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Exam : 640-822

Title : Interconnecting Cisco Networking Devices Part 1

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QUESTION 1

The junior network support staff provided the diagram as a recommended configuration for the first phase of a four-phase network expansion project. The entire network expansion will have over 1000 users on 14 network segments and has been allocated this IP address space:

192.168.1.1 through 192.168.5.255

192.168.100.1 through 198.168.100.255

What are three problems with this design? (Choose three.)

- A. The AREA 1 IP address space is inadequate for the number of users.
- B. The AREA 3 IP address space is inadequate for the number of users.
- C. AREA 2 could use a mask of /25 to conserve IP address space.
- D. The network address space that is provided requires a single network-wide mask.
- E. The router-to-router connection is wasting address space.
- F. The broadcast domain in AREA 1 is too large for IP to function.

Answer: A, C, E

QUESTION 2

A network administrator is connecting PC hosts A and B directly through their Ethernet interfaces as shown in the graphic. Ping attempts between the hosts are unsuccessful.

What can be done to provide connectivity between the hosts? (Choose two.)

- A. A crossover cable should be used in place of the straight-through cable.
- B. A rollover cable should be used in place of the straight-through cable
- C. The subnet masks should be set to 255.255.255.192.
- D. A default gateway needs to be set on each host.
- E. The hosts must be reconfigured to use private IP addresses for direct connections of this type.
- F. The subnet masks should be set to 255.255.255.0.

Answer: A, F

QUESTION 3

Why would a network administrator configure port security on a switch?

- A. to prevent unauthorized Telnet access to a switch port
- B. to limit the number of Layer 2 broadcasts on a particular switch port
- C. to prevent unauthorized hosts from accessing the LAN
- D. to protect the IP and MAC address of the switch and associated ports
- E. to block unauthorized access to the switch management interfaces over common TCP ports

Answer: C

QUESTION 4

Which two statements best describe the wireless security standard that is defined by WPA? (Choose two.)

- A. It specifies use of a static encryption key that must be changed frequently to enhance security.
- B. It requires use of an open authentication method.
- C. It specifies the use of dynamic encryption keys that change each time a client establishes a connection.
- D. It requires that all access points and wireless devices use the same encryption key.
- E. It includes authentication by PSK.

Answer: C, E

QUESTION 5

The two connected ports on the switch are not turning orange or green. What would be the most effective steps to troubleshoot this physical layer problem? (Choose three.)

- A. Ensure that the Ethernet encapsulations match on the interconnected router and switch ports.
- B. Ensure that cables A and B are straight-through cables.
- C. Ensure cable A is plugged into a trunk port.
- D. Ensure the switch has power.
- E. Reboot all of the devices.
- F. Reseat all cables.

Answer: B, D, F

QUESTION 6

Host A needs to send data to Host B. Which Layer 2 and Layer 3 destination addresses will be used to send the data from Host A to Host B?

- A. 192.168.60.5 and 0011.43da.2c98
- B. 192.168.60.5 and 0007.0e56.ab2e
- C. 192.168.24.1 and 0007.0e56.ab2e
- D. 192.168.24.2 and 0007.0e84.acef

Answer: B

QUESTION 7

The IP address space of 128.107.7.0/24 has been allocated for all devices on this network. All devices must use the same subnet mask and all subnets are usable.

Which subnet mask is required to apply the allocated address space to the configuration that is shown?

- A. 255.255.254.0
- B. 255.255.255.0
- C. 255.255.255.128
- D. 255.255.255.192
- E. 255.255.255.224

Answer: D

QUESTION 8

Which two statements describe the operation of the CSMA/CD access method? (Choose two.)

- A. In a CSMA/CD collision domain, multiple stations can successfully transmit data simultaneously.
- B. In a CSMA/CD collision domain, stations must wait until the media is not in use before transmitting.
- C. The use of hubs to enlarge the size of collision domains is one way to improve the operation of the CSMA/CD access method.
- D. After a collision, the station that detected the collision has first priority to resend the lost data.
- E. After a collision, all stations run a random backoff algorithm. When the backoff delay period has expired, all stations have equal priority to transmit data.
- F. After a collision, all stations involved run an identical backoff algorithm and then synchronize with each other prior to transmitting data.

Answer: B, E

QUESTION 9

What two facts can be determined from the WLAN diagram? (Choose two.)

- A. The area of overlap of the two cells represents a basic service set (BSS).
- B. The network diagram represents an extended service set (ESS).
- C. Access points in each cell must be configured to use channel 1.
- D. The area of overlap must be less than 10% of the area to ensure connectivity.
- E. The two APs should be configured to operate on different channels.

Answer: B, E

QUESTION 10

Assuming a subnet mask of 255.255.248.0, which three addresses are valid host addresses? (Choose three.)

- A. 172.16.8.0
- B. 172.16.9.0
- C. 172.16.16.0
- D. 172.16.20.0
- E. 172.16.24.0
- F. 172.16.31.0

Answer: B, D, F

QUESTION 11

A technician pastes the configurations in the exhibit into the two new routers shown. Otherwise,

the routers are configured with their default configurations. A ping from Host1 to Host2 fails, but the technician is able to ping the S0/0 interface of R2 from Host1. The configurations of the hosts have been verified as correct. What could be the cause of the problem?

- A. The serial cable on R1 needs to be replaced.
- B. The interfaces on R2 are not configured properly.
- C. R1 has no route to the 192.168.1.128 network.
- D. The IP addressing scheme has overlapping subnetworks.
- E. The ip subnet-zero command must be configured on both routers.

Answer: C

QUESTION 12

Which form of NAT maps multiple private IP addresses to a single registered IP address by using different ports?

- A. static NAT
- B. dynamic NAT
- C. overloading
- D. overlapping
- E. port loading

Answer: C

QUESTION 13

What should be part of a comprehensive network security plan?

- A. Allow users to develop their own approach to network security.
- B. Physically secure network equipment from potential access by unauthorized individuals.
- C. Encourage users to use personal information in their passwords to minimize the likelihood of passwords being forgotten.
- D. Delay deployment of software patches and updates until their effect on end-user equipment is well known and widely reported.
- E. Minimize network overhead by deactivating automatic antivirus client updates.

Answer: B

QUESTION 14

A single 802.11g access point has been configured and installed in the center of a square office. A few wireless users are experiencing slow performance and drops while most users are operating at peak efficiency. What are three likely causes of this problem? (Choose three.)

- A. mismatched TKIP encryption
- B. null SSID
- C. cordless phones
- D. mismatched SSID

- E. metal file cabinets
- F. antenna type or direction

Answer: C, E, F

QUESTION 15

What two actions must a router take in order to route incoming packets? (Choose two.)

- A. Identify the destination network address of each packet.
- B. Identify the source network address of each packet.
- C. Validate sources of routing information.
- D. Inspect the routing table to select the best path to the destination network address.
- E. Verify the receipt of routed packets by the next hop router.
- F. Inspect the ARP table to verify a legitimate source MAC address for each packet.

Answer: A, D

QUESTION 16

What is the effect of the configuration that is shown?

- A. It configures SSH globally for all logins.
- B. It tells the router or switch to try to establish an SSh connection first and if that fails to use Telnet.
- C. It configures the virtual terminal lines with the password 030752180500.
- D. It configures a Cisco network device to use the SSH protocol on incoming communications via the virtual terminal ports.
- E. It allows seven failed login attempts before the VTY lines are temporarily shutdown.

Answer: D

QUESTION 17

What are two recommended ways of protecting network device configuration files from outside network security threats? (Choose two.)

- A. Allow unrestricted access to the console or VTY ports.
- B. Use a firewall to restrict access from the outside to the network devices.
- C. Always use Telnet to access the device command line because its data is automatically encrypted.
- D. Use SSH or another encrypted and authenticated transport to access device configurations.
- E. Prevent the loss of passwords by disabling password encryption.

Answer: B, D

QUESTION 18

Which two statements describe the IP address 10.16.3.65/23? (Choose two.)

- A. The subnet address is 10.16.3.0 255.255.254.0.
- B. The lowest host address in the subnet is 10.16.2.1 255.255.254.0.
- C. The last valid host address in the subnet is 10.16.2.254 255.255.254.0
- D. The broadcast address of the subnet is 10.16.3.255 255.255.254.0.
- E. The network is not subnetted.

Answer: B, D

QUESTION 19

After the router interfaces shown in the diagram have been configured, it is discovered that hosts in the Branch LAN cannot access the Internet. Further testing reveals additional connectivity issues. What will fix this problem?

- A. Change the address of the Branch router LAN interface.
- B. Change the address of the Branch router WAN interface.
- C. Change the subnet mask of the HQ router LAN interface.
- D. Change the address of the HQ router LAN interface.
- E. Change the address of the HQ router interface to the Internet.
- F. Change the subnet mask of the HQ router interface to the Internet.

Answer: B

QUESTION 20

Serial0/0 does not respond to a ping request from a host on the FastEthernet0/0 LAN. How can this problem be corrected?

- A. Enable the Serial 0/0 interface.
- B. Correct the IP address for Serial 0/0.
- C. Correct the IP address for FastEthernet 0/0.
- D. Change the encapsulation type on Serial 0/0.
- E. Enable autoconfiguration on the Serial 0/0 interface.

Answer: A

QUESTION 21

A network device needs to be installed in the place of the icon labeled Network Device to accommodate a leased line attachment to the Internet. Which network device and interface configuration meets the minimum requirements for this installation?

- A. a router with two Ethernet interfaces
- B. a switch with two Ethernet interfaces
- C. a router with one Ethernet and one serial interface
- D. a switch with one Ethernet and one serial interface
- E. a router with one Ethernet and one modem interface

Answer: C

QUESTION 22

The network administrator is configuring RTA to connect to a non-Cisco network. Which two commands would be applied to the S0/0 WAN interface, but not to the Fa0/0 LAN interface? (Choose two.)

- A. speed
- B. no shutdown
- C. ip address
- D. authentication pap
- E. encapsulation ppp

Answer: D, E

QUESTION 23

At which layer of the OSI model does the protocol that provides the information displayed by the show cdp neighbors command operate?

- A. physical
- B. data link
- C. network
- D. transport
- E. application

Answer: B

QUESTION 24

The network shown in the exhibit is running the RIPv2 routing protocol. The network has converged, and the routers in this network are functioning properly.

The FastEthernet0/0 interface on R1 goes down. In which two ways will the routers in this network respond to this change? (Choose two.)

- A. All routers will reference their topology database to determine if any backup routes to the 192.168.1.0 network are known.
- B. Routers R2 and R3 mark the route as inaccessible and will not accept any further routing updates from R1 until their hold-down timers expire.
- C. Because of the split-horizon rule, router R2 will be prevented from sending erroneous information to R1 about connectivity to the 192.168.1.0 network.
- D. When router R2 learns from R1 that the link to the 192.168.1.0 network has been lost, R2 will respond by sending a route back to R1 with an infinite metric to the 192.168.1.0 network.
- E. R1 will send LSAs to R2 and R3 informing them of this change, and then all routers will send periodic updates at an increased rate until the network again converges.

Answer: C, D

QUESTION 25

Which of the following statements describe the network shown in the graphic? (Choose two.)

- A. There are two broadcast domains in the network.
- B. There are four broadcast domains in the network.
- C. There are six broadcast domains in the network.
- D. There are four collision domains in the network.
- E. There are five collision domains in the network.
- F. There are seven collision domains in the network.

Answer: A, F

QUESTION 26

The administrator is unable to establish connectivity between two Cisco routers. Upon reviewing the command output of both routers, what is the most likely cause of the problem?

- A. Authentication needs to be changed to PAP for both routers.
- B. Serial ip addresses of routers are not on the same subnet.
- C. Username/password is incorrectly configured.
- D. Router names are incorrectly configured.

Answer: C

QUESTION 27

Workstation A must be able to telnet to switch SW-A through router RTA for management purposes. What must be configured for this connection to be successful?

- A. VLAN 1 on RTA
- B. default gateway on SW-A
- C. IP routing on SW-A
- D. cross-over cable connecting SW-A and RTA

Answer: B

QUESTION 28

This graphic shows some common router ports. Which port can be used for a WAN T1 connection?

- A. AUI
- B. BRI
- C. Console
- D. Serial 0

Answer: D

QUESTION 29

The goal of this network design is to provide the most efficient use of IP address space in a network expansion. Each circle defines a network segment and the number of users required on that segment. An IP subnetwork number and default gateway address are shown for each segment.

What are three problems with the network design as shown? (Choose three.)

- A. Interface fa0/3 has an IP address that overlaps with network 10.1.1.0/30.
- B. Interface fa0/1 has an invalid IP address for the subnet on which it resides.
- C. Interface fa0/2 has an invalid IP address for the subnet on which it resides.
- D. Network 10.1.2.0/25 requires more user address space.
- E. Network 10.1.3.128/25 requires more user address space.
- F. The IP subnet 10.1.1.0/30 is invalid for a segment with a single server.

Answer: A, B, D

QUESTION 30

What kind of cable should be used to make each connection that is identified by the numbers shown?

- A. 1 - Ethernet crossover cable
2 - Ethernet straight-through cable
3 - fiber optic cable
4 - rollover cable
- B. 1 - Ethernet straight-through cable
2 - Ethernet straight-through cable
3 - serial cable
4 - rollover cable
- C. 1 - Ethernet rollover cable
2 - Ethernet crossover cable
3 - serial cable
4 - null modem cable
- D. 1 - Ethernet straight-through cable
2 - Ethernet crossover cable
3 - serial cable
4 - rollover cable
- E. 1 - Ethernet straight-through cable
2 - Ethernet crossover cable
3 - serial cable
4 - Ethernet straight-through cable

Answer: B

QUESTION 31

For security reasons, information about RTA, including platform and IP addresses, should not be accessible from the Internet. This information should, however, be accessible to devices on the

internal networks of RT

A. Which command or series of commands will accomplish these objectives?

- A. RTA(config)#no cdp run
- B. RTA(config)#no cdp enable
- C. RTA(config)#interface s0/0
RTA(config-if)#no cdp run
- D. RTA(config)#interface s0/0
RTA(config-if)#no cdp enable

Answer: D

QUESTION 32

Which of the following describe private IP addresses? (Choose two.)

- A. addresses chosen by a company to communicate with the Internet
- B. addresses that cannot be routed through the public Internet
- C. addresses that can be routed through the public Internet
- D. a scheme to conserve public addresses
- E. addresses licensed to enterprises or ISPs by an Internet registry organization

Answer: B, D

QUESTION 33

WAN data link encapsulation types include which of the following? (Choose two.)

- A. T1
- B. Frame Relay
- C. DSL
- D. PPP
- E. ISDN

Answer: B, D

QUESTION 34

A technician is testing connection problems in the internetwork. What is the problem indicated by the output from HostA?

- A. The routing on Router2 is not functioning properly.
- B. An access list is applied to an interface of Router3.
- C. The Fa0/24 interface of Switch1 is down.
- D. The gateway address of HostA is incorrect or not configured.

Answer: D

QUESTION 35

Which of the following are found in a TCP header, but not in a UDP header? (Choose three.)

- A. sequence number
- B. acknowledgment number
- C. source port
- D. destination port
- E. window size
- F. checksum

Answer: A, B, E

QUESTION 36

The Hub and Spoke routers are directly connected through their serial interfaces for purposes of testing. Based on the output shown in the exhibit, what must be done to make the serial line operational?

- A. Start the clock on the Hub router.
- B. Change the IP address on the Spoke router.
- C. Configure the serial 0/0 interface on the Spoke router with a clockrate.
- D. Replace the broken cable between the two devices.
- E. Use the no shutdown command on the Hub router.

Answer: C

QUESTION 37

What is the subnet address of 172.16.159.159/22?

- A. 172.16.0.0
- B. 172.16.128.0
- C. 172.16.156.0
- D. 172.16.159.0
- E. 172.16.159.128
- F. 172.16.192.0

Answer: C

QUESTION 38

What are two advantages of Layer 2 Ethernet switches over hubs? (Choose two.)

- A. decreasing the number of collision domains
- B. filtering frames based on MAC addresses
- C. allowing simultaneous frame transmissions
- D. increasing the size of broadcast domains
- E. increasing the maximum length of UTP cabling between devices

Answer: B, C

QUESTION 39

When files are transferred between a host and an FTP server, the data is divided into smaller pieces for transmission. As these pieces arrive at the destination host, they must be reassembled to reconstruct the original file. What provides for the reassembly of these pieces into the correct order?

- A. the TTL in the IP header
- B. the frame check sequence in the Ethernet frame trailer
- C. the sequence number in the TCP header
- D. the Start Frame Delimiter in the 802.3 Preamble
- E. the acknowledgement number in the segment header

Answer: C

QUESTION 40

Which of the following are types of flow control? (Choose three.)

- A. buffering
- B. cut-through
- C. windowing
- D. congestion avoidance
- E. load balancing

Answer: A, C, D

QUESTION 41

SwitchA receives the frame with the addressing shown.

According to the command output also shown in the exhibit, how will SwitchA handle this frame?

- A. It will drop the frame.
- B. It will forward the frame out port Fa0/3 only.
- C. It will flood the frame out all ports.
- D. It will flood the frame out all ports except Fa0/3.

Answer: D

QUESTION 42

What data structure is described in the graphic?

- A. FDDI frame
- B. Token Ring frame
- C. Ethernet frame
- D. IP datagram

- E. TCP segment
- F. UDP datagram

Answer: E

QUESTION 43

What is the purpose of a default route?

- A. It is a route to be used when the routing protocol fails.
- B. It is a route configured by an ISP that sends traffic into a corporate network.
- C. It is a route used when a packet is destined for a remote network that is not listed in the routing table.
- D. It is a route manually configured for a specific remote network for which a routing protocol is not configured.
- E. It is used to send traffic to a stub network.

Answer: C

QUESTION 44

If an ethernet port on a router was assigned an IP address of 172.16.112.1/20, what is the maximum number of hosts allowed on this subnet?

- A. 1024
- B. 2046
- C. 4094
- D. 4096
- E. 8190

Answer: C

QUESTION 45

What value should be displayed in Box 1 of the ipconfig output of host A?

- A. 172.18.14.5
- B. 172.18.14.6
- C. 192.168.1.10
- D. 192.168.1.11
- E. 192.168.1.250
- F. 192.168.1.254

Answer: F

QUESTION 46

The RIP network shown in the graphic has been fully operational for two days. Each routing table is complete. Which networks will be included in the next routing update from the Apples router to the Pears router?

- A. A,B,C,D,E,F
- B. A,C
- C. A,B,C,D
- D. B,D
- E. D,E,F
- F. A,B,C

Answer: F

QUESTION 47

Which types of cables are required to interconnect the devices shown in the graphic? (Choose three.)

- A. V.35 cable
- B. crossover cable
- C. USB cable
- D. RJ-11 cable
- E. rollover cable
- F. straight-through cable

Answer: B, E, F

QUESTION 48

The internetwork is using subnets of the address 192.168.1.0 with a subnet mask of 255.255.255.224. The routing protocol in use is RIP version 1. Which address could be assigned to the FastEthernet interface on RouterA?

- A. 192.168.1.31
- B. 192.168.1.64
- C. 192.168.1.127
- D. 192.168.1.190
- E. 192.168.1.192

Answer: D

QUESTION 49

A person is trying to send a file from a host on Network A of the JAX Company to a server on Network Z of the XYZ Company. The file transfer fails. The host on Network A can communicate with other hosts on Network

A. Which command, issued from router RTA, would be the most useful for troubleshooting this problem?

- A. show flash:
- B. show history
- C. show version

- D. show interfaces
- E. show controllers serial

Answer: D

QUESTION 50

Host A has been added to the network. Which type of cable should be used between Switch2 and host A?

- A. console cable
- B. rollover cable
- C. straight-through cable
- D. crossover cable

Answer: C

QUESTION 51

What is the effect of using the service password-encryption command?

- A. Only the enable password will be encrypted.
- B. Only the enable secret password will be encrypted.
- C. Only passwords configured after the command has been entered will be encrypted.
- D. It will encrypt the secret password and remove the enable secret password from the configuration.
- E. It will encrypt all current and future passwords.

Answer: E

QUESTION 52

Which command will set the default gateway to 192.168.12.1 on a Cisco switch?

- A. Switch(config)# ip default-network 192.168.12.1
- B. Switch(config)# ip route-default 192.168.12.1
- C. Switch(config)# ip default-gateway 192.168.12.1
- D. Switch(config)# ip route 192.168.12.1 0.0.0.0

Answer: C

QUESTION 53

What types of cables are recommended to make the connections that are shown?

- A. A-straight-through
- B. straight-through
- C. rollover
- D. straight-through
- E. straight-through

- B. A-rollover
- B-straight-through
- C-straight-through
- D-rollover
- E-crossover
- C. A-crossover
- B-straight-through
- C-rollover
- D-straight-through
- E-straight-through
- D. A-crossover
- B-straight-through
- C-crossover
- D-straight-through
- E-crossover
- E. A-straight-through
- B-crossover
- C-rollover
- D-straight-through
- E-straight-through

Answer: C

QUESTION 54

From where does a small network get its IP network address?

- A. Internet Assigned Numbers Authority (IANA)
- B. Internet Architecture Board (IAB)
- C. Internet Service Provider (ISP)
- D. Internet Domain Name Registry (IDNR)

Answer: C

QUESTION 55

The system LED is amber on a Cisco Catalyst 2950 series switch. What does this indicate?

- A. The system is malfunctioning.
- B. The system is not powered up.
- C. The system is powered up and operational.
- D. The system is forwarding traffic.
- E. The system is sensing excessive collisions.

Answer: A

QUESTION 56

What are two recommended ways of protecting network device configuration files from outside

network security threats? (Choose two.)

- A. Allow unrestricted access to the console or VTY ports.
- B. Use a firewall to restrict access from the outside to the network devices.
- C. Always use Telnet to access the device command line because its data is automatically encrypted.
- D. Use SSH or another encrypted and authenticated transport to access device configurations.
- E. Prevent the loss of passwords by disabling password encryption.

Answer: B, D

QUESTION 57

Which type of attack is characterized by a flood of packets that are requesting a TCP connection to a server?

- A. denial of service
- B. brute force
- C. reconnaissance
- D. Trojan horse

Answer: A

QUESTION 58

Why was this message received?

- A. No VTY password has been set.
- B. No enable password has been set.
- C. No console password has been set.
- D. No enable secret password has been set.
- E. The login command has not been set on CON 0.
- F. The login command has not been set on the VTY ports.

Answer: A

QUESTION 59

Which command is used on a Cisco router to reach the global configuration mode?

- A. Router> enable
- B. Router# router
- C. Router# setup
- D. Router# interface
- E. Router# configure terminal

Answer: E

QUESTION 60

This graphic shows some common router ports. Which port can be used for a WAN T1 connection?

- A. AUI
- B. BRI
- C. Console
- D. Serial 0

Answer: D

QUESTION 61

How many collision domains are shown?

- A. one
- B. two
- C. three
- D. four
- E. six
- F. fourteen

Answer: B

QUESTION 62

Two buildings on the San Jose campus of a small company must be connected to use Ethernet with a bandwidth of at least 100 Mbps.

The company is concerned about possible problems from voltage potential differences between the two buildings. Which media type should be used for the connection?

- A. UTP cable
- B. STP cable
- C. coaxial cable
- D. fiber optic cable

Answer: D

QUESTION 63

A network administrator is troubleshooting a connectivity problem on the serial interfaces. The output from the show interfaces command on both routers shows that the serial interface is up, line protocol is down. Given the partial output for the show running-config in the exhibit, what is the most likely cause of this problem?

- A. The serial cable is bad.
- B. The MTU is incorrectly configured.
- C. The Layer 2 framing is misconfigured.

D. The IP addresses are not in the same subnet.

Answer: C

QUESTION 64

Three access points have been installed and configured to cover a small office. What term defines the wireless topology?

- A. BSS
- B. IBSS
- C. ESS
- D. SSID

Answer: C

QUESTION 65

A single 802.11g access point has been configured and installed in the center of a square office. A few wireless users are experiencing slow performance and drops while most users are operating at peak efficiency. What are three likely causes of this problem? (Choose three.)

- A. mismatched TKIP encryption
- B. null SSID
- C. cordless phones
- D. mismatched SSID
- E. metal file cabinets
- F. antenna type or direction

Answer: C, E, F

QUESTION 66

A network administrator is having difficulty in establishing a serial link between a Cisco router and a router from another vendor. Both routers are configured for HDLC encapsulation. Which statements are true regarding this configuration? (Choose two.)

- A. The Cisco HDLC frame uses a proprietary "Type" field that may not be compatible with equipment of other vendors.
- B. HDLC requires a clock rate to be configured on the routers at both ends of the serial link.
- C. PPP encapsulation is recommended for serial links between equipment from multiple vendors.
- D. Usernames must be configured at both ends of the HDLC serial link
- E. The HDLC vendor type must be enabled on the Cisco router.
- F. There is a mismatch in the HDLC authentication password configurations.

Answer: A, C

QUESTION 67

What is needed to allow host A to ping host B?

- A. a straight-through cable connecting the switches
- B. a crossover cable connecting the switches
- C. a router connected to the switches with straight-through cables
- D. a CSU/DSU connected to the switches with straight-through cables
- E. a backbone switch connecting the switches with either fiber optic or straight-through cables

Answer: C

QUESTION 68

As packets travel from Mary to Robert, which three devices will use the destination MAC address of the packet to determine a forwarding path? (Choose three.)

- A. Hub1
- B. Switch1
- C. Router1
- D. Switch2
- E. Router2
- F. Switch3

Answer: B, D, F

QUESTION 69

Which of the following protocols uses both TCP and UDP ports?

- A. FTP
- B. SMTP
- C. Telnet
- D. DNS

Answer: D

QUESTION 70

Host A needs to communicate with the email server shown in the graphic. What address will be placed in the destination address field of the frame when it leaves Host A?

- A. the MAC address of Host A
- B. the MAC address of Switch 1
- C. the MAC address of E0 of the router
- D. the MAC address of E1 of the router
- E. the MAC address of Switch 2
- F. the MAC address of the email server

Answer: C

QUESTION 71

Which encryption type does WPA2 use?

- A. AES-CCMP
- B. PPK via IV
- C. PSK
- D. TKIP/MIC

Answer: A

QUESTION 72

After configuring two interfaces on the HQ router, the network administrator notices an error message. What must be done to fix this error?

- A. The serial interface must be configured first.
- B. The serial interface must use the address 192.168.1.2.
- C. The subnet mask of the serial interface should be changed to 255.255.255.0.
- D. The subnet mask of the FastEthernet interface should be changed to 255.255.255.240.
- E. The address of the FastEthernet interface should be changed to 192.168.1.66.

Answer: D

QUESTION 73

Which IP address is a private address?

- A. 12.0.0.1
- B. 168.172.19.39
- C. 172.20.14.36
- D. 172.33.194.30
- E. 192.169.42.34

Answer: C

QUESTION 74

A network administrator has subnetted the 172.16.0.0 network using a subnet mask of 255.255.255.192. A duplicate IP address of 172.16.2.120 has accidentally been configured on a workstation in the network. The technician must assign this workstation a new IP address within that same subnetwork. Which address should be assigned to the workstation?

- A. 172.16.1.80
- B. 172.16.2.80
- C. 172.16.1.64
- D. 172.16.2.64
- E. 172.16.2.127
- F. 172.16.2.128

Answer: B

QUESTION 75

Host A is communicating with the server. What will be the source MAC address of the frames received by Host A from the server?

- A. the MAC address of router interface e0
- B. the MAC address of router interface e1
- C. the MAC address of the server network interface
- D. the MAC address of host A

Answer: A

QUESTION 76

The DHCP settings have recently been changed on the DHCP server and the client is no longer able to reach network resources. What should be done to correct this situation?

- A. Verify that the DNS server address is correct in the DHCP pool.
- B. Ping the default gateway to populate the ARP cache.
- C. Use the tracert command on the DHCP client to first determine where the problem is located.
- D. Clear all DHCP leases on the router to prevent address conflicts.
- E. Issue the ipconfig command with the /release and /renew options in a command window.

Answer: E

QUESTION 77

Switch-1 needs to send data to a host with a MAC address of 00b0.d056.efa4. What will Switch-1 do with this data?

- A. Switch-1 will drop the data because it does not have an entry for that MAC address.
- B. Switch-1 will flood the data out all of its ports except the port from which the data originated.
- C. Switch-1 will send an ARP request out all its ports except the port from which the data originated.
- D. Switch-1 will forward the data to its default gateway.

Answer: B

QUESTION 78

Host A sends a data frame to host D. What will the switch do when it receives the frame from host A?

- A. The switch will add the source address and port to the MAC address table and forward the frame to host D.
- B. The switch will discard the frame and send an error message back to host A.
- C. The switch will flood the frame out of all ports except for port Fa0/3.

D. The switch will add the destination address of the frame to the MAC address table and forward the frame to host D.

Answer: A

QUESTION 79

By which prompt is the global configuration mode on a Cisco router identified?

- A. Router>
- B. Router#
- C. Router(config)#
- D. Router(config-if)#
- E. Router(config-line)#
- F. Router(config-router)#

Answer: C

QUESTION 80

How many simultaneous Telnet sessions does a Cisco router support by default?

- A. 1
- B. 2
- C. 3
- D. 4
- E. 5
- F. 6

Answer: E

QUESTION 81

What does the "Inside Global" address represent in the configuration of NAT?

- A. the summarized address for all of the internal subnetted addresses
- B. the MAC address of the router used by inside hosts to connect to the Internet
- C. a globally unique, private IP address assigned to a host on the inside network
- D. a registered address that represents an inside host to an outside network

Answer: D

QUESTION 82

HostA cannot ping HostB. Assuming routing is properly configured, what could be the cause of this problem?

- A. HostA is not on the same subnet as its default gateway.
- B. The address of SwitchA is a subnet address.
- C. The Fa0/0 interface on RouterA is on a subnet that can't be used.

- D. The serial interfaces of the routers are not on the same subnet.
- E. The Fa0/0 interface on RouterB is using a broadcast address.

Answer: D

QUESTION 83

Host A has established a communication session with host B for the first time. What enabled R1 to forward this traffic in the appropriate direction to reach the network to which host B is attached?

- A. DNS
- B. DHCP
- C. TCP/IP
- D. a Layer 4 protocol
- E. a routing protocol
- F. a default gateway

Answer: E

QUESTION 84

What are two effects on network performance of configuring a switch to store an entire frame before forwarding it to the destination? (Choose two.)

- A. increase in switch operating speed
- B. increased latency
- C. filtering of all frame errors
- D. filtering of collision fragments only
- E. propagation of corrupted or damaged frames
- F. decreased latency

Answer: B, C

QUESTION 85

What could be possible causes for the "Serial0/0 is down" interface status? (Choose two.)

- A. A Layer 1 problem exists.
- B. The bandwidth is set too low.
- C. A protocol mismatch exists.
- D. An incorrect cable is being used.
- E. There is an incorrect IP address on the Serial 0/0 interface.

Answer: A, D

QUESTION 86

Which statements are true regarding ICMP packets? (Choose two.)

- A. They acknowledge receipt of TCP segments.

- B. They guarantee datagram delivery.
- C. They can provide hosts with information about network problems.
- D. They are encapsulated within IP datagrams.
- E. They are encapsulated within UDP datagrams.

Answer: C, D

QUESTION 87

Construct the command sequence to configure an IP address on a serial interface.

Hub# interface s0/0	enter global configuration mode
Hub(config)# interface s0/0	enter interface configuration mode
Hub(config-if)# no shutdown	configure the interface IP address
Hub(config)# ip address 172.16.20.21 255.255.255.0	enable the interface
Hub(config-if)# ip address 10.9.5.255 255.255.252.0	label the interface
Hub(config-if)# enable interface	
Hub(config-if)# ip address 198.18.2.63 255.255.255.224	
Hub(config-if)# description T1 to WAN	
Hub(config)# banner motd ! T1 to WAN !	
Hub# configure terminal	

Answer:

Hub# interface s0/0	Hub# configure terminal
Hub(config)# interface s0/0	Hub(config)# interface s0/0
Hub(config-if)# no shutdown	Hub(config-if)# ip address 10.8.5.255 255.255.252.0
Hub(config)# ip address 172.16.20.21 255.255.255.0	Hub(config-if)# no shutdown
Hub(config-if)# ip address 10.8.5.255 255.255.252.0	Hub(config-if)# description T1 to WAN
Hub(config-if)# enable interface	
Hub(config-if)# ip address 198.18.2.63 255.255.255.224	
Hub(config-if)# description T1 to WAN	
Hub(config)# banner motd ! T1 to WAN !	
Hub# configure terminal	

QUESTION 88

What value should be displayed in Box 1 of the ipconfig output of host A?

- A. 172.18.14.5
- B. 172.18.14.6
- C. 192.168.1.10
- D. 192.168.1.11
- E. 192.168.1.250
- F. 192.168.1.254

Answer: F

QUESTION 89

Which line from the output of the show ip interface command indicates that there is a Layer 1

problem?

- A. Serial0/1 is up, line protocol is up
- B. Serial0/1 is up, line protocol is down
- C. Serial0/1 is down, line protocol is down
- D. Serial0/1 is administratively down, line protocol is down

Answer: C

QUESTION 90

Which statement describes the operational state of the FastEthernet 0/0 interface?

- A. The interface is generating protocol errors.
- B. The interface has failed because of a media error.
- C. The interface is operational and currently handling traffic.
- D. The interface requires a no shutdown command to be issued.

Answer: C

QUESTION 91

What is the purpose of flow control?

- A. to ensure data is retransmitted if an acknowledgment is not received
- B. to reassemble segments in the correct order at the destination device
- C. to provide a means for the receiver to govern the amount of data sent by the sender
- D. to regulate the size of each segment

Answer: C

QUESTION 92

Two routers named Atlanta and Brevard are connected by their serial interfaces as shown in the exhibit, but there is no data connectivity between them. The Atlanta router is known to have a correct configuration. Given the partial configurations shown in the exhibit, what is the problem on the Brevard router that is causing the lack of connectivity?

- A. A loopback is not set.
- B. The IP address is incorrect.
- C. The subnet mask is incorrect.
- D. The serial line encapsulations are incompatible.
- E. The maximum transmission unit (MTU) size is too large.
- F. The bandwidth setting is incompatible with the connected interface.

Answer: B

QUESTION 93

Which three statements are true about the operation of a full-duplex Ethernet network? (Choose

three.)

- A. There are no collisions in full-duplex mode.
- B. A dedicated switch port is required for each full-duplex node.
- C. Ethernet hub ports are preconfigured for full-duplex mode.
- D. In a full-duplex environment, the host network card must check for the availability of the network media before transmitting.
- E. The host network card and the switch port must be capable of operating in full-duplex mode.

Answer: A, B, E

QUESTION 94

The router console screen is rapidly displaying line after line of output similar to what is shown in the exhibit. The help desk has called to say that users are reporting a slowdown in the network. What will solve this problem while not interrupting network operation?

- A. Save the configuration and reboot the router.
- B. Press the CTRL+C keys.
- C. Enter the no debug all command.
- D. Use the show processes command.
- E. Enter the terminal monitor command.

Answer: C

QUESTION 95

For security reasons, information about RTA, including platform and IP addresses, should not be accessible from the Internet. This information should, however, be accessible to devices on the internal networks of RT

A. Which command or series of commands will accomplish these objectives?

- A. RTA(config)#no cdp run
- B. RTA(config)#no cdp enable
- C. RTA(config)#interface s0/0
RTA(config-if)#no cdp run
- D. RTA(config)#interface s0/0
RTA(config-if)#no cdp enable

Answer: D

QUESTION 96

What is the result of adding this command to a router that is already configured for dynamic routing?

```
ip route 0.0.0.0 0.0.0.0 192.168.1.2
```

- A. It configures the router as a firewall, blocking all packets from IP address 192.168.1.2.

- B. It configures the router to block routing updates from being sent to IP address 192.168.1.2.
- C. It configures the router to drop all packets for which the destination network is unknown.
- D. It configures the router to send all packets to IP address 192.168.1.2.
- E. It configures the router to send all packets to IP address 192.168.1.2 if the packets match no other entry in the routing table.

Answer: E

QUESTION 97

A Cisco router and a Catalyst switch are connected as shown. The technician is working on a computer that is connected to the management console of the switch. In order to configure the default gateway for the switch, the technician needs to learn the IP address of the attached router interface. Which IOS command will provide this information in the absence of Layer 3 connectivity?

- A. ping router_ip_address
- B. ping switch_ip_address
- C. show ip rarp
- D. show cdp neighbors detail
- E. show ip neighbors
- F. show dhcp-config

Answer: D

QUESTION 98

Which of the following commands will configure a default route to any destination network not found in the routing table?

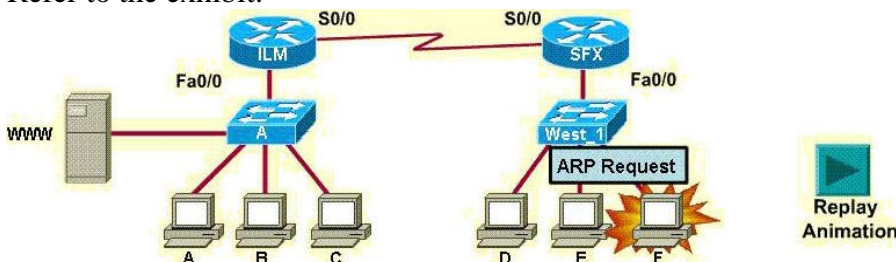
- A. Router(config)# ip default-route 0.0.0.0 255.255.255.255 s0
- B. Router(config)# ip route 0.0.0.0 255.255.255.255 s0
- C. Router(config)# ip default-route 0.0.0.0 s0
- D. Router(config)# ip route 0.0.0.0 0.0.0.0 s0
- E. Router(config)# ip route any any e0

Answer: D

Case Study # 1:

Scenario:

Refer to the exhibit.



Using the information shown, answer the following questions.

Case Study #1 (Questions 4)

QUESTION 99

In order to begin communicating with the server, host F sends out an ARP request. How will the devices exhibited in the topology respond to this request?

- A. Switch West_1 will reply with the MAC address of the server.
- B. Hosts D and E will respond that the destination is not on the local LAN.
- C. Router SFX will forward the ARP request to the ILM router.
- D. Switch West_1 will block the request since the server is not on the LAN.
- E. The ILM router will respond with the IP address of the WWW server.
- F. Router SFX will respond with the MAC address of its Fa0/0 interface.

Answer: F

QUESTION 100

The ARP reply has been received by host F, which needs to build the packet. What information will be placed in the header of the packet that leaves host F if host F is to communicate with the WWW server? (Choose two.)

- A. The destination address will be the IP address of interface Fa0/0 of the ILM router.
- B. The destination address will be the IP address of the WWW server.
- C. The destination address will be the IP address of interface Fa0/0 of router SFX.
- D. The source address will be the IP address of host F.
- E. The source address will be the IP address of interface Fa0/0 of router SFX.
- F. The destination address will be the IP address of interface Fa0/0 of router SFX.

Answer: B, D

QUESTION 101

The frame has been received by the ILM router and is to be delivered on the local LAN. Which two statements describe the addressing of the Ethernet frame that has been created by the ILM router? (Choose two.)

- A. The destination address will be the MAC address of the switch A port attached to the Fa0/0 interface of the ILM router.
- B. The destination address will be the MAC address of the WWW server.
- C. The destination address will be the MAC address of the A switch port attached to the WWW server.
- D. The source address will be the MAC address of host F.
- E. The source address will be the MAC address of interface Fa0/0 of the ILM router.
- F. The destination address will be the MAC address of the A switch port attached to the WWW server.

Answer: B, F

QUESTION 102

Host F is displaying two World Wide Web documents from the WWW server in two browser windows at the same time. How did the data find its way to the correct browser windows?

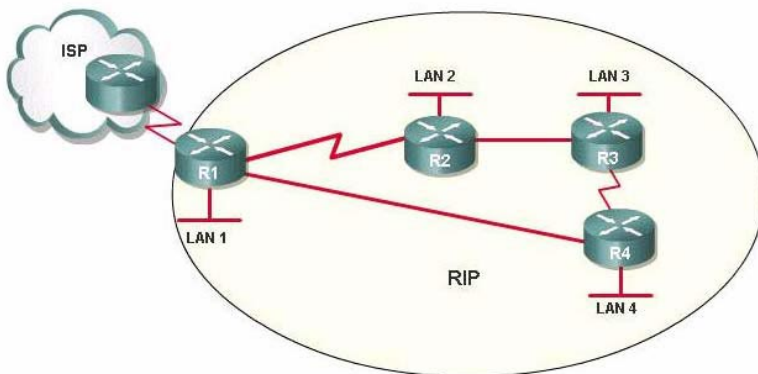
- A. The IP source addresses of the packets will be used to direct the data to the correct browser window.
- B. The browsers track the data by the URL.
- C. TCP port numbers are used to direct the data to the correct application window.
- D. The OSI application layer tracks the conversations and directs them to the correct browser.

Answer: D

Case Study # 2:

Scenario:

Refer to the topology.



Using the information shown, answer the following questions.

Case Study #2 (Questions 3):

QUESTION 103

On which router should a default route be configured?

- A. on the ISP router
- B. on R1
- C. on R2
- D. on R3
- E. on R4

Answer: B

QUESTION 104

With all links operational and all routers converged, which of the following describes the messaging between routers?

- A. Hellos are sent every five seconds.
- B. Multicasts are sent every 60 seconds.
- C. Broadcasts are sent every 30 seconds.
- D. No messaging unless the topology changes.

Answer: C

QUESTION 105

Which of the following describes the route update process if the interface from R4 connected to LAN 4 goes down?

- A. No updates occur
- B. R4 tells both R1 and R3 the network not accessible. Both R3 and R1 update R2.
- C. R4 tells only R1 the network is not accessible. R1 updates R2 and R2 updates R3.
- D. R4 tells only R3 the network is not accessible. R3 updates R2 and R2 updates R1.

Answer: B