**11** Refer to the graphic.



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**

**17** Refer to the exhibit.



Based on the information given, which switch will be elected root bridge and why?

**A.** Switch A, because it has the lowest MAC address

**B.** Switch A, because it is the most centrally located switch

**C.** Switch B, because it has the highest MAC address

**D.** Switch C, because it is the most centrally located switch

**E.** Switch C, because it has the lowest priority

**F.** Switch D, because it has the highest priority

**Answer: E**

**32** In a switched environment, what does the IEEE 802.1Q standard describe?

**A.** the operation of VTP

**B.** a method of VLAN trunking

**C.** an approach to wireless LAN communication

**D.** the process for root bridge selection

**E.** VLAN pruning

**Answer: B**

**45** Refer to the exhibit.



All switch ports are assigned to the correct VLANs, but none of the hosts connected to SwitchA can communicate with hosts in the same VLAN connected to SwitchB. Based on the output shown, what is the most likely problem?

**A.** The access link needs to be configured in multiple VLANs.

**B.** The link between the switches is configured in the wrong VLAN.

**C.** The link between the switches needs to be configured as a trunk.

**D.** VTP is not configured to carry VLAN information between the switches.

**E.** Switch IP addresses must be configured in order for traffic to be forwarded between the switches.

**Answer: C**

**58** What does a Layer 2 switch use to decide where to forward a received frame?

**A.** source MAC address

**B.** source IP address

**C.** source switch port

**D.** destination IP address

**E.** destination port address

**F.** destination MAC address

**Answer: F**

**61**Which command can be used from a PC to verify the connectivity between hosts that connect through a switch in the same LAN?

**A.** ping address

**B.** tracert address

**C.** traceroute address

**D.** arp address

**Answer: A**

**62** Based on the network shown in the graphic



Which option contains both the potential networking problem and the protocol or setting that should be used to prevent the problem?

**A.** routing loops, hold down timers

**B.** switching loops, split horizon

**C.** routing loops, split horizon

**D.** switching loops, VTP

**E.** routing loops, STP

**F.** switching loops, STP

**Answer: F**

**78** Three switches are connected to one another via trunk ports. Assuming the default switch configuration, which switch is elected as the root bridge for the spanning-tree instance of VLAN 1?

**A.** the switch with the highest MAC address

**B.** the switch with the lowest MAC address

**C.** the switch with the highest IP address

**D.** the switch with the lowest IP address

**Answer: B**

**84** You have been asked to come up with a subnet mask that will allow all three web servers to be on the same network while providing the maximum number of subnets. Which network address and subnet mask meet this requirement?

**A.** 192.168.252.0 255.255.255.252

**B.** 192.168.252.8 255.255.255.248

**C.** 192.168.252.8 255.255.255.252

**D.** 192.168.252.16 255.255.255.240

**E.** 192.168.252.16 255.255.255.252

**Answer: B**

**86** Which IPv6 address is the equivalent of the IPv4 interface loopback address 127.0.0.1?

**A.** ::1

**B.** ::

**C.** 2000::/3

**D.** 0::/10

**Answer: A**

**98** The network administrator needs to address seven LANs. RIP version 1 is the only routing protocol in use on the network and subnet 0 is not being used. What is the maximum number of usable IP addresses that can be supported on each LAN if the organization is using one class C address block?

**A.** 8

**B.** 6

**C.** 30

**D.** 32

**E.** 14

**F.** 16

**Answer: C**

**105** An administrator must assign static IP addresses to the servers in a network. For network 192.168.20.24/29, the router is assigned the first usable host address while the sales server is given the last usable host address. Which of the following should be entered into the IP properties box for the sales server?

**A.** IP address: 192.168.20.14

 Subnet Mask: 255.255.255.248

 Default Gateway: 192.168.20.9

**B.** IP address: 192.168.20.254

 Subnet Mask: 255.255.255.0

 Default Gateway: 192.168.20.1

**C.** IP address: 192.168.20.30

 Subnet Mask: 255.255.255.248

 Default Gateway: 192.168.20.25

**D.** IP address: 192.168.20.30

 Subnet Mask: 255.255.255.240

 Default Gateway: 192.168.20.17

**E.** IP address: 192.168.20.30

 Subnet Mask: 255.255.255.240

 efault Gateway: 192.168.20.25

**Answer: C**

**106** Which subnet mask would be appropriate for a network address range to be subnetted for up to eight LANs, with each LAN containing 5 to 26 hosts?

**A.** 0.0.0.240

**B.** 255.255.255.252

**C.** 255.255.255.0

**D.** 255.255.255.224

**E.** 255.255.255.240

**Answer: D**

**116** Which IPv6 address is the all-router multicast group?

**A.** FF02::1

**B.** FF02::2

**C.** FF02::3

**D.** FF02::4

**Answer: B**

**139** A network administrator is troubleshooting an EIGRP problem on a router and needs to confirm the IP addresses of the devices with which the router has established adjacency. The retransmit interval and the queue counts for the adjacent routers also need to be checked. What command will display the required information?

**A.** Router# show ip eigrp adjacency

**B.** Router# show ip eigrp topology

**C.** Router# show ip eigrp interfaces

**D.** Router# show ip eigrp neighbors

**Answer: D**

**141** What is a global command?

**A.** a command that is set once and affects the entire router

**B.** a command that is implemented in all foreign and domestic IOS versions

**C.** a command that is universal in application and supports all protocols

**D.** a command that is available in every release of IOS, regardless of the version or deployment status

**E.** a command that can be entered in any configuration mode

**Answer: A**

**165**

Refer to the exhibit.

****

C-router is to be used as a "router-on-a-stick" to route between the VLANs. All the interfaces have been properly configured and IP routing is operational. The hosts in the VLANs have been configured with the appropriate default gateway. What is true about this configuration?

**A.** These commands need to be added to the configuration:

 C-router(config)# router eigrp 123

 C-router(config-router)# network 172.19.0.0

**B.** These commands need to be added to the configuration:

 C-router(config)# router ospf 1

 C-router(config-router)# network 172.19.0.0 0.0.3.255 area 0

**C.** These commands need to be added to the configuration:

 C-router(config)# router rip

 C-router(config-router)# network 172.19.0.0

**D.** No further routing configuration is required.

**Answer: D**

**170** Refer to the exhibit.



Assuming that the entire network topology is shown, what is the operational status of the interfaces of R2 as indicated by the command output shown?

**A.** One interface has a problem.

**B.** Two interfaces have problems.

**C.** The interfaces are functioning correctly.

**D.** The operational status of the interfaces cannot be determined from the output shown.

**Answer: C**

**183** The network administrator cannot connect to Switch1 over a Telnet session, although the hosts attached to Switch1 can ping the interface Fa0/0 of the router. Given the information in the graphic and assuming that the router and Switch2 are configured properly, which of the following commands should be issued on Switch1 to correct this problem?

**A.** Switch1(config)# line con0

 Switch1(config-line)# password cisco

 Switch1(config-line)#login

**B.** Switch1(config)# interface fa0/1

 Switch1(config-if)# ip address 192.168.24.3 255.255.255.0

**C.** Switch1(config)# ip default-gateway 192.168.24.1

**D.** Switch1(config)# interface fa0/1

 Switch1(config-if)# duplex full

 Switch1(config-if)# speed 100

**E.** Switch1(config)# interface fa0/1

 Switch1(config-if)# switchport mode trunk

**Answer: C**

**185** Two routers named Atlanta and Brevard are connected via their serial interfaces as illustrated, but they are unable to communicate. The Atlanta router is known to have the correct configuration.

****

Given the partial configurations, identify the fault on the Brevard router that is causing the lack of connectivity.

**A.** incompatible IP address

**B.** insufficient bandwidth

**C.** incorrect subnet mask

**D.** incompatible encapsulation

**E.** link reliability too low

**F.** IPCP closed

**Answer: D**

**186** Users on the 172.17.22.0 network cannot reach the server located on the 172.31.5.0 network. The network administrator connected to router Coffee via the console port, issued the show ip route command, and was able to ping the server.

****

Based on the output of the show ip route command and the topology shown in the graphic, what is the cause of the failure?

**A.** The network has not fully converged.

**B.** IP routing is not enabled.

**C.** A static route is configured incorrectly.

**D.** The FastEthernet interface on Coffee is disabled.

**E.** The neighbor relationship table is not correctly updated.

**F.** The routing table on Coffee has not updated .

**Answer: C**

**187** A network administrator is trying to add a new router into an established OSPF network. The networks attached to the new router do not appear in the routing tables of the other OSPF routers. Given the information in the partial configuration shown below, what configuration error is causing this problem?

Router(config)# router ospf 1

Router(config-router)# network 10.0.0.0 255.0.0.0 area 0

**A.** The process id is configured improperly.

**B.** The OSPF area is configured improperly.

**C.** The network wildcard mask is configured improperly.

**D.** The network number is configured improperly.

**E.** The AS is configured improperly.

**F.** The network subnet mask is configured improperly.

**Answer: C**

**196** Refer to the exhibit.



The Bigtime router is unable to authenticate to the Littletime router. What is the cause of the problem?

**A.** The usernames are incorrectly configured on the two routers.

**B.** The passwords do not match on the two routers.

**C.** CHAP authentication cannot be used on a serial interface.

**D.** The routers cannot be connected from interface S0/0 to interface S0/0.

**E.** With CHAP authentication, one router must authenticate to another router. The routers cannot be configured to authenticate to each other.

**Answer: B**

**220** Refer to the exhibit.



A network administrator attempts to ping Host2 from Host1 and receives the results that are shown. What is the problem?

**A.** The link between Host1 and Switch1 is down.

**B.** TCP/IP is not functioning on Host1

**C.** The link between Router1 and Router2 is down.

**D.** The default gateway on Host1 is incorrect.

**E.** Interface Fa0/0 on Router1 is shutdown.

**F.** The link between Switch1 and Router1 is down.

**Answer: C**

**225** Refer to the exhibit.

****

A problem with network connectivity has been observed. It is suspected that the cable connected to switch port Fa0/9 on Switch1 is disconnected. What would be an effect of this cable being disconnected?

**A.** Host B would not be able to access the server in VLAN9 until the cable is reconnected.

**B.** Communication between VLAN3 and the other VLANs would be disabled.

**C.** The transfer of files from Host B to the server in VLAN9 would be significantly slower.

**D.** For less than a minute, Host B would not be able to access the server in VLAN9. Then normal network function would resume.

**Answer: D**