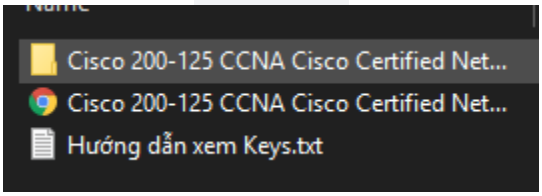
CCNA Cisco Certified Network Associate 200-125 Exam-1

50 Questions | 1 Hour | 75% correct required to pass

CCNA Cisco Certified Network Associate 200-125 Exam-1

UPLOAD BY NGUYEN ANH KIET – LINUX TEAM VIET NAM

KEY HERE



Question 1:

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?

- transport
- network
- presentation
- application

Question 2:

What are the possible trunking modes for a switch port?

- client
- forwarding
- transparent
- auto

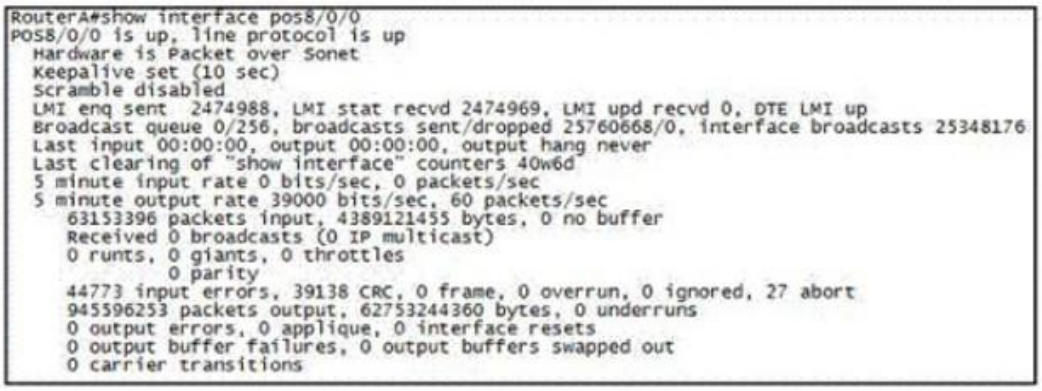
Question 3:

Cisco Catalyst switches CAT1 and CAT2 have a connection between them using ports FA0/13. 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 native VLAN mismatch error message will appear.
- VLAN 10 on CAT1 and VLAN 1 on CAT2 will send tagged frames.
- VLAN 10 on CAT1 and VLAN 1 on CAT2 will send untagged frames.
- 802.1Q giants frames could saturate the link.

Question 4:

Refer to the exhibit.



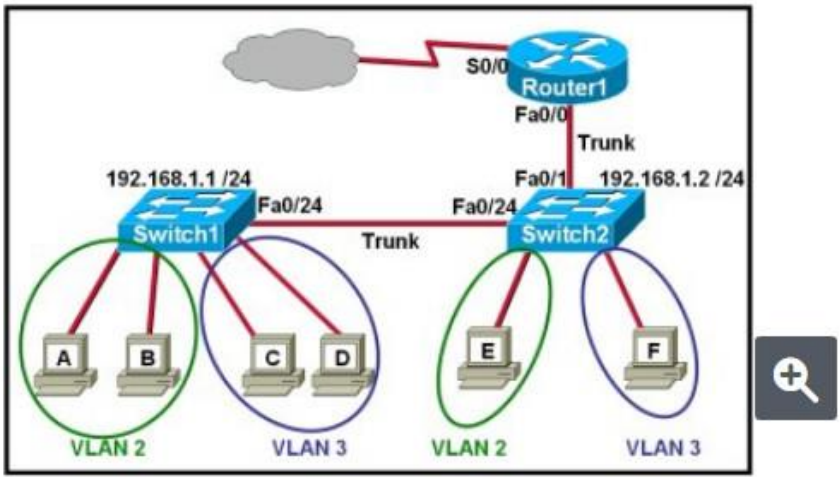
```
RouterA#show interface pos8/0/0
POS8/0/0 is up, line protocol is up
  Hardware is Packet over Sonet
  Keepalive set (10 sec)
  Scramble disabled
  LMI enq sent  2474988, LMI stat recvd 2474969, LMI upd recvd 0, DTE LMI up
  Broadcast queue 0/256, broadcasts sent/dropped 25760668/0, interface broadcasts 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
  5 minute output rate 39000 bits/sec, 60 packets/sec
     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
```

Which WAN protocol is being used?

- ATM
- PPP
- Frame Relay
- HDLC

Question 5:

Refer to the exhibit.



Which statements are true about interVLAN routing in the topology that is shown in the
exhibit?

- The FastEthernet 0/0 interface on Router1 must be configured with subinterfaces.
- Router1 and Switch2 should be connected via a crossover cable
- . Host E and host F use the same IP gateway address.
- Router1 will not play a role in communications between host A and host D.

Question 6:

Which of the following correctly describe steps in the OSI data encapsulation process?

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

Question 7:

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

- Ports between switches should be configured in access mode so that VLANs can span across the ports.
- 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.
- Broadcast and multicast frames are retransmitted to ports that are configured on different VLAN.
- Unknown unicast frames are retransmitted only to the ports that belong to the same VLAN.

Question 8:

Which port state is introduced by Rapid-PVST?

- discarding
- forwarding
- learning
- listening

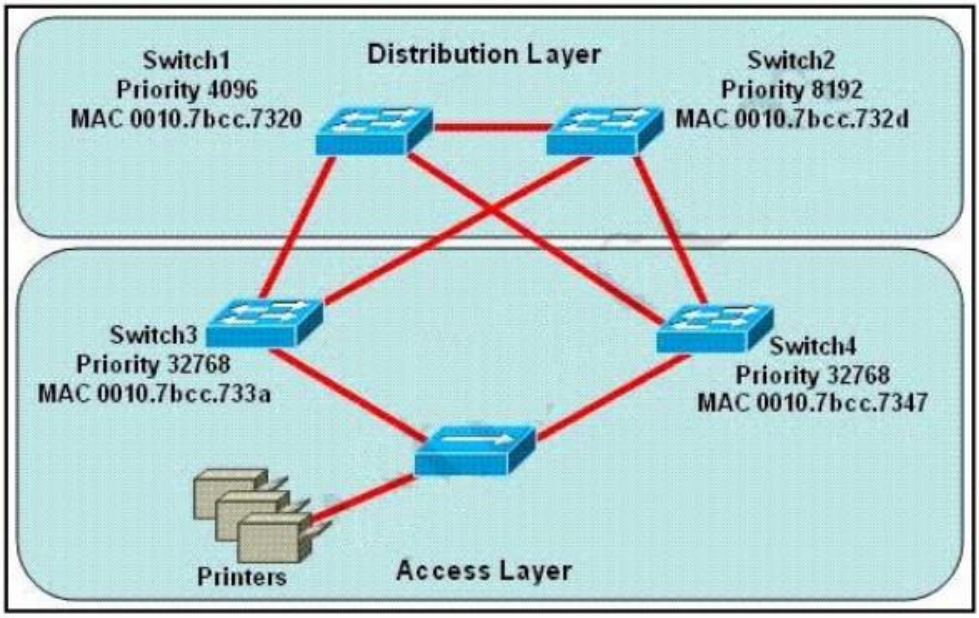
Question 9:

Which link protocols are used to carry multiple VLANs over a single link?

- 802.3u
- 802.1q
- VTP
- IGP

Question 10:

Refer to the exhibit.



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

- Switch1
- Switch4
- Switch3
- Switch2

Question 11:

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?

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

Question 12:

Why will a switch never learn a broadcast address?

- A broadcast address will never be the source address of a frame.
- Broadcast addresses use an incorrect format for the switching table.
- A broadcast frame is never forwarded by a switch
- Broadcasts only use network layer addressing.

Question 13:

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

- path cost
- lowest port MAC address
- VTP revision number
- highest port priority number

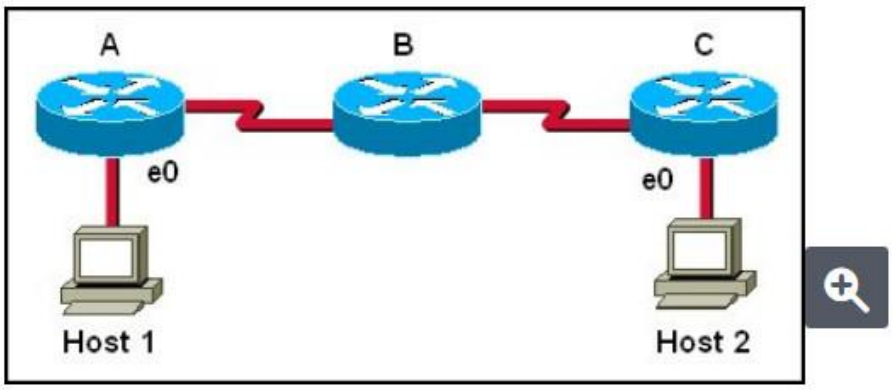
Question 14:

Which of the following describes the roles of devices in a WAN?

- A modem terminates a digital local loop.
- A CSU/DSU terminates a digital local loop.
- A modem terminates a digital local loop.
- A router is commonly considered a DCE device.

Question 15:

Host 1 is trying to communicate with Host 2. The e0 interface on Router C is down.



Which of the following are true?

- Router C will use ICMP to inform Router B that Host 2 cannot be reached.
- Router C will use ICMP to inform Host 1 that Host 2 cannot be reached.
- Router C will use ICMP to inform Host 1, Router A, and Router B that Host 2 cannot be reached.
- . Router C will send a Router Selection message type.

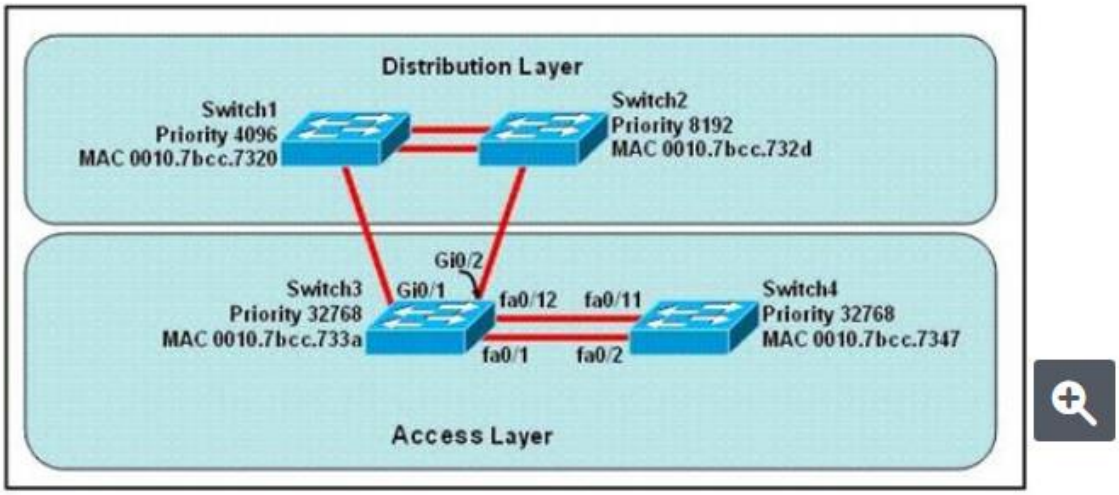
Question 16:

What parameter can be different on ports within an EtherChannel?

- speed
- trunk encapsulation
- DTP negotiation settings
- duplex

Question 17:

Refer to the exhibit.

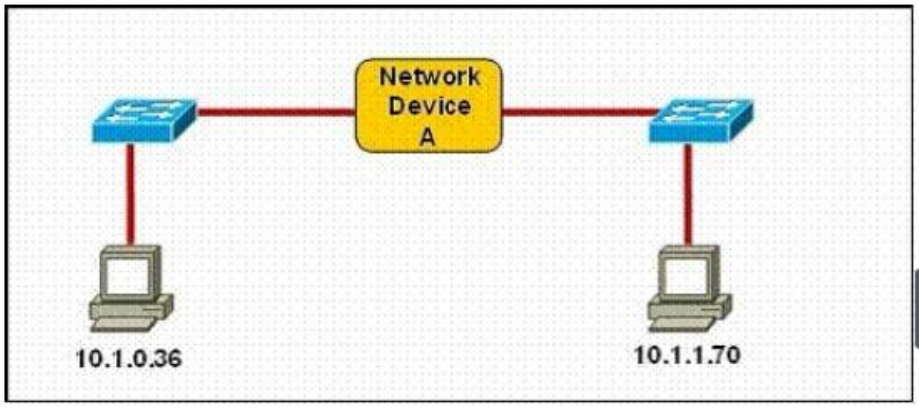


At the end of an RSTP election process, which access layer switch port will assume the discarding role?

- Switch3, port fa0/12
- Switch4, port fa0/11
- Switch4, port fa0/2
- Switch3, port fa0/1

Question 18:

Refer to the exhibit.



Which statements correctly describe Network Device A?

- With a network wide mask of 255.255.255.128, each interface does require an IP address on a unique IP subnet.
- With a network wide mask of 255.255.255.0, must be a Layer 2 device for the PCs to communicate with each other.
- With a network wide mask of 255.255.255.128, each interface does not require an IP address.
- none

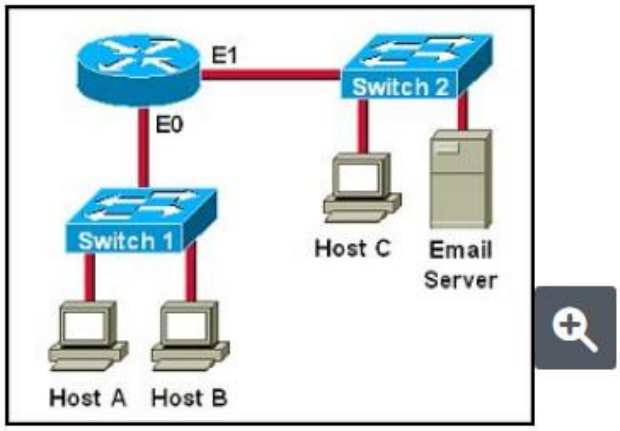
Question 19:

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?

- presentation
- session
- application
- transport

Question 20:

Refer to exhibit:

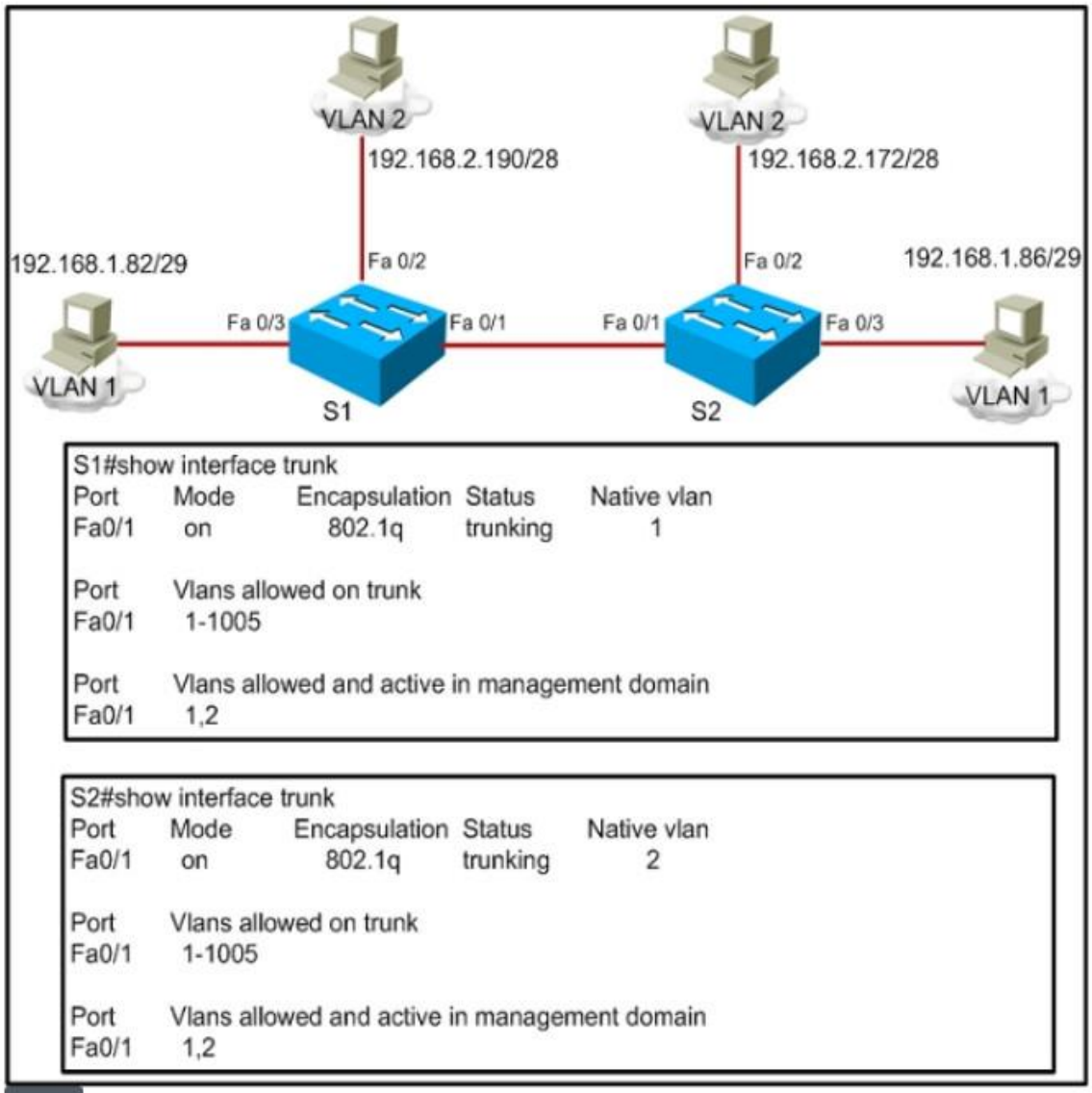


Which destination addresses will be used by Host A to send data to Host C?

- the MAC address of Switch 1
- the IP address of Host C
- . the IP address of Switch 1
- the MAC address of Host C

Question 21:

Refer to the exhibit.

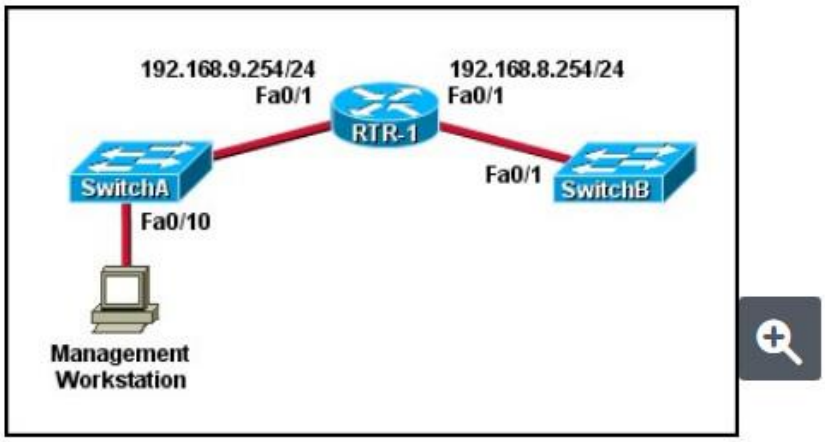


A frame on VLAN 1 on switch S1 is sent to switch S2 where the frame is received on VLAN
2. What causes this behavior?

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

Question 22:

Refer to the exhibit.

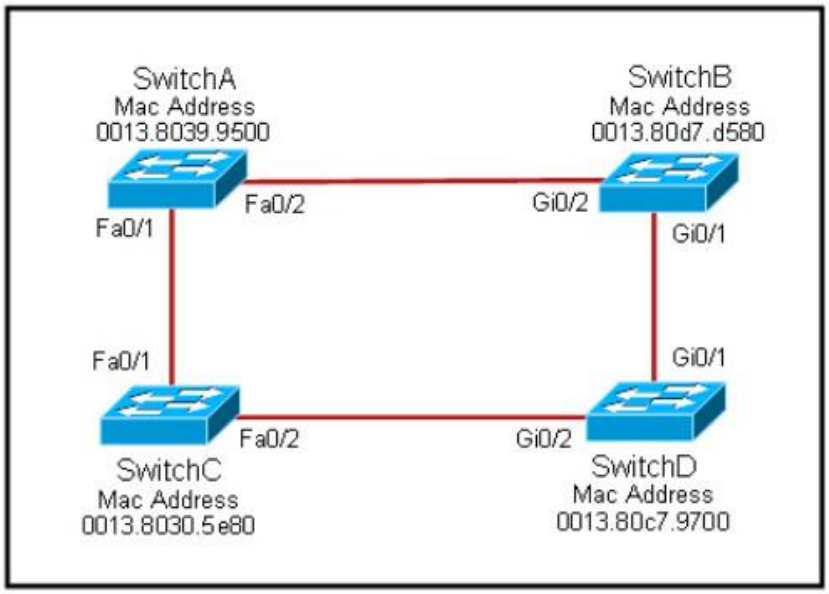


A technician has installed SwitchB and needs to configure it for remote access from the

- 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
- SwitchB(config)# interface FastEthernet 0/1 SwitchB(config-if)# ip address 192.168.8.252 255.255.255.0 SwitchB(config-if)# no shutdown
- 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
- 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

Question 23:

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 of these show the correct RSTP port roles for the indicated switches and interfaces?

- SwitchA, Fa0/2, designated
- SwitchB, Gi0/1, designated
- SwitchB, Gi0/2, root
- SwitchC, Fa0/2, root

Question 24:

In an Ethernet network, under what two scenarios can devices transmit?

- when the server grants access
- when they receive a special token
- . when they detect no other devices are sending
- when there is a carrier

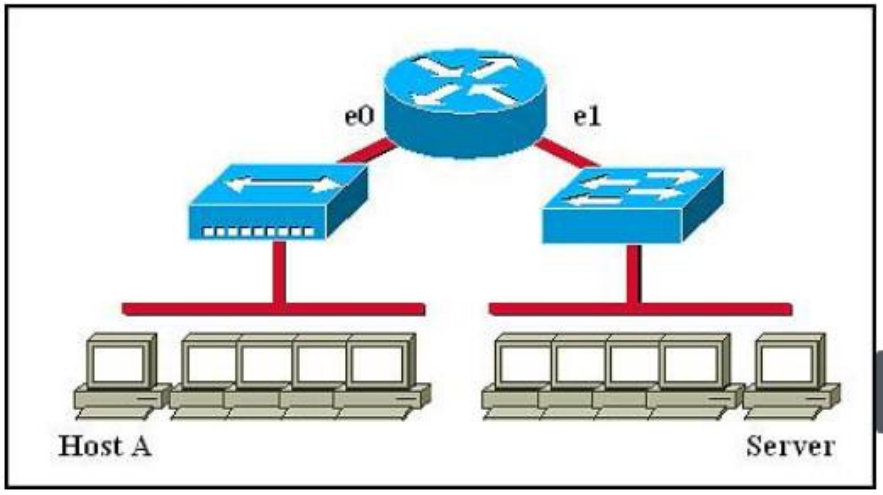
Question 25:

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?

- network
- . data link
- transport
- session

Question 26:

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?

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

Question 27:

Refer to the exhibit.

```
Switch-1# show mac address-table
Dynamic Addresses Count:                  3
Secure Addresses (User-defined) Count:    0
Static Addresses (User-defined) Count:    0
System Self Addresses Count:              41
Total Mac addresses:                      50
Non-static Address Table:
Destination Address  Address Type  VLAN  Destination Port
-------------------  ------------  ----  --------------------
0010.0de0.e289       Dynamic       1     FastEthernet0/1
0010.7b00.1540       Dynamic       2     FastEthernet0/3
0010.7b00.1545       Dynamic       2     FastEthernet0/2
```

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

Question 28:

Refer to the exhibit.

```
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
Hello Time 2 sec Max Age 20 sec Forward Delay 15 sec
Aging Time 300
Interface   Role  Sts   Cost  Prio.Nbr    Type
---------   ---------   ---   -------     ----- ----------
Fa1/1       Desg FWD    4     128.1       p2p
Fa1/2       Desg FWD    4     128.2       p2p
Fa5/1       Desg FWD    4     128.257     p2p
```

The output that is shown is generated at a switch. Which three statements are true?

- All ports will be in a state of discarding, learning, or forwarding.
- All interfaces that are shown are on shared media.
- Thirty VLANs have been configured on this switch
- This switch must be the root bridge for all VLANs on this switch.

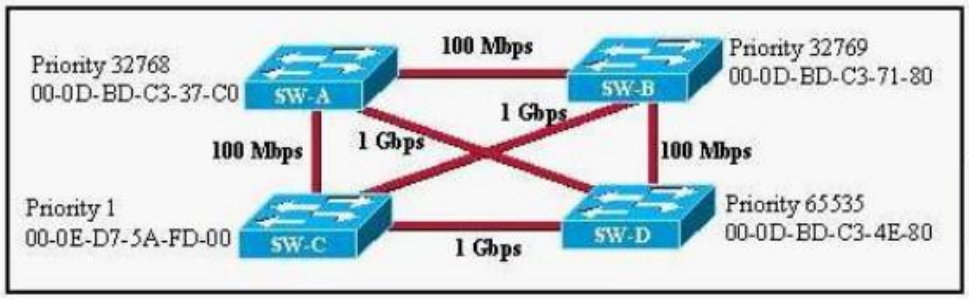
Question 29:

Which command enables RSTP on a switch?

- spanning-tree mode rapid-pvst
- spanning-tree backbonefast
- spanning-tree uplinkfast
- spanning-tree mode mst

Question 30:

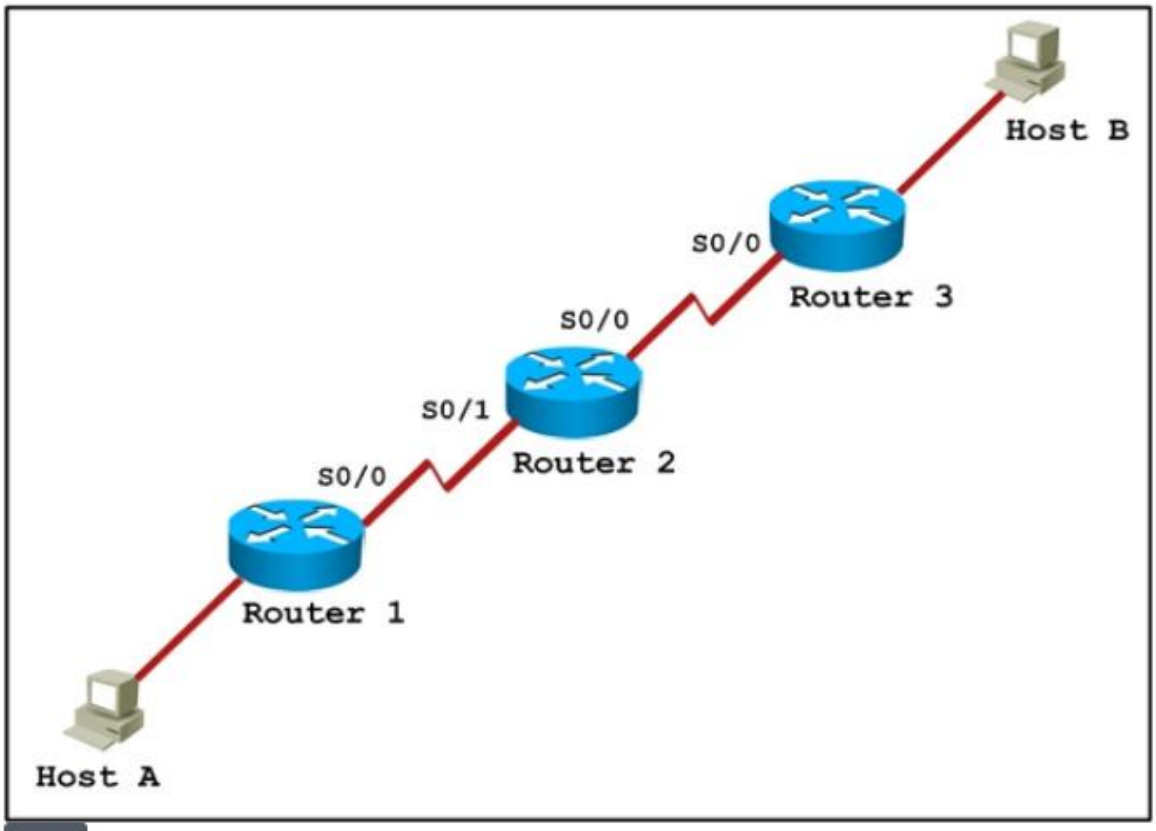
Refer to the exhibit.



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

- Switch A, because it is the most centrally located switch
- Switch C, because it is the most centrally located switch
- Switch A, because it has the lowest MAC address
- Switch C, because it has the lowest priority

Refer to the exhibit.



Host A pings interface S0/0 on router 3. What is the TTL value for that ping?

- 254
- 253
- 252
- 255

Question 32:

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

- converged
- provisioned
- redundant
- spanned

Question 33:

Refer to the exhibit.

```
Switch# show spanning-tree vlan 1
VLAN0001
  Spanning tree enabled protocol rstp
  Root ID     Priority    20481
              Address     0008.217a.5800
              Cost        38
              Port        1 (FastEthernet0/1)
              Hello Time   2 sec  Max Age 20 sec  Forward Delay 15 sec

  Bridge ID   Priority    32769  (priority 32768 sys-id-ext 1)
              Address     0008.205e.6600
              Hello Time   2 sec  Max Age 20 sec  Forward Delay 15 sec
              Aging Time 300

Interface        Role Sts Cost      Prio.Nbr Type
---------------- ---- --- --------- -------- --------------------------------
Fa0/1            Root FWD 19        128.1    P2p
Fa0/4            Desg FWD 38        128.1    P2p
Fa0/11           Altn BLK 57        128.1    P2p
Fa0/13           Desg FWD 38        128.1    P2p
```

Why has this switch not been elected the root bridge for VLAN1?

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

Question 34:

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

- 32768: 22-33-44-55-66-77
- 32769: 22-33-44-55-66-78
- 32769: 11-22-33-44-55-65
- 32768: 11-22-33-44-55-66

Question 35:

Which of these are characteristics of the 802.1Q protocol?

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

Question 36:

Refer to the exhibit:

Router1# **show ip arp**

Protocol	Address	Age(min)	Hardware Adddr	Type	Interface
Internet	192.168.20.5	9	0000.0c07.f892	ARPA	FastEthernet0/0
Internet	192.168.60.5	8	0000.0c07.ac00	ARPA	FastEthernet0/1
Internet	192.168.20.1	-	0000.0c63.ae45	ARPA	FastEthernet0/0
Internet	192.168.40.5	9	0000.0c07.4320	ARPA	FastEthernet0/2
Internet	192.168.60.1	-	0000.0c63.1300	ARPA	FastEthernet0/1
Internet	192.168.40.1	-	0000.0c36.6965	ARPA	FastEthernet0/2

Data Frame:

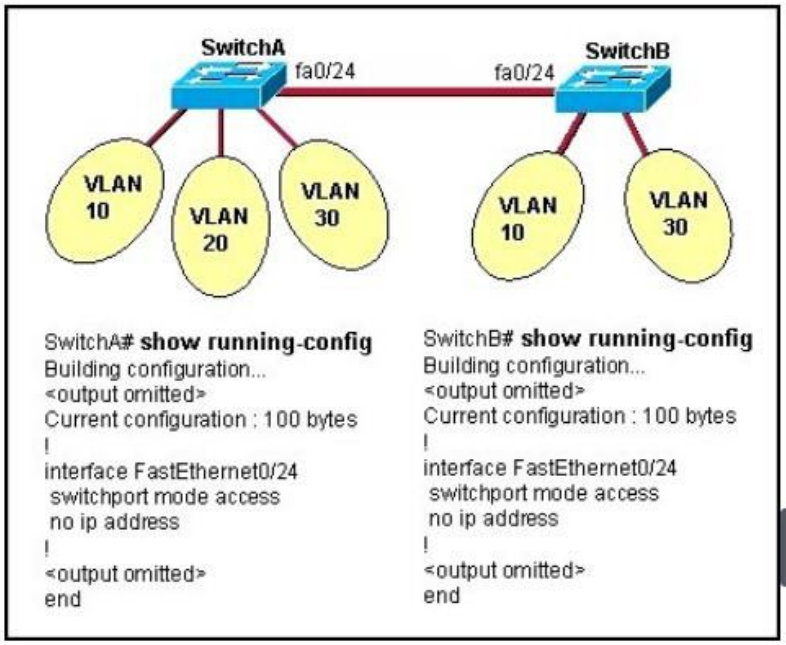
Source MAC	Source IP	Destination MAC	Destination IP
0000.0c07.f892	192.168.20.5	0000.0c63.ae45	192.138.40.5

What will Router1 do when it receives the data frame shown?

- Router1 will forward the data packet out interface FastEthernet0/1.
- . Router1 will strip off the source MAC address and replace it with the MAC address 0000.0c36.6965.
- Router1 will strip off the source IP address and replace it with the IP address 192.168.40.1.
- Router1 will strip off the destination IP address and replace it with the IP address of 192.168.40.1.

Question 37:

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?

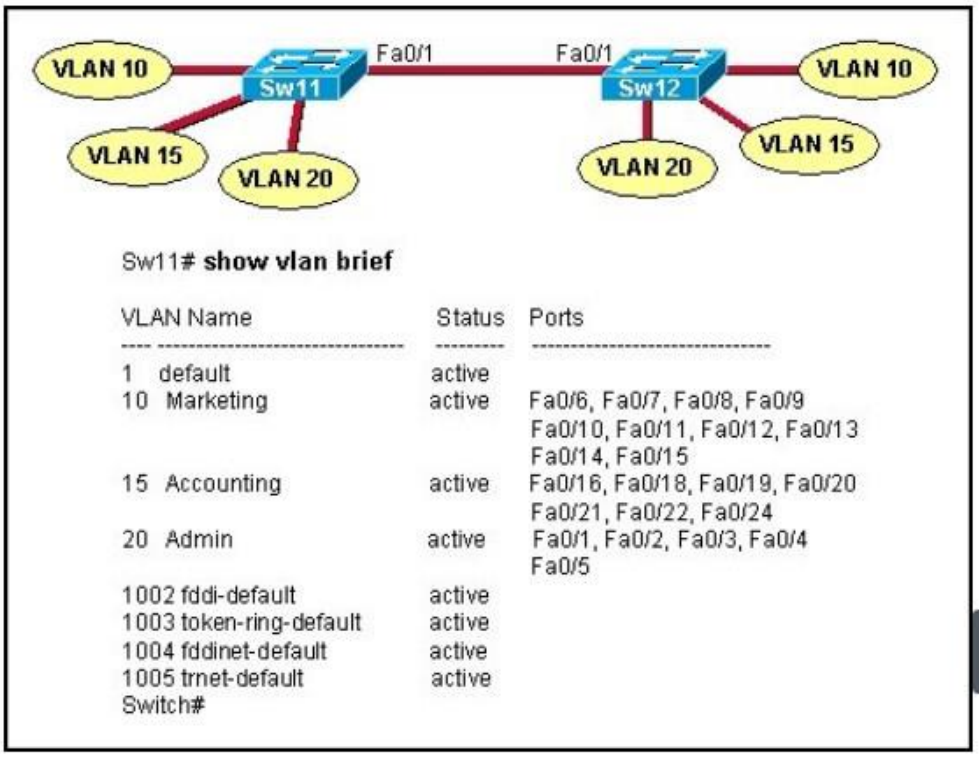
- The link between the switches needs to be configured as a trunk.
- The access link needs to be configured in multiple VLANs.
- The link between the switches is configured in the wrong VLAN.
- VTP is not configured to carry VLAN information between the switches.

Question 38:

For what purposes does the Ethernet protocol use physical addresses? (

- to uniquely identify devices at Layer 2
- to allow communication with devices on a different network
- o allow detection of a remote device when its physical address is unknown
- to differentiate a Layer 2 frame from a Layer 3 packet

Refer to the exhibit.



Sw11# **show vlan brief**

VLAN	Name	Status	Ports
1	default	active	
10	Marketing	active	Fa0/6, Fa0/7, Fa0/8, Fa0/9 Fa0/10, Fa0/11, Fa0/12, Fa0/13 Fa0/14, Fa0/15
15	Accounting	active	Fa0/16, Fa0/18, Fa0/19, Fa0/20 Fa0/21, Fa0/22, Fa0/24
20	Admin	active	Fa0/1, Fa0/2, Fa0/3, Fa0/4 Fa0/5
1002	fddi-default	active	
1003	token-ring-default	active	
1004	fddinet-default	active	
1005	trnet-default	active	

Switch#

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?

- The Fa0/1 port is not operational on one of the switches.
- The link connecting the switches has not been configured as a trunk.
- At least one port needs to be configured in VLAN 1 for VLANs 10 and 15 to be able to communicate.
- Port FastEthernet 0/1 needs to be configured as an access link on both switches.

Question 40:

Refer to the exhibit.

```
ALSwitch1# show running-config
«output omitted»
interface FastEthernet0/24 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: dot1q
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)
Apliance trust: none
```

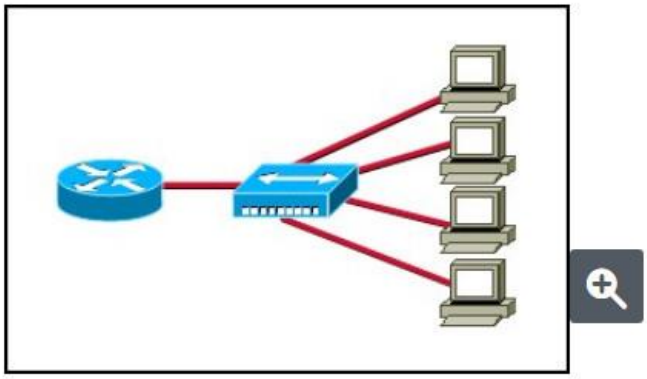
Switch port FastEthernet 0/24 on ALSwitch1 will be used to create an IEEE 802.1Q-compliant trunk to another switch. Based on the output shown, what is the reason the trunk
does not form, even though the proper cabling has been attached?

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?

- The port is currently configured for access mode.
- An IP address must be configured for the port.
- VLANs have not been created yet.
- The correct encapsulation type has not been configured.

Question 41:

Refer to the exhibit.



What results would occur if the hub were to be replaced with a switch that is configured
with one Ethernet VLAN?

- The number of collision domains would remain the same.
- The number of collision domains would decrease.
- The number of collision domains would increase.
- The number of broadcast domains would decrease.

Question 42:

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

- 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.
- 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
- 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.
- 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 43:

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

- internet
- application
- network
- transport

Question 44:

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?

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

Question 45:

Which statements accurately describe Layer 2 Ethernet switches?

- Switches that are configured with VLANs make forwarding decisions based on both Layer 2 and Layer 3 address information.
- Establishing VLANs increases the number of broadcast domains.
- If a switch receives a frame for an unknown destination, it uses ARP to resolve the address.
- Spanning Tree Protocol allows switches to automatically share VLAN information.

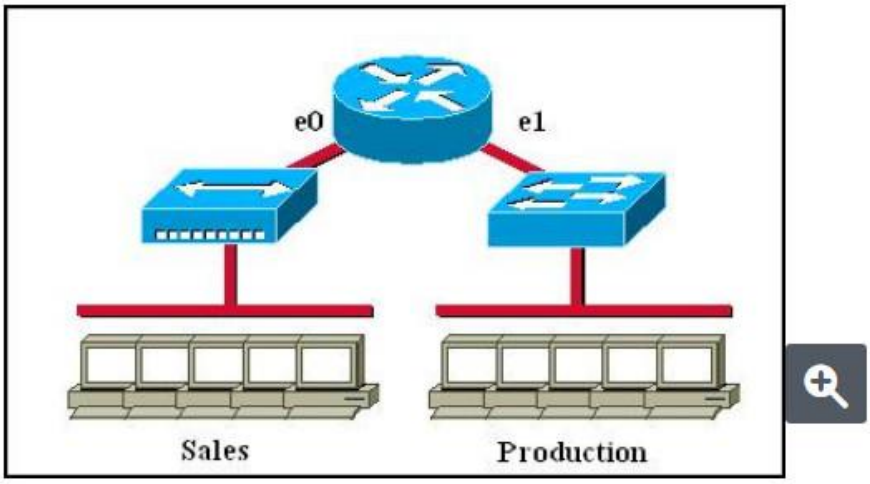
Question 46:

What are advantages of VLANs?

- VLANs provide a low-latency internetworking alternative to routed networks.
- VLANs utilize packet filtering to enhance network security.
- VLANs establish broadcast domains in switched networks.
- VLANs provide a method of conserving IP addresses in large networks.

Question 47:

Which of the following statements describe the network shown in the graphic?



- There are two broadcast domains in the network.
- There are four collision domains in the network.
- There are six broadcast domains in the network.
- There are four broadcast domains in the network.

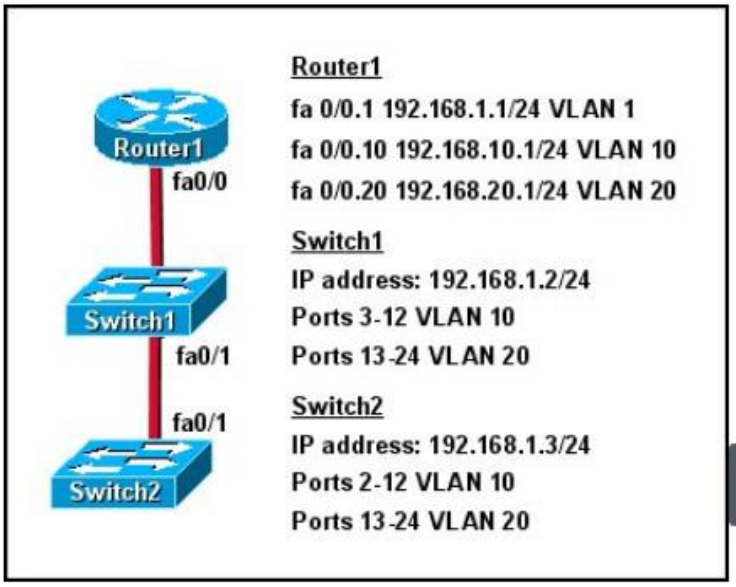
Question 48:

What is one benefit of PVST+?

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

Question 49:

Refer to the exhibit.



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

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

Question 50:

**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?**

- This is an Ethernet port operating at half duplex.
- . This is a 10 Mb/s switch port.
- This is an Ethernet port operating at half duplex.
- This is a 100 Mb/s switch port.