Cisco CCNA 200-120 Exam



Vendor: Cisco

Exam Code: 200-120

Exam Name: Interconnecting Cisco Networking Devices:

Accelerated (CCNAX) v2.0

QUESTION 1

Refer to the exhibit. What will Router1 do when it receives the data frame shown? (Choose three.)

0000.0c		32.168.20.5	0000.0c63.ae		192.138.40.5
Source	NAC S	ource IP	Destination N	AAC	Destination IP
Data Fra	ame:				
Internet	192.168.40.3	÷	0000.0c 36.6965	ARPA	FastEthernet0/2
Internet	192.168.60.1	www.er	19000eqt63.4.300 m	ARPA	FastEthernet0/1
Internet	192,168,40,5	5 9	0000.0c07.4320	ARPA	FastEthernet 0/2
Internet	192,168,20,1	l - 5 9	0000.0c63.ae45	ARPA	FastEthernet 0/0
Internet	192.168.60.5	8	0000,0007,a000	ARPA	FastEthernet0/1
Internet	192,168,20.5	> У	0000.0c07.f892	ARPA	FastEthernetU/U
Protocol	Address	Age(min)	Hardware Adddr	Type	Interface

- A. Router1 will strip off the source MAC address and replace it with the MAC address 0000.0c36.6965.
- B. Router1 will strip off the source IP address and replace it with the IP address 192.168.40.1.
- C. Router1 will strip off the destination MAC address and replace it with the MAC address 0000.0c07.4320.
- D. Router1 will strip off the destination IP address and replace it with the IP address of 192.168.40.1.
- E. Router1 will forward the data packet out interface FastEthernet0/1.
- F. Router1 will forward the data packet out interface FastEthernet0/2.

Correct Answer: ACF

QUESTION 2

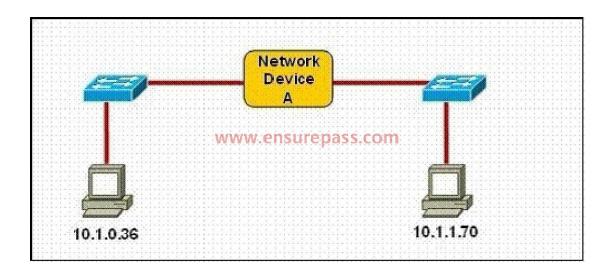
Which of the following describes the roles of devices in a WAN? (Choose three.)

- A. A CSU/DSU terminates a digital local loop.
- B. A modem terminates a digital local loop.
- C. A CSU/DSU terminates an analog local loop.
- D. A modem terminates an analog local loop.
- E. A router is commonly considered a DTE device.
- F. A router is commonly considered a DCE device.

Correct Answer: ADE

QUESTION 3

Refer to the exhibit. Which three statements correctly describe Network Device A? (Choose three.)



- A. With a network wide mask of 255.255.255.128, each interface does not require an IP address.
- B. With a network wide mask of 255.255.255.128, each interface does require an IP address on a unique IP subnet.
- C. With a network wide mask of 255.255.255.0, must be a Layer 2 device for the PCs to communicate with each other.
- D. With a network wide mask of 255.255.255.0, must be a Layer 3 device for the PCs to communicate with each other.
- E. With a network wide mask of 255.255.254.0, each interface does not require an IP address.

Correct Answer: BDE

QUESTION 4

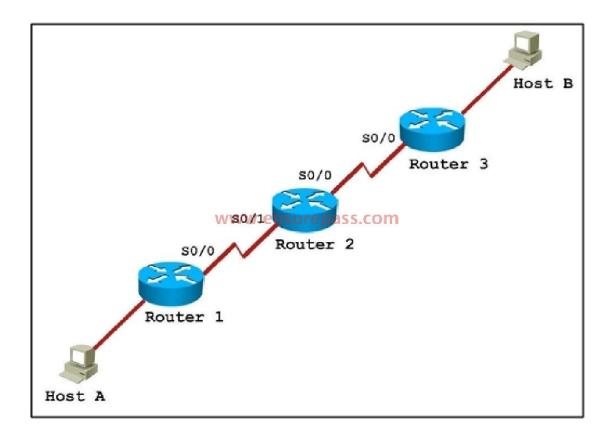
Which layer in the OSI reference model is responsible for determining the availability of the receiving program and checking to see if enough resources exist for that communication?

- A. transport
- B. network
- C. presentation
- D. session
- E. application

Correct Answer: E

QUESTION 5

Refer to the exhibit. Host A pings interface SO/O on router 3. What is the TTL value for that ping?



- A. 252
- B. 253
- C. 254
- D. 255

QUESTION 6

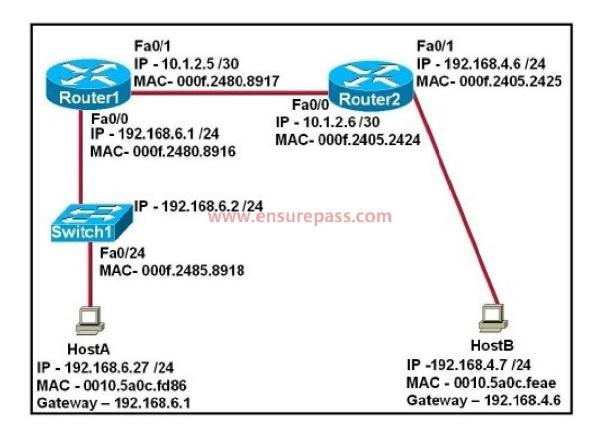
A network administrator is verifying the configuration of a newly installed host by establishing an FTP connection to a remote server. What is the highest layer of the protocol stack that the network administrator is using for this operation?

- A. application
- B. presentation
- C. session
- D. transport
- E. internet
- F. data link

Correct Answer: A

QUESTION 7

Refer to the exhibit. After HostA pings HostB, which entry will be in the ARP cache of HostA to support this transmission?



A.

Interface Address	Physical Address	Туре
192.168.4.7	000f.2480.8916	dynamic

В.

Interface Address	Physical Address	Туре
192.168.4.7	0010.5a0c.feae	dynamic

C.

Interface Address	Physical Address	Туре
192.168.6.1	0010.5a0c.feae	dynamic

D.

Interface Address	Physical Address	Туре
192.168.6.1	000f.2480.8916	dynamic

E.

Interface Address	Physical Address	Туре
192.168.6.2	0010.5a0c.feae	dynamic

F.

Interface Address	Physical Address	Туре
192.168.6.2	000f.2485.8918	dynamic

Correct Answer: D

QUESTION 8

A network interface port has collision detection and carrier sensing enabled on a shared twisted pair network. From this statement, what is known about the network interface port?

- A. This is a 10 Mb/s switch port.
- B. This is a 100 Mb/s switch port.
- C. This is an Ethernet port operating at half duplex.
- D. This is an Ethernet port operating at full duplex.
- E. This is a port on a network interface card in a PC.

Correct Answer: C

QUESTION 9

A receiving host computes the checksum on a frame and determines that the frame is damaged. The frame is then discarded. At which OSI layer did this happen?

- A. session
- B. transport

- C. network
- D. data link
- E. physical

QUESTION 10

Which of the following correctly describe steps in the OSI data encapsulation process? (Choose two.)

- A. The transport layer divides a data stream into segments and may add reliability and flow control information.
- B. The data link layer adds physical source and destination addresses and an FCS to the segment.
- C. Packets are created when the network layer encapsulates a frame with source and destination host addresses and protocol-related control information.
- D. Packets are created when the network layer adds Layer 3 addresses and control information to a segment.
- E. The presentation layer translates bits into voltages for transmission across the physical link.

Correct Answer: AD

QUESTION 11

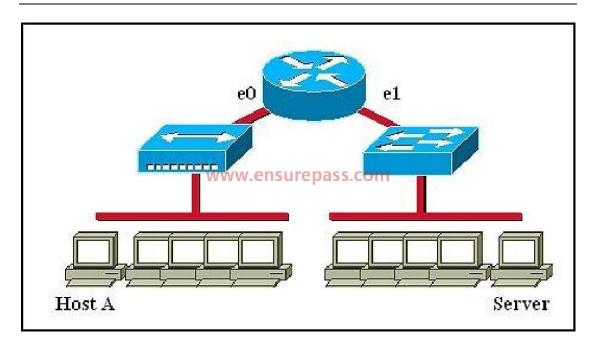
Which three statements accurately describe Layer 2 Ethernet switches? (Choose three.)

- A. Spanning Tree Protocol allows switches to automatically share VLAN information.
- B. Establishing VLANs increases the number of broadcast domains.
- C. Switches that are configured with VLANs make forwarding decisions based on both Layer 2 and Layer 3 address information.
- D. Microsegmentation decreases the number of collisions on the network.
- E. In a properly functioning network with redundant switched paths, each switched segment will contain one root bridge with all its ports in the forwarding state. All other switches in that broadcast domain will have only one root port.
- F. If a switch receives a frame for an unknown destination, it uses ARP to resolve the address.

Correct Answer: BDE

QUESTION 12

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

QUESTION 13

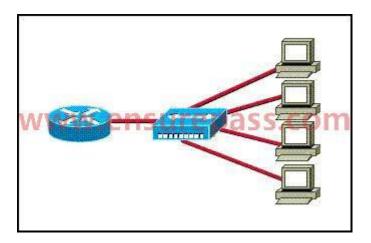
Where does routing occur within the DoD TCP/IP reference model?

- A. application
- B. internet
- C. network
- D. transport

Correct Answer: B

QUESTION 14

Refer to the exhibit. What two results would occur if the hub were to be replaced with a switch that is configured with one Ethernet VLAN? (Choose two.)



- A. The number of collision domains would remain the same.
- B. The number of collision domains would decrease.
- C. The number of collision domains would increase.
- D. The number of broadcast domains would remain the same.
- E. The number of broadcast domains would decrease.
- F. The number of broadcast domains would increase.

QUESTION 15

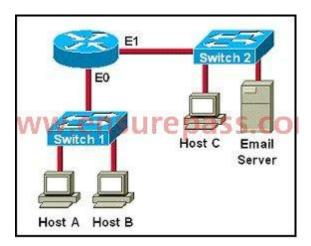
For what two purposes does the Ethernet protocol use physical addresses? (Choose two.)

- A. to uniquely identify devices at Layer 2
- B. to allow communication with devices on a different network
- C. to differentiate a Layer 2 frame from a Layer 3 packet
- D. to establish a priority system to determine which device gets to transmit first
- E. to allow communication between different devices on the same network
- F. to allow detection of a remote device when its physical address is unknown

Correct Answer: AE

QUESTION 16

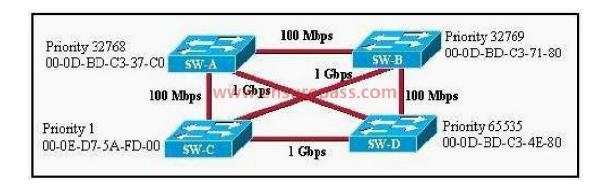
Refer to exhibit. Which destination addresses will be used by Host A to send data to Host C? (Choose two.)



- A. the IP address of Switch 1
- B. the MAC address of Switch 1
- C. the IP address of Host C
- D. the MAC address of Host C
- E. the IP address of the router's E0 interface
- F. the MAC address of the router's E0 interface

QUESTION 17

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

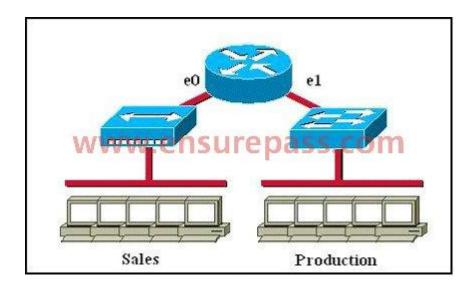


- A. Switch A, because it has the lowest MAC address
- B. Switch A, because it is the most centrally located switch
- C. Switch B, because it has the highest MAC address
- D. Switch C, because it is the most centrally located switch
- E. Switch C, because it has the lowest priority
- F. Switch D, because it has the highest priority

Correct Answer: E

QUESTION 18

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.

Correct Answer: AF

QUESTION 19

In an Ethernet network, under what two scenarios can devices transmit? (Choose two.)

- A. when they receive a special token
- B. when there is a carrier
- C. when they detect no other devices are sending
- D. when the medium is idle
- E. when the server grants access

Correct Answer: CD

QUESTION 20

A router has two Fast Ethernet interfaces and needs to connect to four VLANs in the local network. How can you accomplish this task, using the fewest physical interfaces and without decreasing

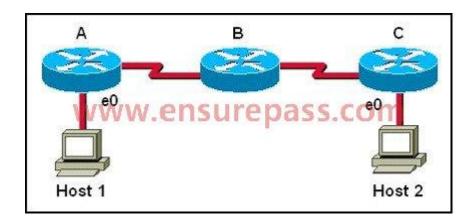
network performance?

- A. Use a hub to connect the four VLANS with a Fast Ethernet interface on the router.
- B. Add a second router to handle the VLAN traffic.
- C. Add two more Fast Ethernet interfaces.
- D. Implement a router-on-a-stick configuration.

Correct Answer: D

QUESTION 21

Host 1 is trying to communicate with Host 2. The e0 interface on Router C is down. Which of the following are true? (Choose two.)



- A. Router C will use ICMP to inform Host 1 that Host 2 cannot be reached.
- B. Router C will use ICMP to inform Router B that Host 2 cannot be reached.
- C. Router C will use ICMP to inform Host 1, Router A, and Router B that Host 2 cannot be reached.
- D. Router C will send a Destination Unreachable message type.
- E. Router C will send a Router Selection message type.
- F. Router C will send a Source Quench message type.

Correct Answer: AD

QUESTION 22

What is the difference between a CSU/DSU and a modem?

- A. A CSU/DSU converts analog signals from a router to a leased line; a modem converts analog signals from a router to a leased line.
- B. A CSU/DSU converts analog signals from a router to a phone line; a modem converts digital signals from a router to a leased line.
- C. A CSU/DSU converts digital signals from a router to a phone line; a modem converts analog

- signals from a router to a phone line.
- D. A CSU/DSU converts digital signals from a router to a leased line; a modem converts digital signals from a router to a phone line.

QUESTION 23

Drag and Drop



Correct Answer:

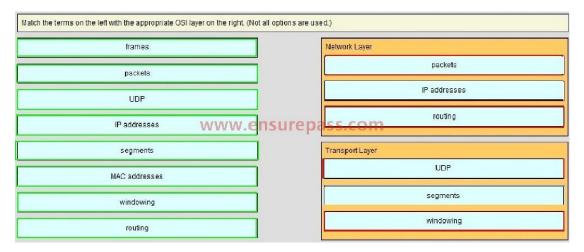


QUESTION 24
Drag and Drop

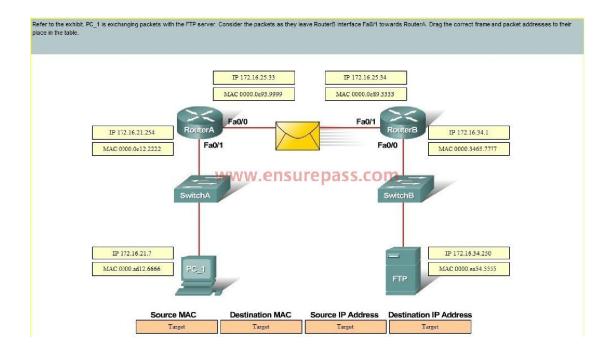
Ensurepass.com Easy Test! Easy Pass!

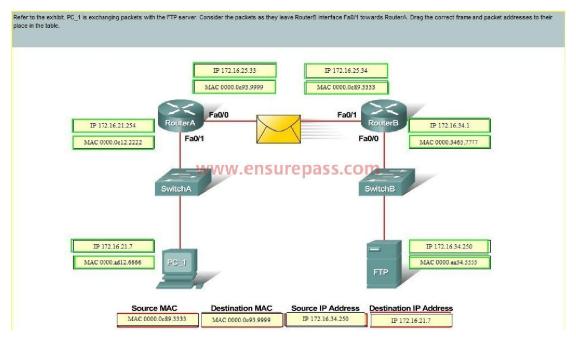


Correct Answer:

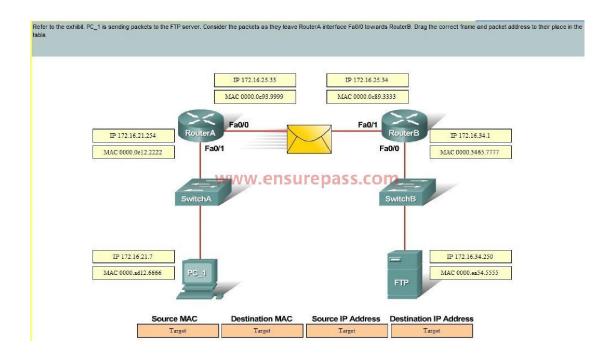


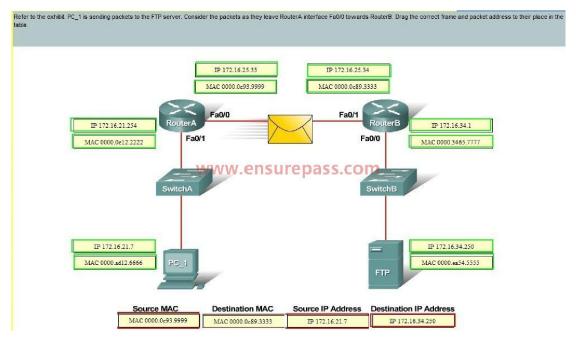
QUESTION 25 Drag and Drop



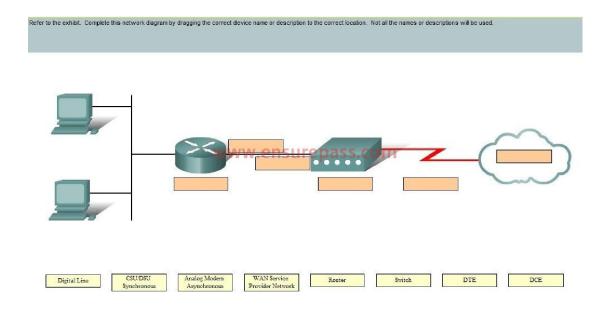


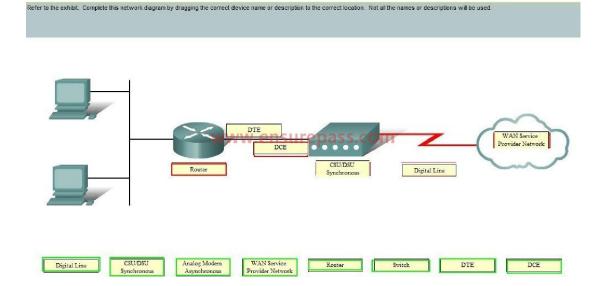
QUESTION 26 Drag and Drop





QUESTION 27 Drag and Drop





QUESTION 28

Refer to the exhibit. Switch port FastEthernet 0/24 on ALSwitch1 will be used to create an IEEE 802.1Q-compliant trunk to another switch. Based on the output shown, what is the reason the

trunk does not form, even though the proper cabling has been attached?

ALSwitch1# show running-config

«output omitted»

interface FastEthernetO/24 no ip address

«output omitted»

ALSwitch1# show interfaces FastEthernet0/24 switchport

Name: Fa0/24 Switchport: Enable

Administrative Mode: static access Operation Mode: static access

Administrative Trunking Encapsulation: dot1g Operation Trunking Encapsulation: native

Negotiation of Trunking: Off

Access Mode VLAN: 1 (default)
Trunking Native Mode VLAN: 1 (default)

Voice VLAN: none

Administrative private-vlan host-association: none

Administrative private-vlan mapping: none

Operation private-vlan: none Trunking VLANs Enabled: ALL Pruning VLANs Enabled: 2-1001

Capture Mode Disabled Capture VLANs Allowed: ALL

Protected: false

Voice VLAN: none (Inactive)

Aplliance trust: none

- A. VLANs have not been created yet.
- B. An IP address must be configured for the port.
- C. The port is currently configured for access mode.
- D. The correct encapsulation type has not been configured.
- E. The "no shutdown" command has not been entered for the port.

Correct Answer: C

QUESTION 29

Which port state is introduced by Rapid-PVST?

- A. learning
- B. listening
- C. discarding
- D. forwarding

Correct Answer: C

QUESTION 30

VLAN 3 is not yet configured on your switch. What happens if you set the switchport access vlan 3 command in interface configuration mode?

- A. The command is rejected.
- B. The port turns amber.
- C. The command is accepted and the respective VLAN is added to vlan dat.
- D. The command is accepted and you must configure the VLAN manually.

Correct Answer: C

QUESTION 31

What value is primarily used to determine which port becomes the root port on each nonroot switch in a spanning-tree topology?

- A. path cost
- B. lowest port MAC address
- C. VTP revision number
- D. highest port priority number
- E. port priority number and MAC address

Correct Answer: A

QUESTION 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

Correct Answer: B

QUESTION 33

Refer to the exhibit. 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?

Switch-1# show made Dynamic Addresses			3
Secure Addresses (I			0
Static Addresses (Ús	방지 않는 그 아무리를 하지만 하다 하면 수 있다.		0
Total Mac addresses	nsuren	125	ncom
Non-static Address 7	「able:		
Non-static Address T Destination Address	「able:		
Non-static Address 7	able: Address Type		Destination Port

- 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.

QUESTION 34

What is the function of the command switchport trunk native vlan 999 on a Cisco Catalyst switch?

- A. It creates a VLAN 999 interface.
- B. It designates VLAN 999 for untagged traffic.
- C. It blocks VLAN 999 traffic from passing on the trunk.
- D. It designates VLAN 999 as the default for all unknown tagged traffic.

Correct Answer: B

QUESTION 35

Which two protocols are used by bridges and/or switches to prevent loops in a layer 2 network? (Choose two.)

- A. 802.1d
- B. VTP
- C. 802.1q

D. STP

E. SAP

Correct Answer: AD

QUESTION 36

Which switch would STP choose to become the root bridge in the selection process?

A. 32768: 11-22-33-44-55-66B. 32768: 22-33-44-55-66-77C. 32769: 11-22-33-44-55-65

D. 32769: 22-33-44-55-66-78

Correct Answer: A

QUESTION 37

A switch is configured with all ports assigned to vlan 2 with full duplex FastEthernet to segment existing departmental traffic. What is the effect of adding switch ports to a new VLAN on the switch?

- A. More collision domains will be created.
- B. IP address utilization will be more efficient.
- C. More bandwidth will be required than was needed previously.
- D. An additional broadcast domain will be created.

Correct Answer: D

QUESTION 38

What are three benefits of implementing VLANs? (Choose three.)

- A. A higher level of network security can be reached by separating sensitive data traffic from other network traffic.
- B. A more efficient use of bandwidth can be achieved allowing many physical groups to use the same network infrastructure.
- C. A more efficient use of bandwidth can be achieved allowing many logical networks to use the same network infrastructure.
- D. Broadcast storms can be mitigated by increasing the number of broadcast domains, thus reducing their size.
- E. Broadcast storms can be mitigated by decreasing the number of broadcast domains, thus increasing their size.
- F. VLANs make it easier for IT staff to configure new logical groups, because the VLANs all belong to the same broadcast domain.

G. Port-based VLANs increase switch-port use efficiency, thanks to 802.1Q trunks.

Correct Answer: ACD

QUESTION 39

Which IEEE standard protocol is initiated as a result of successful DTP completion in a switch over Fast Ethernet?

- A. 802.3ad
- B. 802.1w
- C. 802.1D
- D. 802.1Q

Correct Answer: D

QUESTION 40

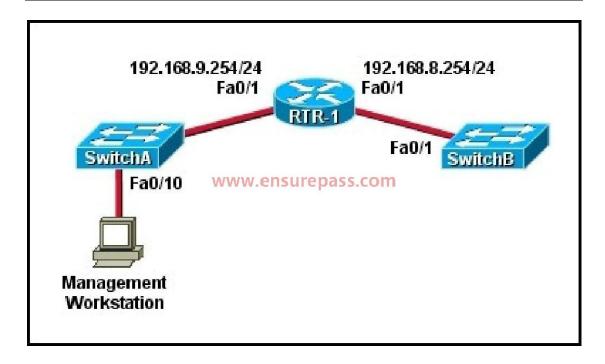
Which of the following are benefits of VLANs? (Choose three.)

- A. They increase the size of collision domains.
- B. They allow logical grouping of users by function.
- C. They can enhance network security.
- D. They increase the size of broadcast domains while decreasing the number of collision domains.
- E. They increase the number of broadcast domains while decreasing the size of the broadcast domains.
- F. They simplify switch administration.

Correct Answer: BCE

QUESTION 41

Refer to the exhibit. A technician has installed SwitchB and needs to configure it for remote access from the management workstation connected to SwitchA. Which set of commands is required to accomplish this task?



- A. SwitchB(config)# interface FastEthernet 0/1
 SwitchB(config-if)# ip address 192.168.8.252 255.255.255.0
 SwitchB(config-if)# no shutdown
- B. SwitchB(config)# interface vlan 1
 SwitchB(config-if)# ip address 192.168.8.252 255.255.255.0
 SwitchB(config-if)# ip default-gateway 192.168.8.254 255.255.255.0
 SwitchB(config-if)# no shutdown
- C. SwitchB(config)# ip default-gateway 192.168.8.254
 SwitchB(config)# interface vlan 1
 SwitchB(config-if)# ip address 192.168.8.252 255.255.255.0
 SwitchB(config-if)# no shutdown
- D. SwitchB(config)# ip default-network 192.168.8.254
 SwitchB(config)# interface vlan 1
 SwitchB(config-if)# ip address 192.168.8.252 255.255.255.0
 SwitchB(config-if)# no shutdown
- E. SwitchB(config)# ip route 192.168.8.254 255.255.255.0 SwitchB(config)# interface FastEthernet 0/1 SwitchB(config-if)# ip address 192.168.8.252 255.255.255.0 SwitchB(config-if)# no shutdown

QUESTION 42

Which two states are the port states when RSTP has converged? (Choose two.)

- A. discarding
- B. listening
- C. learning
- D. forwarding
- E. disabled

Correct Answer: AD

QUESTION 43

Which two commands can be used to verify a trunk link configuration status on a given Cisco switch interface? (Choose two.)

- A. show interface trunk
- B. show interface interface
- C. show ip interface brief
- D. show interface vlan
- E. show interface switchport

Correct Answer: AE

QUESTION 44

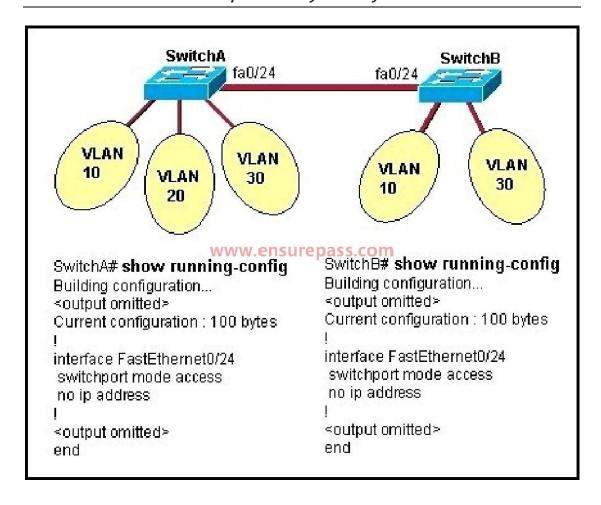
Which command enables RSTP on a switch?

- A. spanning-tree uplinkfast
- B. spanning-tree mode rapid-pvst
- C. spanning-tree backbonefast
- D. spanning-tree mode mst

Correct Answer: B

QUESTION 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.

QUESTION 46

Refer to the exhibit. Which WAN protocol is being used?

```
RouterA#show interface pos8/0/0
POS8/0/0 is up, line protocol is up
Hardware is Packet over Sonet
Keepalive set (10 sec)
Scramble disabled
LMI eng sent 2474988, LMI stat recvd 2474969, LMI upd recvd 0, DTE LMI up
Broadcast queue 0/256, broadcasts sent/dropped 25760668/0, interface broadcasts 25348176
Last input 00:00:00, output 00:00:00, output hang never
Last clearing of "show interface" counters 40w6d
5 minute input rate 0 bits/sec. 0 packets/sec. 50
5 minute output rate 0 bits/sec. 0 packets/sec. 50
63153396 packets input, 4389121455 bytes, 0 no buffer
Received 0 broadcasts (0 IP multicast)
0 runts, 0 giants, 0 throttles
0 parity
44773 input errors, 39138 CRC, 0 frame, 0 overrun, 0 ignored, 27 abort
945596253 packets output, 62753244360 bytes, 0 underruns
0 output errors, 0 applique, 0 interface resets
0 output buffer failures, 0 output buffers swapped out
0 carrier transitions
```

- A. ATM
- B. HDLC
- C. Frame Relay
- D. PPP

QUESTION 47

Refer to the exhibit. Given the output shown from this Cisco Catalyst 2950, what is the reason that interface FastEthernet 0/10 is not the root port for VLAN 2?

Vlan	Role	Sts	Cost	Prio.Mbr	Type
VLAN0001	Root	FWD/	ww.ens	Lli28plass	P2pm
VLAN0 002	Altn	BLK	19	128.2	P2p
VLANO 003	Root	FWD	19	128.2	P2p

- A. This switch has more than one interface connected to the root network segment in VLAN 2.
- B. This switch is running RSTP while the elected designated switch is running 802.1d Spanning Tree.
- C. This switch interface has a higher path cost to the root bridge than another in the topology.
- D. This switch has a lower bridge ID for VLAN 2 than the elected designated switch.

Correct Answer: C

QUESTION 48

Why will a switch never learn a broadcast address?

A. Broadcasts only use network layer addressing.

- B. A broadcast frame is never forwarded by a switch.
- C. A broadcast address will never be the source address of a frame.
- D. Broadcast addresses use an incorrect format for the switching table.
- E. Broadcast frames are never sent to switches.

QUESTION 49

Refer to the exhibit. Why has this switch not been elected the root bridge for VLAN1?

```
Switch# show spanning-tree vlan 1
VLAN0001
  Spanning tree enabled protocol rstp
                 Priority 20481
Address 0008.217a.5800
  Root ID
                 Cost 38
Port 1
                               1 (FastEthernet0/1)
                 Hello Time 2 sec Max Age 20 sec Forward Delay 15 sec
 Bridge ID Priority 32769 (priority Address 0008.205e.6600 2 sec Max Age
                                32769 (priority 32768 sys-id-ext 1)
                                 2 sec Max Age 20 sec Forward Delay 15 sec
                 Aging Time 300
                     Role Sts Cost
                                              Prio.Mbr Type
Interface

    Root FWD 19
    128.1
    P2p

    Desg FWD 38
    128.1
    P2p

    Altn BLK 57
    128.1
    P2p

    Desg FWD 38
    128.1
    P2p

Fa0/1
Fa0/4
Fa0/11
Fa0/13
```

- A. It has more than one interface that is connected to the root network segment.
- B. It is running RSTP while the elected root bridge is running 802.1d spanning tree.
- C. It has a higher MAC address than the elected root bridge.
- D. It has a higher bridge ID than the elected root bridge.

Correct Answer: D

QUESTION 50

Which two link protocols are used to carry multiple VLANs over a single link? (Choose two.)

- A. VTP
- B. 802.1q

- C. IGP
- D. ISL
- E. 802.3u

QUESTION 51

Assuming the default switch configuration, which VLAN range can be added, modified, and removed on a Cisco switch?

- A. 1 through 1001
- B. 2 through 1001
- C. 1 through 1002
- D. 2 through 1005

Correct Answer: B

QUESTION 52

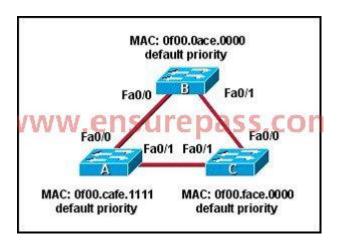
Which statement about VLAN operation on Cisco Catalyst switches is true?

- A. When a packet is received from an 802.1Q trunk, the VLAN ID can be determined from the source MAC address and the MAC address table.
- B. Unknown unicast frames are retransmitted only to the ports that belong to the same VLAN.
- C. Broadcast and multicast frames are retransmitted to ports that are configured on different VI AN
- D. Ports between switches should be configured in access mode so that VLANs can span across the ports.

Correct Answer: B

QUESTION 53

Refer to the topology shown in the exhibit. Which ports will be STP designated ports if all the links are operating at the same bandwidth? (Choose three.)



- A. Switch A Fa0/0
- B. Switch A Fa0/1
- C. Switch B Fa0/0
- D. Switch B Fa0/1
- E. Switch C Fa0/0
- F. Switch C Fa0/1

QUESTION 54

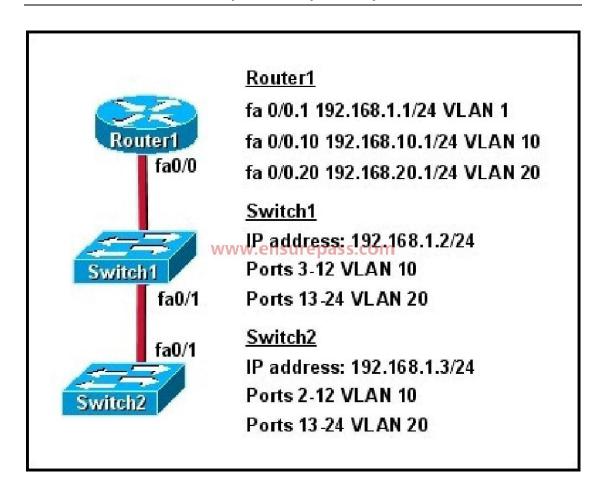
Which three statements about RSTP are true? (Choose three.)

- A. RSTP significantly reduces topology reconverging time after a link failure.
- B. RSTP expands the STP port roles by adding the alternate and backup roles.
- C. RSTP port states are blocking, discarding, learning, or forwarding.
- D. RSTP provides a faster transition to the forwarding state on point-to-point links than STP does.
- E. RSTP also uses the STP proposal-agreement sequence.
- F. RSTP uses the same timer-based process as STP on point-to-point links.

Correct Answer: ABD

QUESTION 55

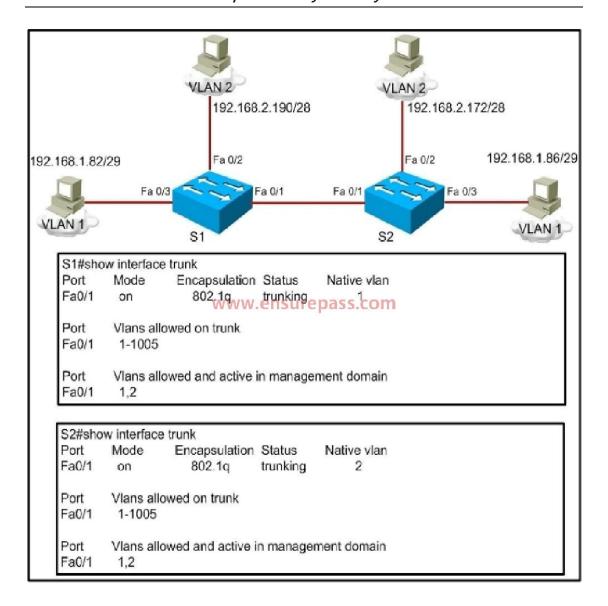
Refer to the exhibit. How should the FastEthernet0/1 ports on the 2950 model switches that are shown in the exhibit be configured to allow connectivity between all devices?



- A. The ports only need to be connected by a crossover cable.
- B. SwitchX(config)# interface fastethernet 0/1SwitchX(config-if)# switchport mode trunk
- C. SwitchX(config)# interface fastethernet 0/1 SwitchX(config-if)# switchport mode access SwitchX(config-if)# switchport access vlan 1
- D. SwitchX(config)# interface fastethernet 0/1 SwitchX(config-if)# switchport mode trunk SwitchX(config-if)# switchport trunk vlan 1 SwitchX(config-if)# switchport trunk vlan 10 SwitchX(config-if)# switchport trunk vlan 20

QUESTION 56

Refer to the exhibit. A frame on VLAN 1 on switch S1 is sent to switch S2 where the frame is received on VLAN 2. What causes this behavior?



- A. trunk mode mismatches
- B. allowing only VLAN 2 on the destination
- C. native VLAN mismatches
- D. VLANs that do not correspond to a unique IP subnet

QUESTION 57

At which layer of the OSI model is RSTP used to prevent loops?

- A. physical
- B. data link

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- C. network
- D. transport

Correct Answer: B

QUESTION 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

Correct Answer: F

QUESTION 59

Which two benefits are provided by creating VLANs? (Choose two.)

- A. added security
- B. dedicated bandwidth
- C. provides segmentation
- D. allows switches to route traffic between subinterfaces
- E. contains collisions

Correct Answer: AC

QUESTION 60

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

Correct Answer: A

QUESTION 61

Refer to the exhibit. Which statement is true?

```
Switchi# show spanning-tree vlan 20
VI.ANOO2O
 Spanning tree enabled protocol rstp
 Root ID Priority 24596
          Address 0017.596d.2a00
                    38
           Cost
          Port 11 (FastEthernetO/11)
           Hello Time 2 sec Max age 20 sec Forward Delay 15 sec
 Bridge ID Priority 28692 (priority Address 0017.596d.1580
                            (priority 28672 sys-id-ext 20)
           Hello Time 2 sec Max Age 20 sec Forward Delay 15 sec
           Aging Time 300
Interface
              Role Sts Cost
                               Prio.Nbr Type
Fa0/11
              Root FWD 19
                               128.11
                                      P2p
Fa0/12
              Alth BLK 19
                              128.12 P2p
```

- A. The Fa0/11 role confirms that SwitchA is the root bridge for VLAN 20.
- B. VLAN 20 is running the Per VLAN Spanning Tree Protocol.
- C. The MAC address of the root bridge is 0017.596d.1580.
- D. SwitchA is not the root bridge, because not all of the interface roles are designated.

Correct Answer: D

QUESTION 62

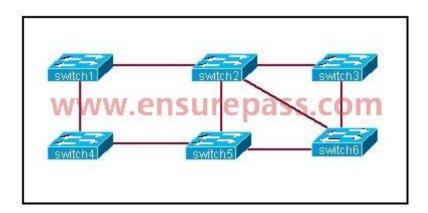
Which two of these are characteristics of the 802.1Q protocol? (Choose two.)

- A. It is used exclusively for tagging VLAN frames and does not address network reconvergence following switched network topology changes.
- B. It modifies the 802.3 frame header, and thus requires that the FCS be recomputed.
- C. It is a Layer 2 messaging protocol which maintains VLAN configurations across networks.
- D. It includes an 8-bit field which specifies the priority of a frame.
- E. It is a trunking protocol capable of carrying untagged frames.

Correct Answer: BE

QUESTION 63

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

QUESTION 64

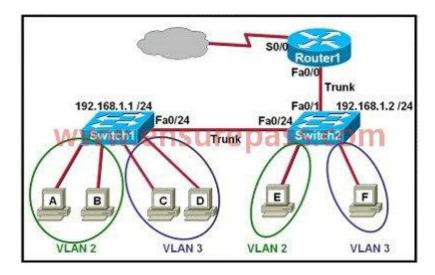
Which are valid modes for a switch port used as a VLAN trunk? (Choose three.)

- A. transparent
- B. auto
- C. on
- D. desirable
- E. blocking
- F. forwarding

Correct Answer: BCD

QUESTION 65

Refer to the exhibit. Which two statements are true about interVLAN routing in the topology that is shown in the exhibit? (Choose two.)



- A. Host E and host F use the same IP gateway address.
- B. Router1 and Switch2 should be connected via a crossover cable.
- C. Router1 will not play a role in communications between host A and host D.
- D. The FastEthernet 0/0 interface on Router1 must be configured with subinterfaces.
- E. Router1 needs more LAN interfaces to accommodate the VLANs that are shown in the exhibit.
- F. The FastEthernet 0/0 interface on Router1 and the FastEthernet 0/1 interface on Switch2 trunk ports must be configured using the same encapsulation type.

QUESTION 66

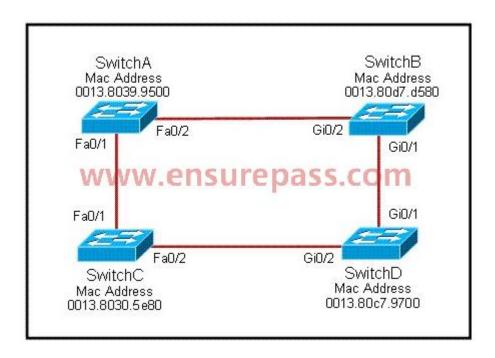
What is one benefit of PVST+?

- A. PVST+ supports Layer 3 load balancing without loops.
- B. PVST+ reduces the CPU cycles for all the switches in the network.
- C. PVST+ allows the root switch location to be optimized per VLAN.
- D. PVST+ automatically selects the root bridge location, to provide optimized bandwidth usage.

Correct Answer: C

QUESTION 67

Refer to the exhibit. Each of these four switches has been configured with a hostname, as well as being configured to run RSTP. No other configuration changes have been made. Which three of these show the correct RSTP port roles for the indicated switches and interfaces? (Choose three.)

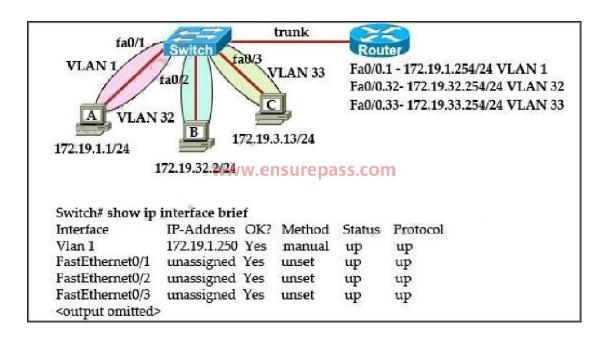


- A. SwitchA, Fa0/2, designated
- B. SwitchA, Fa0/1, root
- C. SwitchB, Gi0/2, root
- D. SwitchB, Gi0/1, designated
- E. SwitchC, Fa0/2, root
- F. SwitchD, Gi0/2, root

Correct Answer: ABF

QUESTION 68

Refer to the exhibit. The network administrator normally establishes a Telnet session with the switch from host A. However, host A is unavailable. The administrator's attempt to telnet to the switch from host B fails, but pings to the other two hosts are successful. What is the issue?

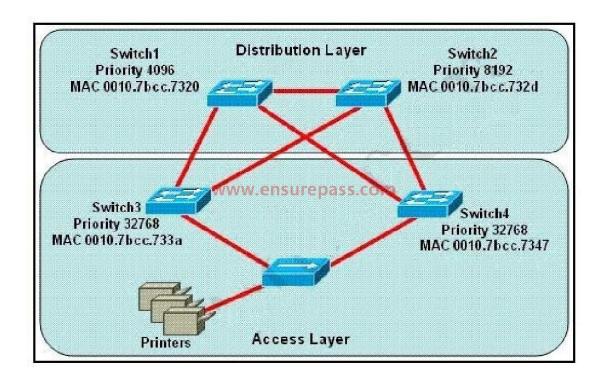


- A. Host B and the switch need to be in the same subnet.
- B. The switch interface connected to the router is down.
- C. Host B needs to be assigned an IP address in VLAN 1.
- D. The switch needs an appropriate default gateway assigned.
- E. The switch interfaces need the appropriate IP addresses assigned.

Correct Answer: D

QUESTION 69

Refer to the exhibit. Which switch provides the spanning-tree designated port role for the network segment that services the printers?

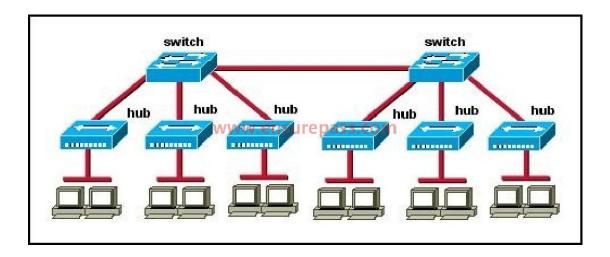


- A. Switch1
- B. Switch2
- C. Switch3
- D. Switch4

Correct Answer: C

QUESTION 70

Refer to Exhibit. How many broadcast domains are shown in the graphic assuming only the default VLAN is configured on the switches?



- A. one
- B. two
- C. six
- D. twelve

Correct Answer: A

QUESTION 71

Which three of these statements regarding 802.1Q trunking are correct? (Choose three.)

- A. 802.1Q native VLAN frames are untagged by default.
- B. 802.1Q trunking ports can also be secure ports.
- C. 802.1Q trunks can use 10 Mb/s Ethernet interfaces.
- D. 802.1Q trunks require full-duplex, point-to-point connectivity.
- E. 802.1Q trunks should have native VLANs that are the same at both ends.

Correct Answer: ACE

QUESTION 72

Refer to the exhibit. The output that is shown is generated at a switch. Which three statements are true? (Choose three.)

```
Switch# show spanning-tree vlan 30
VLAN0030
Spanning tree enabled protocol rstp
Root ID Priority 24606
Address 00d0.047b.2800
This bridge is the root
Hello Time 2 sec Max Age 20 sec Forward Delay 15 sec
Bridge ID Priority 24606 (priority 24576 sys-id-ext 30) Address 00d0.047b.2800/W.ensurepass.com
Hello Time 2 sec Max Age 20 sec Forward Delay 15 sec
Aging Time 300
Interface Role Sts Cost Prio.Mbr
                                           Type
            ______
                             _____
          Desg FWD 4
Desg FWD 4
Fa1/1
                               128.1
                                           p2p
Fa1/2
                              128.2
                                          p2p
Fa5/1
           Desg FWD
                       4
                              128.257
                                          p2p
```

- A. All ports will be in a state of discarding, learning, or forwarding.
- B. Thirty VLANs have been configured on this switch.
- C. The bridge priority is lower than the default value for spanning tree.
- D. All interfaces that are shown are on shared media.
- E. All designated ports are in a forwarding state.
- F. This switch must be the root bridge for all VLANs on this switch.

Correct Answer: ACE

QUESTION 73

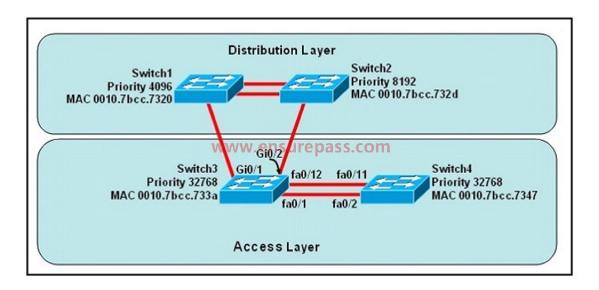
Which term describes a spanning-tree network that has all switch ports in either the blocking or forwarding state?

- A. converged
- B. redundant
- C. provisioned
- D. spanned

Correct Answer: A

QUESTION 74

Refer to the exhibit. At the end of an RSTP election process, which access layer switch port will assume the discarding role?



- A. Switch3, port fa0/1
- B. Switch3, port fa0/12
- C. Switch4, port fa0/11
- D. Switch4, port fa0/2
- E. Switch3, port Gi0/1
- F. Switch3, port Gi0/2

Correct Answer: C

QUESTION 75

What are the possible trunking modes for a switch port? (Choose three.)

- A. transparent
- B. auto
- C. on
- D. desirable
- E. client
- F. forwarding

Correct Answer: BCD

QUESTION 76

Which two of these statements regarding RSTP are correct? (Choose two.)

- A. RSTP cannot operate with PVST+.
- B. RSTP defines new port roles.

- C. RSTP defines no new port states.
- D. RSTP is a proprietary implementation of IEEE 802.1D STP.
- E. RSTP is compatible with the original IEEE 802.1D STP.

Correct Answer: BE

QUESTION 77

Refer to the exhibit. Which two statements are true of the interfaces on Switch1? (Choose two.)

```
Switchl# show mac-address-table
Dynamic Addresses Count: 19
Secure Addresses (User-defined) Count: 0
Static Addresses (User-defined) Count: O
System Self Addresses Count: 41
Total MAC addresses: 50
Non-static Address Table:
<output omitted>
Switchl# show cdp neighbors
Capability Codes: R - Router, T - Trans Bridge, B - Source Route Bridge
                S - Switch, H - Host, I - IGMP, r - Repeater
Device ID Local Intrice Holdtime Capability Platform Port ID Switch2 Fas 0/1 157 S 2950-12 Fas 0/1
                                                               Fas 0/1
Switch3
               Fas 0/2
                                143
                                             S
                                                    2950-12 Fas 0/5
Switchl#
```

- A. Multiple devices are connected directly to FastEthernet0/1.
- B. A hub is connected directly to FastEthernet0/5.
- C. FastEthernet0/1 is connected to a host with multiple network interface cards.
- D. FastEthernet0/5 has statically assigned MAC addresses.
- E. FastEthernet0/1 is configured as a trunk link.
- F. Interface FastEthernet0/2 has been disabled.

Correct Answer: BE

QUESTION 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

Correct Answer: B

QUESTION 79

What are three advantages of VLANs? (Choose three.)

- A. VLANs establish broadcast domains in switched networks.
- B. VLANs utilize packet filtering to enhance network security.
- C. VLANs provide a method of conserving IP addresses in large networks.
- D. VLANs provide a low-latency internetworking alternative to routed networks.
- E. VLANs allow access to network services based on department, not physical location.
- F. VLANs can greatly simplify adding, moving, or changing hosts on the network.

Correct Answer: AEF

QUESTION 80

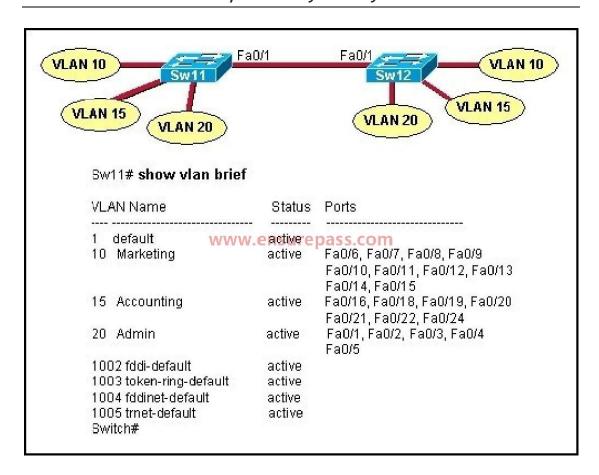
Cisco Catalyst switches CAT1 and CAT2 have a connection between them using ports FAO/13. An 802.1Q trunk is configured between the two switches. On CAT1, VLAN 10 is chosen as native, but on CAT2 the native VLAN is not specified. What will happen in this scenario?

- A. 802.1Q giants frames could saturate the link.
- B. VLAN 10 on CAT1 and VLAN 1 on CAT2 will send untagged frames.
- C. A native VLAN mismatch error message will appear.
- D. VLAN 10 on CAT1 and VLAN 1 on CAT2 will send tagged frames.

Correct Answer: C

QUESTION 81

Refer to the exhibit. A technician is troubleshooting host connectivity issues on the switches. The hosts in VLANs 10 and 15 on Sw11 are unable to communicate with hosts in the same VLANs on Sw12. Hosts in the Admin VLAN are able to communicate. The port-to-VLAN assignments are identical on the two switches. What could be the problem?

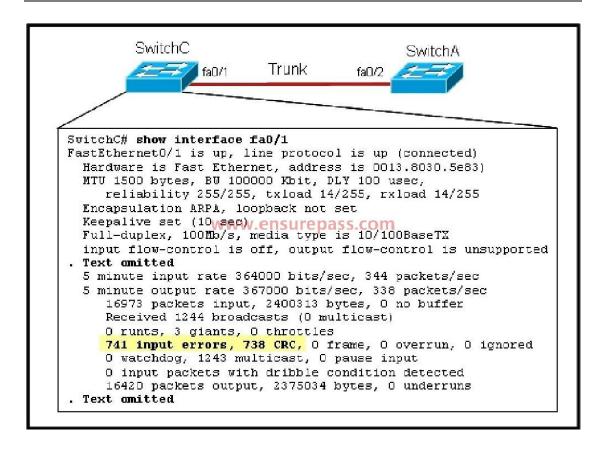


- A. The Fa0/1 port is not operational on one of the switches.
- B. The link connecting the switches has not been configured as a trunk.
- C. At least one port needs to be configured in VLAN 1 for VLANs 10 and 15 to be able to communicate.
- D. Port FastEthernet 0/1 needs to be configured as an access link on both switches.
- E. A router is required for hosts on SW11 in VLANs 10 and 15 to communicate with hosts in the same VLAN on Sw12.

Correct Answer: B

QUESTION 82

Refer to the exhibit. Given this output for SwitchC, what should the network administrator's next action be?

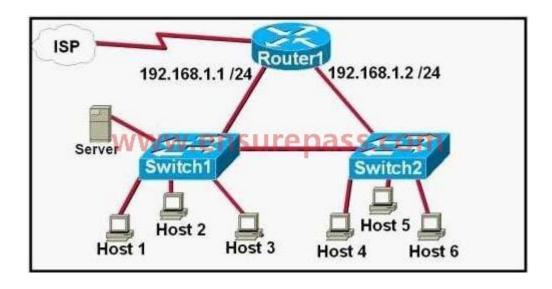


- A. Check the trunk encapsulation mode for SwitchC's fa0/1 port.
- B. Check the duplex mode for SwitchC's fa0/1 port.
- C. Check the duplex mode for SwitchA's fa0/2 port.
- D. Check the trunk encapsulation mode for SwitchA's fa0/2 port.

Correct Answer: C

QUESTION 83

Refer to the exhibit. A network technician is asked to design a small network with redundancy. The exhibit represents this design, with all hosts configured in the same VLAN. What conclusions can be made about this design?



- A. This design will function as intended.
- B. Spanning-tree will need to be used.
- C. The router will not accept the addressing scheme.
- D. The connection between switches should be a trunk.
- E. The router interfaces must be encapsulated with the 802.1Q protocol.

Correct Answer: C

QUESTION 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

Correct Answer: B

QUESTION 85

Given an IP address 172.16.28.252 with a subnet mask of 255.255.240.0, what is the correct network address?

- A. 172.16.16.0
- B. 172.16.0.0

C. 172.16.24.0

D. 172.16.28.0

Correct Answer: A

QUESTION 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

Correct Answer: A

QUESTION 87

You are working in a data center environment and are assigned the address range 10.188.31.0/23. You are asked to develop an IP addressing plan to allow the maximum number of subnets with as many as 30 hosts each. Which IP address range meets these requirements?

A. 10.188.31.0/26

B. 10.188.31.0/25

C. 10.188.31.0/28

D. 10.188.31.0/27

E. 10.188.31.0/29

Correct Answer: D

QUESTION 88

What are three features of the IPv6 protocol? (Choose three.)

A. optional IPsec

B. autoconfiguration

C. no broadcasts

D. complicated header

E. plug-and-play

F. checksums

Correct Answer: BCE

QUESTION 89

Which command enables IPv6 forwarding on a Cisco router?

- A. ipv6 local
- B. ipv6 host
- C. ipv6 unicast-routing
- D. ipv6 neighbor

Correct Answer: C

QUESTION 90

What is known as "one-to-nearest" addressing in IPv6?

- A. global unicast
- B. anycast
- C. multicast
- D. unspecified address

Correct Answer: B

QUESTION 91

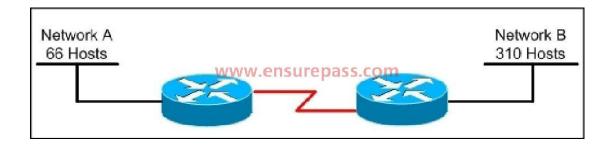
What is the first 24 bits in a MAC address called?

- A. NIC
- B. BIA
- C. OUI
- D. VAI

Correct Answer: C

QUESTION 92

Refer to the exhibit. Which subnet mask will place all hosts on Network B in the same subnet with the least amount of wasted addresses?

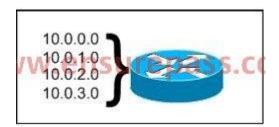


- A. 255.255.255.0
- B. 255.255.254.0
- C. 255.255.252.0
- D. 255.255.248.0

Correct Answer: B

QUESTION 93

Refer to the exhibit. What is the most appropriate summarization for these routes?



- A. 10.0.0.0 /21
- B. 10.0.0.0 /22
- C. 10.0.0.0 /23
- D. 10.0.0.0 /24

Correct Answer: B

QUESTION 94

Which two are features of IPv6? (Choose two.)

- A. anycast
- B. broadcast
- C. multicast
- D. podcast
- E. allcast

Correct Answer: AC

QUESTION 95

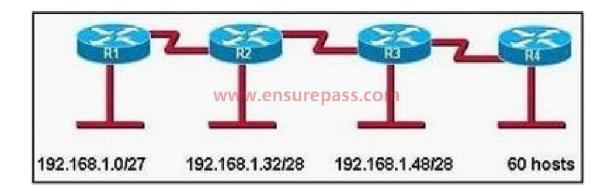
Which two of these statements are true of IPv6 address representation? (Choose two.)

- A. There are four types of IPv6 addresses: unicast, multicast, anycast, and broadcast.
- B. A single interface may be assigned multiple IPv6 addresses of any type.
- C. Every IPv6 interface contains at least one loopback address.
- D. The first 64 bits represent the dynamically created interface ID.
- E. Leading zeros in an IPv6 16 bit hexadecimal field are mandatory.

Correct Answer: BC

QUESTION 96

Refer to the exhibit. A new subnet with 60 hosts has been added to the network. Which subnet address should this network use to provide enough usable addresses while wasting the fewest addresses?

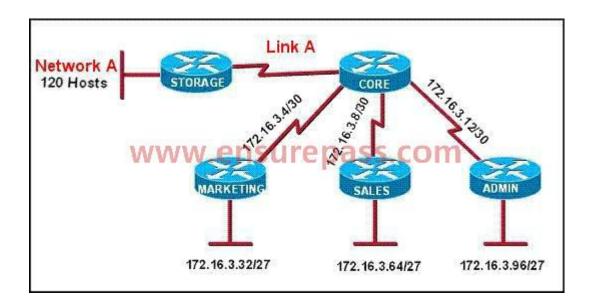


- A. 192.168.1.56/26
- B. 192.168.1.56/27
- C. 192.168.1.64/26
- D. 192.168.1.64/27

Correct Answer: C

QUESTION 97

Refer to the exhibit. All of the routers in the network are configured with the ip subnet-zero command. Which network addresses should be used for Link A and Network A? (Choose two.)



- A. Network A 172.16.3.48/26
- B. Network A 172.16.3.128/25
- C. Network A 172.16.3.192/26
- D. Link A 172.16.3.0/30
- E. Link A 172.16.3.40/30
- F. Link A 172.16.3.112/30

Correct Answer: BD

QUESTION 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

Correct Answer: C QUESTION 99

What will happen if a private IP address is assigned to a public interface connected to an ISP?

- A. Addresses in a private range will be not be routed on the Internet backbone.
- B. Only the ISP router will have the capability to access the public network.
- C. The NAT process will be used to translate this address to a valid IP address.

D. A conflict of IP addresses happens, because other public routers can use the same range.

Correct Answer: A

QUESTION 100

Which two benefits are provided by using a hierarchical addressing network addressing scheme? (Choose two.)

- A. reduces routing table entries
- B. auto-negotiation of media rates
- C. efficient utilization of MAC addresses
- D. dedicated communications between devices
- E. ease of management and troubleshooting

Correct Answer: AE

QUESTION 101

What is the alternative notation for the IPv6 address B514:82C3:0000:0000:0029:EC7A:0000:EC72?

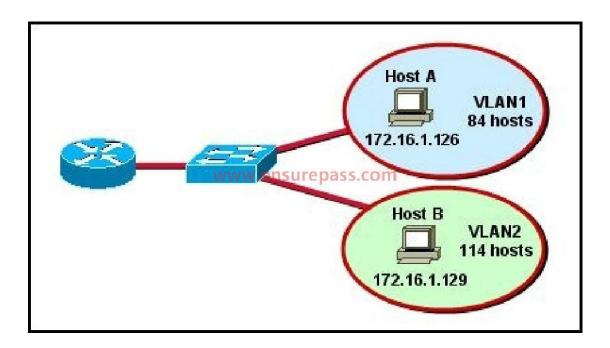
A. B514:82C3:0029:EC7A:EC72B. B514:82C3::0029:EC7A:EC72

C. B514:82C3:0029::EC7A:0000:EC72D. B514:82C3::0029:EC7A:0:EC72

Correct Answer: D

QUESTION 102

Refer to the diagram. All hosts have connectivity with one another. Which statements describe the addressing scheme that is in use in the network? (Choose three.)



- A. The subnet mask in use is 255.255.255.192.
- B. The subnet mask in use is 255.255.255.128.
- C. The IP address 172.16.1.25 can be assigned to hosts in VLAN1.
- D. The IP address 172.16.1.205 can be assigned to hosts in VLAN1.
- E. The LAN interface of the router is configured with one IP address.
- F. The LAN interface of the router is configured with multiple IP addresses.

Correct Answer: BCF

QUESTION 103

Which two statements describe characteristics of IPv6 unicast addressing? (Choose two.)

- A. Global addresses start with 2000::/3.
- B. Link-local addresses start with FE00:/12.
- C. Link-local addresses start with FF00::/10.
- D. There is only one loopback address and it is ::1.
- E. If a global address is assigned to an interface, then that is the only allowable address for the interface.

Correct Answer: AD

QUESTION 104

The network administrator has been asked to give reasons for moving from IPv4 to IPv6. What are two valid reasons for adopting IPv6 over IPv4? (Choose two.)

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- A. no broadcast
- B. change of source address in the IPv6 header
- C. change of destination address in the IPv6 header
- D. Telnet access does not require a password
- E. autoconfiguration
- F. NAT

Correct Answer: AE

QUESTION 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 Default Gateway: 192.168.20.25

Correct Answer: C

QUESTION 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. 255.255.254
- E. 255.255.255.240

Correct Answer: D

QUESTION 107

How many bits are contained in each field of an IPv6 address?

- A. 24
- B. 4
- C. 8
- D. 16

Correct Answer: D

QUESTION 108

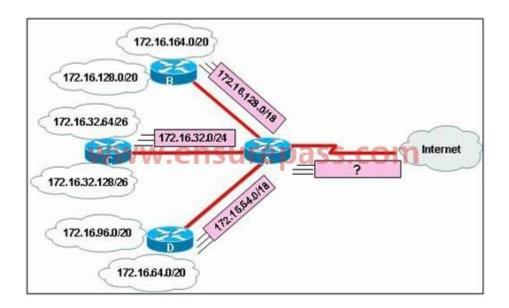
What are three approaches that are used when migrating from an IPv4 addressing scheme to an IPv6 scheme. (Choose three.)

- A. enable dual-stack routing
- B. configure IPv6 directly
- C. configure IPv4 tunnels between IPv6 islands
- D. use proxying and translation to translate IPv6 packets into IPv4 packets
- E. statically map IPv4 addresses to IPv6 addresses
- F. use DHCPv6 to map IPv4 addresses to IPv6 addresses

Correct Answer: ACE

QUESTION 109

Refer to the exhibit. In this VLSM addressing scheme, what summary address would be sent from router A?



- A. 172.16.0.0 /16
- B. 172.16.0.0 /20
- C. 172.16.0.0 /24
- D. 172.32.0.0 /16
- E. 172.32.0.0 /17
- F. 172.64.0.0 /16

Correct Answer: A

QUESTION 110

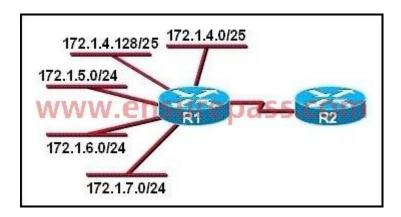
How is an EUI-64 format interface ID created from a 48-bit MAC address?

- A. by appending 0xFF to the MAC address
- B. by prefixing the MAC address with 0xFFEE
- C. by prefixing the MAC address with 0xFF and appending 0xFF to it
- D. by inserting 0xFFFE between the upper three bytes and the lower three bytes of the MAC address
- E. by prefixing the MAC address with 0xF and inserting 0xF after each of its first three bytes

Correct Answer: D

QUESTION 111

Refer to the exhibit. What is the most efficient summarization that R1 can use to advertise its networks to R2?



- A. 172.1.0.0/22
- B. 172.1.0.0/21
- C. 172.1.4.0/22
- D. 172.1.4.0/24
 - 172.1.5.0/24
 - 172.1.6.0/24
 - 172.1.7.0/24
- E. 172.1.4.0/25
 - 172.1.4.128/25
 - 172.1.5.0/24
 - 172.1.6.0/24
 - 172.1.7.0/24

Correct Answer: C

QUESTION 112

Which option is a valid IPv6 address?

- A. 2001:0000:130F::099a::12a
- B. 2002:7654:A1AD:61:81AF:CCC1
- C. FEC0:ABCD:WXYZ:0067::2A4
- D. 2004:1:25A4:886F::1

Correct Answer: D

QUESTION 113

Which three are characteristics of an IPv6 anycast address? (Choose three.)

- A. one-to-many communication model
- B. one-to-nearest communication model

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- C. any-to-many communication model
- D. a unique IPv6 address for each device in the group
- E. the same address for multiple devices in the group
- F. delivery of packets to the group interface that is closest to the sending device

Correct Answer: BEF

QUESTION 114

A national retail chain needs to design an IP addressing scheme to support a nationwide network. The company needs a minimum of 300 sub-networks and a maximum of 50 host addresses per subnet. Working with only one Class B address, which of the following subnet masks will support an appropriate addressing scheme? (Choose two.)

- A. 255.255.255.0
- B. 255.255.255.128
- C. 255.255.252.0
- D. 255.255.254
- E. 255.255.255.192
- F. 255.255.248.0

Correct Answer: BE

QUESTION 115

Which IPv6 address is valid?

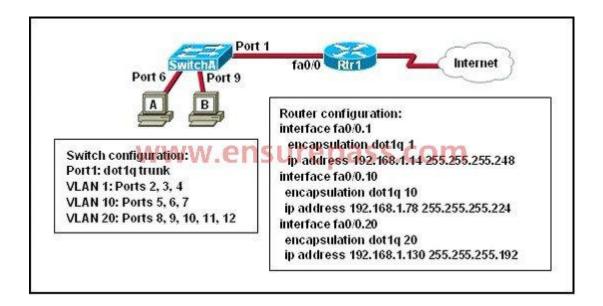
A. 2001:0db8:0000:130F:0000:0000:08GC:140B

B. 2001:0db8:0:130H::87C:140B C. 2031::130F::9C0:876A:130B D. 2031:0:130F::9C0:876A:130B

Correct Answer: D

QUESTION 116

Refer to the exhibit. A network administrator is adding two new hosts to SwitchA. Which three values could be used for the configuration of these hosts? (Choose three.)



A. host A IP address: 192.168.1.79
B. host A IP address: 192.168.1.64
C. host A default gateway: 192.168.1.78
D. host B IP address: 192.168.1.128
E. host B default gateway: 192.168.1.129
F. host B IP address: 192.168.1.190

Correct Answer: ACF

QUESTION 117

Which IPv6 address is the all-router multicast group?

A. FF02::1

B. FF02::2

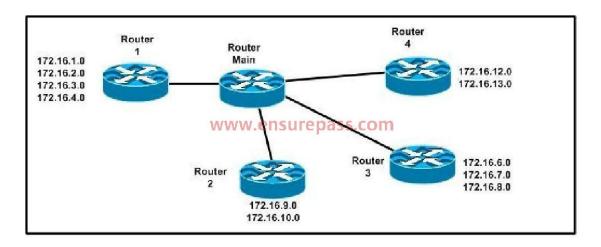
C. FF02::3

D. FF02::4

Correct Answer: B

QUESTION 118

Refer to the exhibit. Which address range efficiently summarizes the routing table of the addresses for router Main?



- A. 172.16.0.0./21
- B. 172.16.0.0./20
- C. 172.16.0.0./16
- D. 172.16.0.0/18

Correct Answer: B

QUESTION 119

Which command can you use to manually assign a static IPv6 address to a router interface?

- A. ipv6 autoconfig 2001:db8:2222:7272::72/64
- B. ipv6 address 2001:db8:2222:7272::72/64
- C. ipv6 address PREFIX_1 ::1/64
- D. ipv6 autoconfig

Correct Answer: B

QUESTION 120

Which of these represents an IPv6 link-local address?

A. FE80::380e:611a:e14f:3d69

B. FE81::280f:512b:e14f:3d69

C. FEFE:0345:5f1b::e14d:3d69

D. FE08::280e:611:a:f14f:3d69

Correct Answer: A

QUESTION 121

The network administrator is asked to configure 113 point-to-point links. Which IP addressing

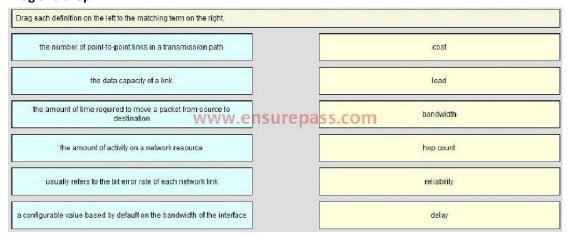
scheme defines the address range and subnet mask that meet the requirement and waste the fewest subnet and host addresses?

- A. 10.10.0.0/16 subnetted with mask 255.255.255.252
- B. 10.10.0.0/18 subnetted with mask 255.255.255.252
- C. 10.10.1.0/24 subnetted with mask 255.255.255.252
- D. 10.10.0.0/23 subnetted with mask 255.255.255.252
- E. 10.10.1.0/25 subnetted with mask 255.255.255.252

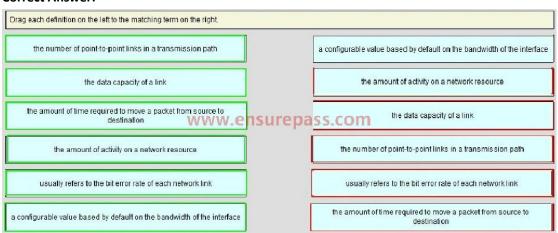
Correct Answer: D

QUESTION 122

Drag and drop.



Correct Answer:



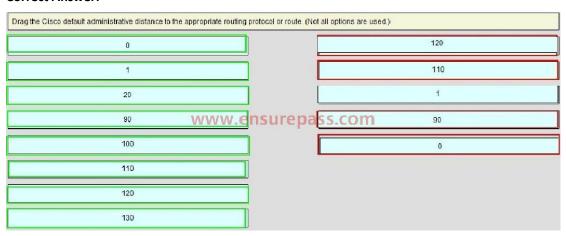
QUESTION 123

Drag and drop.

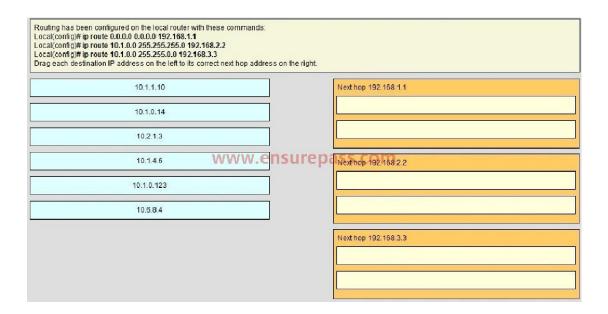
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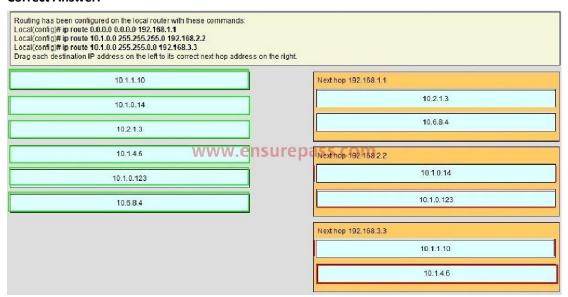
Correct Answer:



QUESTION 124 Drag and drop.



Correct Answer:



QUESTION 125

Which parameter or parameters are used to calculate OSPF cost in Cisco routers?

- A. Bandwidth
- B. Bandwidth and Delay
- C. Bandwidth, Delay, and MTU
- D. Bandwidth, MTU, Reliability, Delay, and Load

Correct Answer: A QUESTION 126

Why do large OSPF networks use a hierarchical design? (Choose three.)

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- A. to decrease latency by increasing bandwidth
- B. to reduce routing overhead
- C. to speed up convergence
- D. to confine network instability to single areas of the network
- E. to reduce the complexity of router configuration
- F. to lower costs by replacing routers with distribution layer switches

Correct Answer: BCD

QUESTION 127

Which command encrypts all plaintext passwords?

- A. Router# service password-encryption
- B. Router(config)# password-encryption
- C. Router(config)# service password-encryption
- D. Router# password-encryption

Correct Answer: C

QUESTION 128

Which two are advantages of static routing when compared to dynamic routing? (Choose two.)

- A. Configuration complexity decreases as network size increases.
- B. Security increases because only the network administrator may change the routing table.
- C. Route summarization is computed automatically by the router.
- D. Routing tables adapt automatically to topology changes.
- E. An efficient algorithm is used to build routing tables, using automatic updates.
- F. Routing updates are automatically sent to neighbors.
- G. Routing traffic load is reduced when used in stub network links.

Correct Answer: BG

QUESTION 129

A network administrator needs to allow only one Telnet connection to a router. For anyone viewing the configuration and issuing the show run command, the password for Telnet access should be encrypted. Which set of commands will accomplish this task?

A. service password-encryption

access-list 1 permit 192.168.1.0 0.0.0.255

line vty 04

login

password cisco access-class 1

B. enable password secret

line vty 0

login

password cisco

C. service password-encryption

line vty 1

login

password cisco

D. service password-encryption

line vty 04

login

password cisco

Correct Answer: C

QUESTION 130

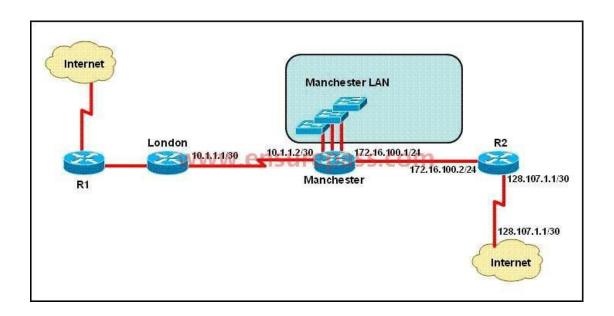
What is the effect of using the service password-encryption command?

- 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.

Correct Answer: E

QUESTION 131

Refer to the exhibit. The speed of all serial links is E1 and the speed of all Ethernet links is 100 Mb/s. A static route will be established on the Manchester router to direct traffic toward the Internet over the most direct path available. What configuration on the Manchester router will establish a route toward the Internet for traffic that originates from workstations on the Manchester LAN?

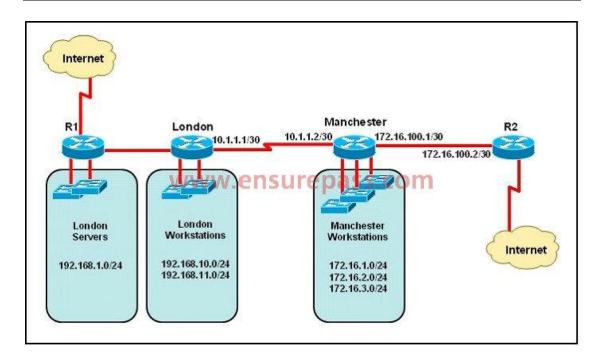


- A. ip route 0.0.0.0 255.255.255.0 172.16.100.2
- B. ip route 0.0.0.0 0.0.0.0 128.107.1.1
- C. ip route 0.0.0.0 255.255.255.252 128.107.1.1
- D. ip route 0.0.0.0 0.0.0.0 172.16.100.1
- E. ip route 0.0.0.0 0.0.0.0 172.16.100.2
- F. ip route 0.0.0.0 255.255.255 172.16.100.2

Correct Answer: E

QUESTION 132

Refer to the exhibit. The network administrator must establish a route by which London workstations can forward traffic to the Manchester workstations. What is the simplest way to accomplish this?

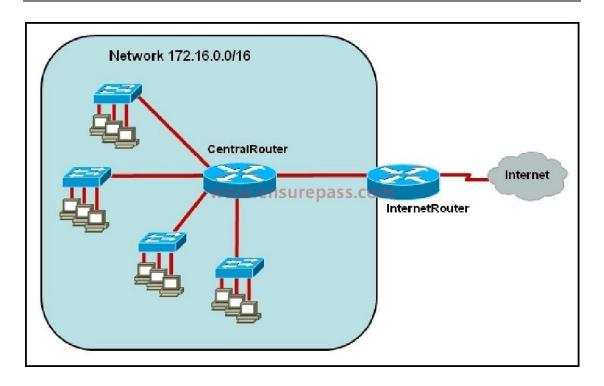


- A. Configure a dynamic routing protocol on London to advertise all routes to Manchester.
- B. Configure a dynamic routing protocol on London to advertise summarized routes to Manchester.
- C. Configure a dynamic routing protocol on Manchester to advertise a default route to the London router.
- D. Configure a static default route on London with a next hop of 10.1.1.1.
- E. Configure a static route on London to direct all traffic destined for 172.16.0.0/22 to 10.1.1.2.
- F. Configure Manchester to advertise a static default route to London.

Correct Answer: E

QUESTION 133

Refer to the exhibit. The network administrator requires easy configuration options and minimal routing protocol traffic. What two options provide adequate routing table information for traffic that passes between the two routers and satisfy the requests of the network administrator? (Choose two.)



- A. a dynamic routing protocol on InternetRouter to advertise all routes to CentralRouter.
- B. a dynamic routing protocol on InternetRouter to advertise summarized routes to CentralRouter.
- C. a static route on InternetRouter to direct traffic that is destined for 172.16.0.0/16 to CentralRouter.
- D. a dynamic routing protocol on CentralRouter to advertise all routes to InternetRouter.
- E. a dynamic routing protocol on CentralRouter to advertise summarized routes to InternetRouter.
- F. a static, default route on CentralRouter that directs traffic to InternetRouter.

Correct Answer: CF

QUESTION 134

Refer to the exhibit. What is the effect of the configuration that is shown?

line vty 0 4 password 7 030752180500 login transport input ssh

- 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.

Correct Answer: D

QUESTION 135

Refer to the exhibit. What is the reason that the interface status is "administratively down, line protocol down"?

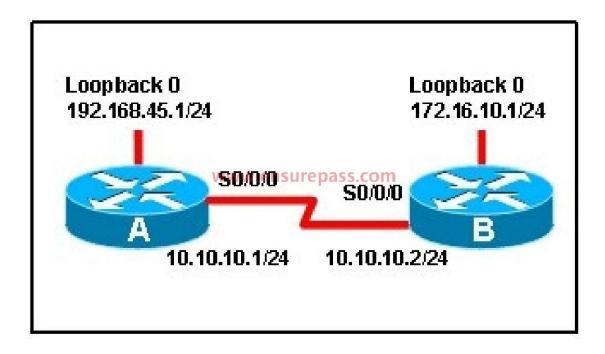
Router# **show interface s0/0/0** Serial 0/0/0 is administratively down, line protocol is down

- A. There is no encapsulation type configured.
- B. There is a mismatch in encapsulation types.
- C. The interface is not receiving any keepalives.
- D. The interface has been configured with the shutdown command.
- E. The interface needs to be configured as a DTE device.
- F. The wrong type of cable is connected to the interface.

Correct Answer: D

QUESTION 136

Refer to the exhibit. When running OSPF, what would cause router A not to form an adjacency with router B?



- A. The loopback addresses are on different subnets.
- B. The value of the dead timers on the routers are different.
- C. Route summarization is enabled on both routers.
- D. The process identifier on router A is different than the process identifier on router B.

Correct Answer: B

QUESTION 137

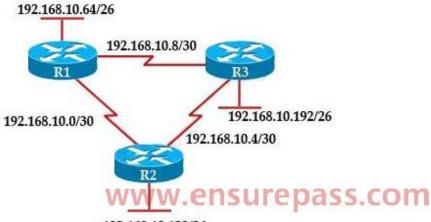
A router has learned three possible routes that could be used to reach a destination network. One route is from EIGRP and has a composite metric of 20514560. Another route is from OSPF with a metric of 782. The last is from RIPv2 and has a metric of 4. Which route or routes will the router install in the routing table?

- A. the OSPF route
- B. the EIGRP route
- C. the RIPv2 route
- D. all three routes
- E. the OSPF and RIPv2 routes

Correct Answer: B

QUESTION 138

Refer to the exhibit. The company uses EIGRP as the routing protocol. What path will packets take from a host on the 192.168.10.192/26 network to a host on the LAN attached to router R1?



192.168.10.128/26

R3# show ip route

Gateway of last resort is not set

192 168.10.0/24 is variably subnetted, 6 subnets, 2 masks

D 192.168. 10.64/26 [90/2195456] via 192.168.10.9, 00:03:31, Serial0/0

D 192.168.10.0/30 [90/2681856] via 192.168.10.9, 00:03:31, Serial0/0

C 192.168.10.4/30 is directly connected, Serial 0/1

C 192.168.10.8/30 is directly connected, Serial 0/0

C 192.168.10.192/26 is directly connected, FastEthernetO/O

D 192.168.10.128/26 [90/2195456] via 192.168.10.5,00:03 31, Serial 0/1

- A. The path of the packets will be R3 to R2 to R1.
- B. The path of the packets will be R3 to R1 to R2.
- C. The path of the packets will be both R3 to R2 to R1 AND R3 to R1.
- D. The path of the packets will be R3 to R1.

Correct Answer: D

QUESTION 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?

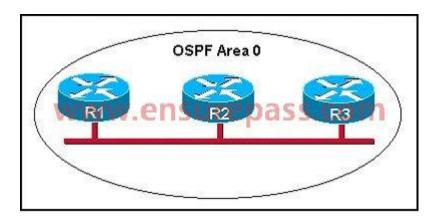
- A. Router# show ip eigrp adjacency
- B. Router# show ip eigrp topology
- C. Router# show ip eigrp interfaces
- D. Router# show ip eigrp neighbors

Correct Answer: D

QUESTION 140

Refer to the graphic. R1 is unable to establish an OSPF neighbor relationship with R3. What are

possible reasons for this problem? (Choose two.)



- A. All of the routers need to be configured for backbone Area 1.
- B. R1 and R2 are the DR and BDR, so OSPF will not establish neighbor adjacency with R3.
- C. A static route has been configured from R1 to R3 and prevents the neighbor adjacency from being established.
- D. The hello and dead interval timers are not set to the same values on R1 and R3.
- E. EIGRP is also configured on these routers with a lower administrative distance.
- F. R1 and R3 are configured in different areas.

Correct Answer: DF

QUESTION 141

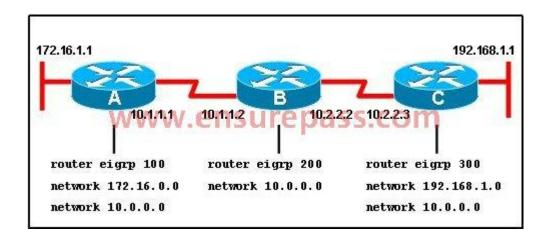
What is a global command?

- 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

Correct Answer: A

QUESTION 142

Refer to the exhibit. When running EIGRP, what is required for RouterA to exchange routing updates with RouterC?



- A. AS numbers must be changed to match on all the routers
- B. Loopback interfaces must be configured so a DR is elected
- C. The no auto-summary command is needed on Router A and Router C
- D. Router B needs to have two network statements, one for each connected network

Correct Answer: A

QUESTION 143

A Cisco router is booting and has just completed the POST process. It is now ready to find and load an IOS image. What function does the router perform next?

- A. It checks the configuration register.
- B. It attempts to boot from a TFTP server.
- C. It loads the first image file in flash memory.

Correct Answer: A

QUESTION 144

Which command displays CPU utilization?

- A. show protocols
- B. show process
- C. show system
- D. show version

Correct Answer: B

QUESTION 145

Refer to the exhibit. What is the meaning of the output MTU 1500 bytes?

```
Router# show interfaces ethernet 0
Ethernet0 is up, line protocol is up
Hardware is QUICC Ethernet, address is 00c0.ab73.dead (bia 0010.7bcc.7321)
MTU 1500 bytes, BW 10000 Kbit, DLY 1000 usec,
reliability 255/255, txload 1/255, rxload 1/255
Encapsulation ARPA, loopback not set
Keepalive set (10 sec)
<output omitted>
Router#
```

- A. The maximum number of bytes that can traverse this interface per second is 1500.
- B. The minimum segment size that can traverse this interface is 1500 bytes.
- C. The maximum segment size that can traverse this interface is 1500 bytes.
- D. The minimum packet size that can traverse this interface is 1500 bytes.
- E. The maximum packet size that can traverse this interface is 1500 bytes.
- F. The maximum frame size that can traverse this interface is 1500 bytes.

Correct Answer: E

QUESTION 146

On a corporate network, hosts on the same VLAN can communicate with each other, but they are unable to communicate with hosts on different VLANs. What is needed to allow communication between the VLANs?

- A. a router with subinterfaces configured on the physical interface that is connected to the switch
- B. a router with an IP address on the physical interface connected to the switch
- C. a switch with an access link that is configured between the switches
- D. a switch with a trunk link that is configured between the switches

Correct Answer: A

QUESTION 147

What two things will a router do when running a distance vector routing protocol? (Choose two.)

- A. Send periodic updates regardless of topology changes.
- B. Send entire routing table to all routers in the routing domain.
- C. Use the shortest-path algorithm to the determine best path.
- D. Update the routing table based on updates from their neighbors.

E. Maintain the topology of the entire network in its database.

Correct Answer: AD

QUESTION 148

Which command is used to display the collection of OSPF link states?

- A. show ip ospf link-state
- B. show ip ospf Isa database
- C. show ip ospf neighbors
- D. show ip ospf database

Correct Answer: D

QUESTION 149

Refer to the exhibit. The technician wants to upload a new IOS in the router while keeping the existing IOS. What is the maximum size of an IOS file that could be loaded if the original IOS is also kept in flash?

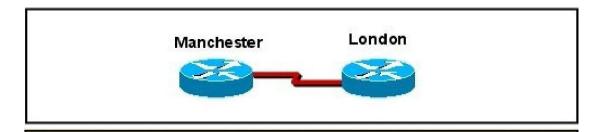
System flash director
File Length Name/status
1 3802992 c827v-y6-mz/121-1:XBss.com
[3803056 bytes used,4585552 available, 8388608 total]
8192K bytes of processor board System flash(Read/Write)

- A. 3 MB
- B. 4 MB
- C. 5 MB
- D. 7 MB
- E. 8 MB

Correct Answer: B

QUESTION 150

Refer to the exhibit. The two exhibited devices are the only Cisco devices on the network. The serial network between the two devices has a mask of 255.255.255.252. Given the output that is shown, what three statements are true of these devices? (Choose three.)



Device ID: London Entry address (es): IP address: 10.1.1.2

Platform: cisco 2610, Capabilities: Router

Interface: Serial10/0, Port ID (outgoing port): Serial0/1

Holdtime: 125 sec

<output omitted>

A. The Manchester serial address is 10.1.1.1.

- B. The Manchester serial address is 10.1.1.2.
- C. The London router is a Cisco 2610.
- D. The Manchester router is a Cisco 2610.
- E. The CDP information was received on port Serial0/0 of the Manchester router.
- F. The CDP information was sent by port Serial0/0 of the London router.

Correct Answer: ACE

QUESTION 151

If IP routing is enabled, which two commands set the gateway of last resort to the default gateway? (Choose two.)

- A. ip default-gateway 0.0.0.0
- B. ip route 172.16.2.1 0.0.0.0 0.0.0.0
- C. ip default-network 0.0.0.0
- D. ip default-route 0.0.0.0 0.0.0.0 172.16.2.1
- E. ip route 0.0.0.0 0.0.0.0 172.16.2.1

Correct Answer: CE

QUESTION 152

Which parameter would you tune to affect the selection of a static route as a backup, when a dynamic protocol is also being used?

- A. hop count
- B. administrative distance
- C. link bandwidth
- D. link delay
- E. link cost

Correct Answer: B

QUESTION 153

Refer to the exhibit.

Interface	IP-Address	OK?	Method	Status	Protocol
FastEthernet0/0	192.168.12.48	YES	manual	up	up
FastEthernet0/1	192.168.12.65	YES	manual	up	up
Serial0/0	192/168/12/121	EYES	s manual	up	up
Serial0/1	unassigned	YES	unset	up	up
Serial0/1.102	192.168.12.125	YES	manual	up	up
Serial0/1.103	192.168.12.129	YES	manual	up	up
Serial0/1.104	192.168.12.133	YES	manual	up	up
City#				Arrange at	Second W.

A network associate has configured OSPF with the command:

City(config-router)# network 192.168.12.64 0.0.0.63 area 0

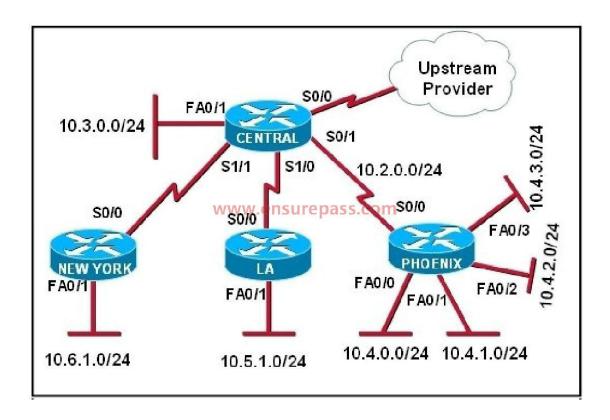
After completing the configuration, the associate discovers that not all the interfaces are participating in OSPF. Which three of the interfaces shown in the exhibit will participate in OSPF according to this configuration statement? (Choose three.)

- A. FastEthernet0 /0
- B. FastEthernet0 /1
- C. Serial0/0
- D. Serial0/1.102
- E. Serial0/1.103
- F. Serial0/1.104

Correct Answer: BCD

QUESTION 154

Refer to the exhibit. The Lakeside Company has the internetwork in the exhibit. The administrator would like to reduce the size of the routing table on the Central router. Which partial routing table entry in the Central router represents a route summary that represents the LANs in Phoenix but no additional subnets?

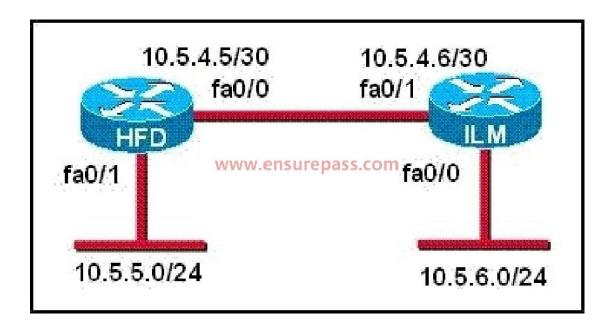


- A. 10.0.0.0/22 is subnetted, 1 subnets
 D 10.0.0.0 [90/20514560] via 10.2.0.2, 6w0d, Serial0/1
- B. 10.0.0.0/28 is subnetted, 1 subnetsD 10.2.0.0 [90/20514560] via 10.2.0.2, 6w0d, Serial0/1
- C. 10.0.0.0/30 is subnetted, 1 subnetsD 10.2.2.0 [90/20514560] via 10.2.0.2, 6w0d, Serial0/1
- D. 0.0.0/22 is subnetted, 1 subnetsD 10.4.0.0 [90/20514560] via 10.2.0.2, 6w0d, Serial0/1
- E. 10.0.0.0/28 is subnetted, 1 subnetsD 10.4.4.0 [90/20514560] via 10.2.0.2, 6w0d, Serial0/1
- F. 10.0.0.0/30 is subnetted, 1 subnets
 D 10.4.4.4 [90/20514560] via 10.2.0.2, 6w0d, Serial0/1

Correct Answer: D

QUESTION 155

Refer to the graphic. A static route to the 10.5.6.0/24 network is to be configured on the HFD router. Which commands will accomplish this? (Choose two.)



- A. HFD(config)# ip route 10.5.6.0 0.0.0.255 fa0/0
- B. HFD(config)# ip route 10.5.6.0 0.0.0.255 10.5.4.6
- C. HFD(config)# ip route 10.5.6.0 255.255.255.0 fa0/0
- D. HFD(config)# ip route 10.5.6.0 255.255.255.0 10.5.4.6
- E. HFD(config)# ip route 10.5.4.6 0.0.0.255 10.5.6.0
- F. HFD(config)# ip route 10.5.4.6 255.255.255.0 10.5.6.0

Correct Answer: CD

QUESTION 156

Before installing a new, upgraded version of the IOS, what should be checked on the router, and which command should be used to gather this information? (Choose two.)

- A. the amount of available ROM
- B. the amount of available flash and RAM memory
- C. the version of the bootstrap software present on the router
- D. show version
- E. show processes
- F. show running-config

Correct Answer: BD

QUESTION 157

Which command reveals the last method used to powercycle a router?

- A. show reload
- B. show boot
- C. show running-config
- D. show version

Correct Answer: D

QUESTION 158

Which command would you use on a Cisco router to verify the Layer 3 path to a host?

- A. tracert address
- B. traceroute address
- C. telnet address
- D. ssh address

Correct Answer: B

QUESTION 159

What information does a router running a link-state protocol use to build and maintain its topological database? (Choose two.)

- A. hello packets
- B. SAP messages sent by other routers
- C. LSAs from other routers
- D. beacons received on point-to-point links
- E. routing tables received from other link-state routers
- F. TTL packets from designated routers

Correct Answer: AC

QUESTION 160

Which statements describe the routing protocol OSPF? (Choose three.)

- A. It supports VLSM.
- B. It is used to route between autonomous systems.
- C. It confines network instability to one area of the network.
- D. It increases routing overhead on the network.
- E. It allows extensive control of routing updates.
- F. It is simpler to configure than RIP v2.

Correct Answer: ACE

Refer to the exhibit. A network administrator configures a new router and enters the copy startup-config running-config command on the router. The network administrator powers down the router and sets it up at a remote location. When the router starts, it enters the system configuration dialog as shown. What is the cause of the problem?

-- System Configuration Dialog --

Would you like to enter the initial configuration dialog? [yes/no]: % Please answer 'yes' or 'no'.

"Would you like to enter the initial configuration dialog? [yes/ho]: n

Would you like to terminate autoinstall? [yes]:

Press RETURN to get started!

- A. The network administrator failed to save the configuration.
- B. The configuration register is set to 0x2100.
- C. The boot system flash command is missing from the configuration.
- D. The configuration register is set to 0x2102.
- E. The router is configured with the boot system startup command.

Correct Answer: A

QUESTION 162

What is the default administrative distance of OSPF?

- A. 90
- B. 100
- C. 110
- D. 120

Correct Answer: C

QUESTION 163

Which characteristics are representative of a link-state routing protocol? (Choose three.)

- A. provides common view of entire topology
- B. exchanges routing tables with neighbors
- C. calculates shortest path
- D. utilizes event-triggered updates
- E. utilizes frequent periodic updates

Correct Answer: ACD

QUESTION 164

Refer to the exhibit. According to the routing table, where will the router send a packet destined for 10.1.5.65?

Network	Interface	Next-hop	
10.1.1.0/24	e0	directly connected	
10.1.2.0/24	e1	directly connected	
10.1.3.0/25	s0	directly connected	
10.1.4.0/24	ensure	directly connected	
10.1.5.0/24	e0	10.1.1.2	
10.1.5.64/28	e1	10.1.2.2	
10.1.5.64/29	s0	10.1.3.3	
10.1.5.64/27	s1	10.1.4.4	

A. 10.1.1.2

B. 10.1.2.2

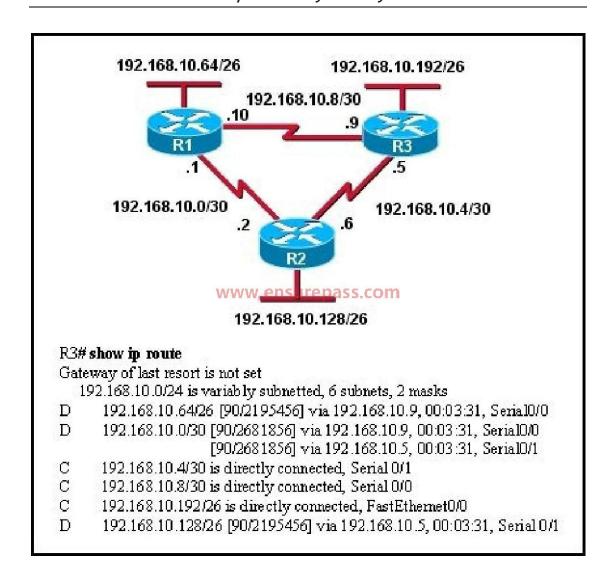
C. 10.1.3.3

D. 10.1.4.4

Correct Answer: C

QUESTION 165

Refer to the exhibit. Based on the exhibited routing table, how will packets from a host within the 192.168.10.192/26 LAN be forwarded to 192.168.10.1?

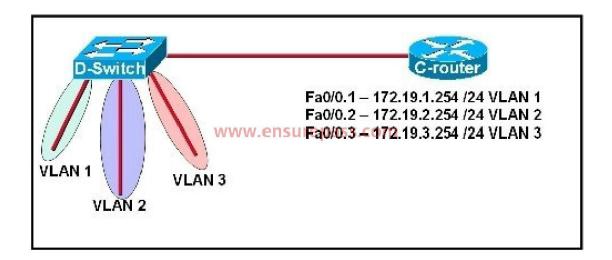


- A. The router will forward packets from R3 to R2 to R1.
- B. The router will forward packets from R3 to R1 to R2.
- C. The router will forward packets from R3 to R2 to R1 AND from R3 to R1.
- D. The router will forward packets from R3 to R1.

Correct Answer: C

QUESTION 166

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.

Correct Answer: D

QUESTION 167

Refer to the exhibit. Why is flash memory erased prior to upgrading the IOS image from the TFTP server?

Router# copy tftp flash
Address or name of remote host []? 192.168.2.167
Source filename []? c1600-k8sy-mz.123-16a.bin
Destination filename [c1600-k8sy-mz.123-16a.bin]?
Accessing tftp://192.168.2.167/ c1600-k8sy-mz.l23-16a.bin
Erasing flash before copying? [confirm]
Erasing the flash filesystem will remove all files! continue? [confirm]
Erasing device
Eeeeeeeeeeeeeeeeeeeeeeee
Eeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeee
Erase of flash: complete www.ensurepass.com
Loading c1600-k8sy-mz.l23-16a.bin from 192.168.2.167 (via Ethernet0):
in miniminiminiminimi
[OK - 6888962/13777920 bytes]
verifying checksum OK (0x78F3)
6888962 bytes copied in 209.920 secs (32961 bytes/sec)
Router#

- A. The router cannot verify that the Cisco IOS image currently in flash is valid.
- B. Flash memory on Cisco routers can contain only a single IOS image.
- C. Erasing current flash content is requested during the copy dialog.
- D. In order for the router to use the new image as the default, it must be the only IOS image in flash.

Correct Answer: C

QUESTION 168

Which command would you configure globally on a Cisco router that would allow you to view directly connected Cisco devices?

- A. enable cdp
- B. cdp enable
- C. cdp run
- D. run cdp

Correct Answer: C

QUESTION 169

Refer to the exhibit. Which address and mask combination represents a summary of the routes learned by EIGRP?

Gateway of last resort is not set

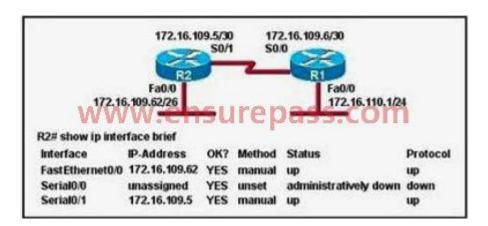
192.168.25.0/30 is subnetted, 4 subnets

- D 192.168.25.20 [90/2681856] via 192.168.15.5, 00:00:10, Serial0/1
- D 192.168.25.16 [90/1823638] via 192.168.15.5, 00:00:50, Serial0/1
- D 192.168.25.24 [90/3837233] via 192.168.15.5, 00:05:23, Serial0/1
- D 192.168.25.28 [90/8127323] via 192.168.15.5, 00:06:45, Serial0/1
- C 192.168.15.4/30 is directly connected, Serial0/1
- C 192.168.2.0/24 is directly connected, FastEthernet0/0
- A. 192.168.25.0 255.255.255.240
- B. 192.168.25.0 255.255.255.252
- C. 192.168.25.16 255.255.255.240
- D. 192.168.25.16 255.255.255.252
- E. 192.168.25.28 255.255.255.240
- F. 192.168.25.28 255.255.255.252

Correct Answer: C

QUESTION 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.

Correct Answer: C

Which two locations can be configured as a source for the IOS image in the boot system command? (Choose two.)

- A. RAM
- B. NVRAM
- C. flash memory
- D. HTTP server
- E. TFTP server
- F. Telnet server

Correct Answer: CE

QUESTION 172

Refer to the exhibit. Given the output for this command, if the router ID has not been manually set, what router ID will OSPF use for this router?

```
RouterD# show ip interface brief
Interface IP-Address OK? Method Status Protocol
FastEthernetO/O 192.168.5.3 YES manual up up
FastEthernetO/I 10.1.1.2 YES manual up up
LoopbackO 172.16.5.1 YES NVRAM up up
Loopback1 10.154.154.1 YES NVRAM up up
```

- A. 10.1.1.2
- B. 10.154.154.1
- C. 172.16.5.1
- D. 192.168.5.3

Correct Answer: C

QUESTION 173

Which two statements describe the process identifier that is used in the command to configure OSPF on a router? (Choose two.)

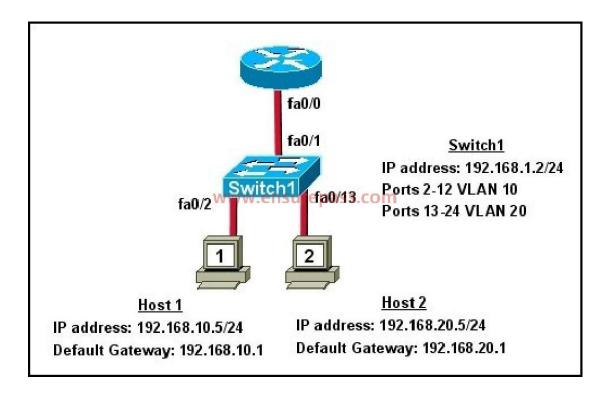
Router(config)# router ospf 1

- A. All OSPF routers in an area must have the same process ID.
- B. Only one process number can be used on the same router.
- C. Different process identifiers can be used to run multiple OSPF processes
- D. The process number can be any number from 1 to 65,535.
- E. Hello packets are sent to each neighbor to determine the processor identifier.

Correct Answer: CD

QUESTION 174

Refer to the exhibit. What commands must be configured on the 2950 switch and the router to allow communication between host 1 and host 2? (Choose two.)



- A. Router(config)# interface fastethernet 0/0
 Router(config-if)# ip address 192.168.1.1 255.255.255.0
 Router(config-if)# no shut down
- B. Router(config)# interface fastethernet 0/0

Router(config-if)# no shut down

Router(config)# interface fastethernet 0/0.1

Router(config-subif)# encapsulation dot1q 10

Router(config-subif)# ip address 192.168.10.1 255.255.255.0

Router(config)# interface fastethernet 0/0.2

Router(config-subif)# encapsulation dot1q 20

Router(config-subif)# ip address 192.168.20.1 255.255.255.0

- C. Router(config)# router eigrp 100 Router(config-router)# network 192.168.10.0 Router(config-router)# network 192.168.20.0
- D. Switch1(config)# vlan databaseSwitch1(config-vlan)# vtp domain XYZSwitch1(config-vlan)# vtp server
- E. Switch1(config)# interface fastethernet 0/1 Switch1(config-if)# switchport mode trunk
- F. Switch1(config)# interface vlan 1Switch1(config-if)# ip default-gateway 192.168.1.1

Correct Answer: BE

QUESTION 175

Refer to the exhibit. For what two reasons has the router loaded its IOS image from the location that is shown? (Choose two.)

```
Routerl> show version
Cisco Internetwork Operating System Software
IOS (tm) 7200 Software (C7200-J-M), Experimental Version 11.3(19970915:164752)
[hampton-nitro-baseline 249]
Copyright (c) 1986-1997 by cisco Systems, Inc.
Compiled Wed 08-0ct-97 06:39 by hampton
Image text-base: 0x60008900, data-base: 0x60B98000

ROM: System Bootstrap, Version 11.1(11855) [beta 2], INTERIM SOFTWARE
BOOTFLASH: 7200 Software (C7200-B00T-M), Version 11.1(472), RELEASE SOFTWARE (fcl)

Routerl uptime is 23 hours, 33 minutes
System restarted by abort at PC 0x6022322C at 10:50:55 PDT Tue Oct 21 1997
System image file is "tftp://172.16.1.129/hampton/nitro/c7200-j-mz"

cisco 7206 (NPE150) processor with S7344K/8192K bytes of memory.

<output omitted>
Configuration register is 0x2102
```

- A. Router1 has specific boot system commands that instruct it to load IOS from a TFTP server.
- B. Router1 is acting as a TFTP server for other routers.
- C. Router1 cannot locate a valid IOS image in flash memory.
- D. Router1 defaulted to ROMMON mode and loaded the IOS image from a TFTP server.
- E. Cisco routers will first attempt to load an image from TFTP for management purposes.

Correct Answer: AC

Refer to the exhibit. What can be determined about the router from the console output?

```
1 FastEthernet/IEEE 802.3 interface(s)
125K bytes of non-volatile configuration memory.
65536K bytes of ATA PCMCIA card at slot 0 (Sector size 512 bytes).
8192K bytes of Flash internal SIMM (Sector Size 256K).
--- System Configuration Dialog ---
Would you like to enter the initial configuration dialog? [yes/no]:
```

- A. No configuration file was found in NVRAM.
- B. No configuration file was found in flash.
- C. No configuration file was found in the PCMCIA card.
- D. Configuration file is normal and will load in 15 seconds.

Correct Answer: A

QUESTION 177

Which three elements must be used when you configure a router interface for VLAN trunking? (Choose three.)

- A. one physical interface for each subinterface
- B. one IP network or subnetwork for each subinterface
- C. a management domain for each subinterface
- D. subinterface encapsulation identifiers that match VLAN tags
- E. one subinterface per VLAN
- F. subinterface numbering that matches VLAN tags

Correct Answer: BDE

QUESTION 178

Which commands are required to properly configure a router to run OSPF and to add network 192.168.16.0/24 to OSPF area 0? (Choose two.)

- A. Router(config)# router ospf 0
- B. Router(config)# router ospf 1
- C. Router(config)# router ospf area 0
- D. Router(config-router)# network 192.168.16.0 0.0.0.255 0
- E. Router(config-router)# network 192.168.16.0 0.0.0.255 area 0

F. Router(config-router)# network 192.168.16.0 255.255.255.0 area 0

Correct Answer: BE

QUESTION 179

A router receives information about network 192.168.10.0/24 from multiple sources. What will the router consider the most reliable information about the path to that network?

- A. a directly connected interface with an address of 192.168.10.254/24
- B. a static route to network 192.168.10.0/24
- C. a RIP update for network 192.168.10.0/24
- D. an OSPF update for network 192.168.0.0/16
- E. a default route with a next hop address of 192.168.10.1
- F. a static route to network 192.168.10.0/24 with a local serial interface configured as the next hop

Correct Answer: A

QUESTION 180

What is the default maximum number of equal-cost paths that can be placed into the routing table of a Cisco OSPF router?

- A. 2
- B. 4
- C. 16
- D. unlimited

Correct Answer: B

QUESTION 181

Which command shows your active Telnet connections?

- A. show cdp neigbors
- B. show session
- C. show users
- D. show vty logins

Correct Answer: B

Which type of EIGRP route entry describes a feasible successor?

- A. a backup route, stored in the routing table
- B. a primary route, stored in the routing table
- C. a backup route, stored in the topology table
- D. a primary route, stored in the topology table

Correct Answer: C

QUESTION 183

Refer to the exhibit. Which of these statements correctly describes the state of the switch once the boot process has been completed?

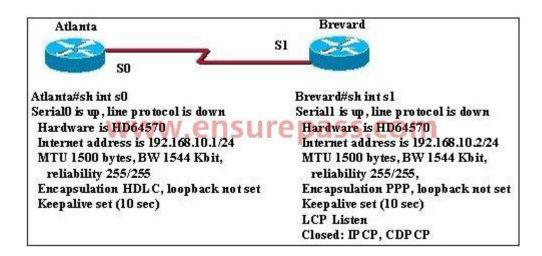
```
00:00:39: %LINEPROTO-5-UPDOWN: Line protocol on Interface Vlan1, changed state to down
00:00:40: %SPANTREE-5-EXTENDED_SYSID: Extended SysId enabled for type vlan
00:00:42: %SYS-5-CONFIG_I: Configured from memory by console
00:00:42: %SYS-5-RESTART: System restarted --
Cisco IOS Software, C2960 Software (C2960-LANBASEK9-M), Version 12.2(25)SEE2, RELEASE SOFTWARE (fc1)
Copyright (c) 1986-2006 by Cisco Systems, Inc.
Compiled Fri 28-Jul-06 11:57 by yenanh
00:00:44: %LINK-5-CHANGED: Interface Vlan1, changed state to administratively down
00:00:44: %LINK-3-UPDOWN: Interface FastEthernet0/1, changed state to up
00:00:44: %LINK-3-UPDOWN: Interface FastEthernet0/2, changed state to up
00:00:44: %LINK-3-UPDOWN: Interface FastEthernet0/11, changed state to up
00:00:45: %LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/1, changed state to up
00:00:45: %LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/2, changed state to up
00:00:45: %LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/11, changed state to up
00:00:48: %LINK-3-UPDOWN: Interface FastEthernet0/12, changed state to up
00:00:49: %LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/12, changed state to up
```

- A. As FastEthernet0/12 will be the last to come up, it will be blocked by STP.
- B. Remote access management of this switch will not be possible without configuration change.
- C. More VLANs will need to be created for this switch.
- D. The switch will need a different IOS code in order to support VLANs and STP.

Correct Answer: B

QUESTION 184

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.

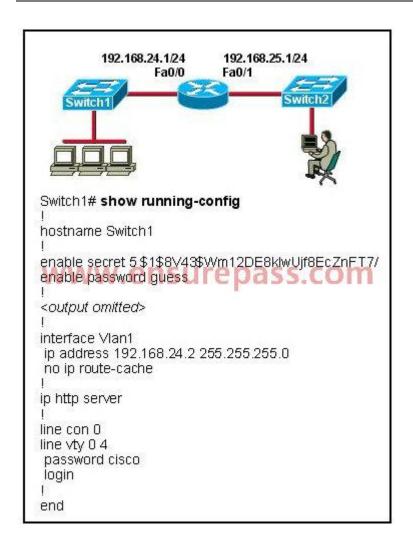


- A. incompatible IP address
- B. insufficient bandwidth
- C. incorrect subnet mask
- D. incompatible encapsulation
- E. link reliability too low
- F. IPCP closed

Correct Answer: D

QUESTION 185

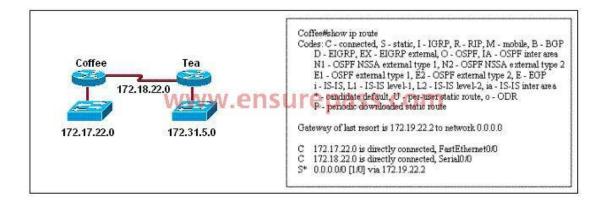
The network administrator cannot connect to Switch1 over a Telnet session, although the hosts attached to Switch1 can ping the interface Fa0/0 of the router. Given the information in the graphic and assuming that the router and Switch2 are configured properly, which of the following commands should be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



- A. Switch1(config)# line con0Switch1(config-line)# password ciscoSwitch1(config-line)#login
- B. Switch1(config)# interface fa0/1Switch1(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 fa0/1Switch1(config-if)# duplex fullSwitch1(config-if)# speed 100
- E. Switch1(config)# interface fa0/1Switch1(config-if)# switchport mode trunk

Correct Answer: C

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.

Correct Answer: C

QUESTION 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.

Correct Answer: C

Which statement is correct regarding the operation of DHCP?

- A. A DHCP client uses a ping to detect address conflicts.
- B. A DHCP server uses a gratuitous ARP to detect DHCP clients.
- C. A DHCP client uses a gratuitous ARP to detect a DHCP server.
- D. If an address conflict is detected, the address is removed from the pool and an administrator must resolve the conflict.
- E. If an address conflict is detected, the address is removed from the pool for an amount of time configurable by the administrator.
- F. If an address conflict is detected, the address is removed from the pool and will not be reused until the server is rebooted.

Correct Answer: D

QUESTION 189

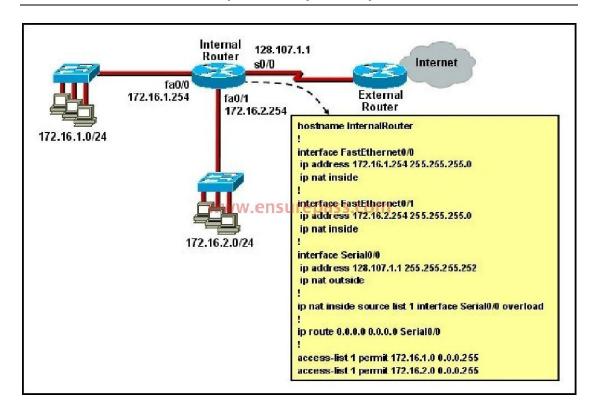
Which statement describes the process of dynamically assigning IP addresses by the DHCP server?

- A. Addresses are allocated after a negotiation between the server and the host to determine the length of the agreement.
- B. Addresses are permanently assigned so that the hosts uses the same address at all times.
- C. Addresses are assigned for a fixed period of time, at the end of the period, a new request for an address must be made.
- D. Addresses are leased to hosts, which periodically contact the DHCP server to renew the lease.

Correct Answer: D

QUESTION 190

Refer to the exhibit. What statement is true of the configuration for this network?



- A. The configuration that is shown provides inadequate outside address space for translation of the number of inside addresses that are supported.
- B. Because of the addressing on interface FastEthernet0/1, the Serial0/0 interface address will not support the NAT configuration as shown.
- C. The number 1 referred to in the ip nat inside source command references access-list number
- D. ExternalRouter must be configured with static routes to networks 172.16.1.0/24 and 172.16.2.0/24.

Correct Answer: C

QUESTION 191

What are two benefits of using NAT? (Choose two.)

- A. NAT facilitates end-to-end communication when IPsec is enabled.
- B. NAT eliminates the need to re-address all hosts that require external access.
- C. NAT conserves addresses through host MAC-level multiplexing.
- D. Dynamic NAT facilitates connections from the outside of the network.
- E. NAT accelerates the routing process because no modifications are made on the packets.
- F. NAT protects network security because private networks are not advertised.

Correct Answer: BF

QUESTION 192

On which options are standard access lists based?

- A. destination address and wildcard mask
- B. destination address and subnet mask
- C. source address and subnet mask
- D. source address and wildcard mask

Correct Answer: D

QUESTION 193

A network engineer wants to allow a temporary entry for a remote user with a specific username and password so that the user can access the entire network over the Internet. Which ACL can be used?

- A. standard
- B. extended
- C. dynamic
- D. reflexive

Correct Answer: C

QUESTION 194

How does a DHCP server dynamically assign IP addresses to hosts?

- A. Addresses are permanently assigned so that the host uses the same address at all times.
- B. Addresses are assigned for a fixed period of time. At the end of the period, a new request for an address must be made, and another address is then assigned.
- C. Addresses are leased to hosts. A host will usually keep the same address by periodically contacting the DHCP server to renew the lease.
- D. Addresses are allocated after a negotiation between the server and the host to determine the length of the agreement.

Correct Answer: C

QUESTION 195

Refer to the exhibit. Which rule does the DHCP server use when there is an IP address conflict?

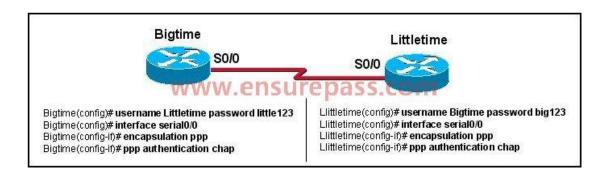
Router# show ip dhcp conflict
IP address Detection method Detection time
172.16.1.32 Pingv.ensurepass.COFeb 16 1998 12:28 PM
172.16.1.64 Gratuitous ARP Feb 23 1998 08:12 AM

- A. The address is removed from the pool until the conflict is resolved.
- B. The address remains in the pool until the conflict is resolved.
- C. Only the IP detected by Gratuitous ARP is removed from the pool.
- D. Only the IP detected by Ping is removed from the pool.
- E. The IP will be shown, even after the conflict is resolved.

Correct Answer: A

QUESTION 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 SO/O to interface SO/O.
- E. With CHAP authentication, one router must authenticate to another router. The routers cannot be configured to authenticate to each other.

Correct Answer: B

QUESTION 197

Which two tasks does the Dynamic Host Configuration Protocol perform? (Choose two.)

A. Set the IP gateway to be used by the network.

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- B. Perform host discovery used DHCPDISCOVER message.
- C. Configure IP address parameters from DHCP server to a host.
- D. Provide an easy management of layer 3 devices.
- E. Monitor IP performance using the DHCP server.
- F. Assign and renew IP address from the default pool.

Correct Answer: CF

QUESTION 198

When a DHCP server is configured, which two IP addresses should never be assignable to hosts? (Choose two.)

- A. network or subnetwork IP address
- B. broadcast address on the network
- C. IP address leased to the LAN
- D. IP address used by the interfaces
- E. manually assigned address to the clients
- F. designated IP address to the DHCP server

Correct Answer: AB

QUESTION 199

Which two statements about static NAT translations are true? (Choose two.)

- A. They allow connections to be initiated from the outside.
- B. They require no inside or outside interface markings because addresses are statically defined.
- C. They are always present in the NAT table.
- D. They can be configured with access lists, to allow two or more connections to be initiated from the outside.

Correct Answer: AC

QUESTION 200

A network administrator needs to configure port security on a switch. Which two statements are true? (Choose two.)

- A. The network administrator can apply port security to dynamic access ports.
- B. The network administrator can apply port security to EtherChannels.

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