config-line)# password arj15
Router(config-line)# login

- This configuration allows users to connect by using a modem.
- Users must specify which line, 0 or 4, they wish to connect to when making a connection.
- **This configuration allows users to connect to the router via the use of the telnet command.**
- **This configuration allows five users to make simultaneous connections to this router.**
- The configured password is automatically encrypted on the router.

38. Refer to the exhibit. Each media link is labeled. What type of cable should be used to connect the different devices?
- Connection 1 - rollover cable Connection 2 - straight-through cable Connection 3 - crossover cable
- Connection 1 - straight-through cable Connection 2 - crossover cable Connection 3 - rollover cable

- Connection 1 - crossover cable Connection 2 - rollover cable Connection 3 - straight-through cable
- Connection 1 - crossover cable Connection 2 - straight-through cable Connection 3 - rollover cable
- **Connection 1 - straight-through cable Connection 2 - straight-through cable Connection 3 - straight-through cable**

39. Which two types of media are useful for connecting two devices separated by a distance of 500 meters? (Choose two.)
- 10 BASE-T
- **1000 BASE-TX**
- 10 BASE-2
- 1000 BASE LX
- **1000 BASE-SX**

40. Which information is used by the router to determine the path between the source and destination hosts?
- the host portion of the IP address
- **the network portion of the IP address**
- host default gateway address
- the MAC address

41. Refer to the exhibit. What two facts can be determined from the session information that is displayed? (Choose two.)
- This exchange is part of the three-way handshake.
- **The destination port indicates that a Telnet session has been initiated.**
- The source port does not support communication with the destination port that is listed.
- The destination port indicates that an SMTP session has been initiated.
- **The protocol is a connection-oriented protocol.**

42. Refer to the exhibit. Host A is accessing multiple servers. Which combination of port number and address will uniquely identify a particular process running on a specific server?
- MAC address of the server and port number of the service
- IP address of the host and port number of the service
- MAC address of the host and port number of the service
- **IP address of the server and port number of the service**

43. A network technician wants to configure an IP address on a router interface by using the ip address 192.168.1.0 255.255.255.0 command. Which prompt should the technician see when entering this command?
- Router>
- **Router(config-if)#**
- Router#
- Router(config)#

44. Refer to the exhibit. Host X is unable to communicate with host Y. Which command can be run at host X to determine which intermediary device is responsible for this failure?
- telnet 192.168.1.1
- ping 192.168.1.1
- ftp 192.168.1.1
- **tracert 192.168.1.1**

45. Refer to the exhibit. In a network, PC1 sends a message to PC2. The frame received at PC2 is shown. What information in this frame determines the correct destination application?
- timing and synchronization bits
- destination and source physical addresses
- destination and source logical network addresses
- **destination and source process numbers**

46. An organization has been assigned network ID 10.10.128.0 and subnet mask 255.255.224.0. Which IP address range can be used for this organization?
- 10.10.128.0 to 10.10.160.255
- **10.10.128.0 to 10.10.159.255**
- 10.10.128.0 to 10.10.192.255
- 10.10.128.0 to 10.10.0.159
- 10.10.128.0 to 10.10.159.0

47. What is the effect of using the Router# copy running-config startup-config command on a router?
- The contents of ROM will change.
- The contents of RAM will change.
- **The contents of NVRAM will change.**
- The contents of flash will change.

48. Which three IPv4 addresses represent valid host addresses for a subnet? (Choose three.)
- 10.1.12.79/28
- **10.1.12.113/28**
- 10.1.12.32/28
- **10.1.11.5/27**
- **10.1.11.97/27**
- 10.1.11.128/27

49. Refer to the exhibit. The NAT functionality of the router is enabled to provide Internet access to the PC. However, the PC is still unable to access the Internet. Which IP address should be changed to 209.165.201.1 to enable the PC to access the Internet?
- 192.168.1.191
- 192.168.1.101
- 192.168.1.1

- 192.168.1.254

50. Which three statements are true about network layer addressing? (Choose three.)
- It uniquely identifies each host.
- It assists in forwarding packets across internetworks.
- It uses a logical 32-bit IPv4 address.
- It is not a configurable address.
- It is a physical address.
- It identifies the host from the first part of the address.