300-115

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Exam Code: 300-115

Exam Name: Implementing Cisco IP Switched Networks (SWITCH v2.0)

Exam A

QUESTION 1
An EtherChannel bundle has been established between a Cisco switch and a corporate web server. The network administrator noticed that only one of the EtherChannel links is being utilized to reach the web server. What should be done on the Cisco switch to allow for better EtherChannel utilization to the corporate web server?

A. Enable Cisco Express Forwarding to allow for more effective traffic sharing over the EtherChannel bundle.
B. Adjust the EtherChannel load-balancing method based on destination IP addresses.
C. Disable spanning tree on all interfaces that are participating in the EtherChannel bundle.
D. Use link-state tracking to allow for improved load balancing of traffic upon link failure to the server.
E. Adjust the EtherChannel load-balancing method based on source IP addresses.

Correct Answer: E
Section: (none)
Explanation

Explanation/Reference:

QUESTION 2
Interface FastEthernet0/1 is configured as a trunk interface that allows all VLANs.
This command is configured globally:

```
monitor session 2 filter vlan 1 - 8, 39, 52
```

What is the result of the implemented command?

A. All VLAN traffic is sent to the SPAN destination interface.
B. Traffic from VLAN 4 is not sent to the SPAN destination interface.
C. Filtering a trunked SPAN port effectively disables SPAN operations for all VLANs.
D. The trunk's native VLAN must be changed to something other than VLAN 1.
E. Traffic from VLANs 1 to 8, 39, and 52 is replicated to the SPAN destination port.

Correct Answer: E
Section: (none)
Explanation

Explanation/Reference:

QUESTION 3
A network engineer notices inconsistent Cisco Discovery Protocol neighbors according to the diagram that is provided. The engineer notices only a single neighbor that uses Cisco Discovery Protocol, but it has several routing neighbor relationships. What would cause the output to show only the single neighbor?

A. The routers are connected via a Layer 2 switch.
B. IP routing is disabled on neighboring devices.
C. Cisco Express Forwarding is enabled locally.
D. Cisco Discovery Protocol advertisements are inconsistent between the local and remote devices.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 4
After the implementation of several different types of switches from different vendors, a network engineer notices that directly connected devices that use Cisco Discovery Protocol are not visible. Which vendor-neutral protocol could be used to resolve this issue?

A. Local Area Mobility
B. Link Layer Discovery Protocol
C. NetFlow
D. Directed Response Protocol

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 5
Several new switches have been added to the existing network as VTP clients. All of the new switches have been configured with the same VTP domain, password, and version. However, VLANs are not passing from the VTP server (existing network) to the VTP clients. What must be done to fix this?

A. Remove the VTP domain name from all switches with "null" and then replace it with the new domain name.
B. Configure a different native VLAN on all new switches that are configured as VTP clients.

C. Provision one of the new switches to be the VTP server and duplicate information from the existing network.

D. Ensure that all switch interconnects are configured as trunks to allow VTP information to be transferred.

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 6
After implementing VTP, the extended VLANs are not being propagated to other VTP switches.
What should be configured for extended VLANs?

A. VTP does not support extended VLANs and should be manually added to all switches.

B. Enable VTP version 3, which supports extended VLAN propagation.

C. VTP authentication is required when using extended VLANs because of their ability to cause network instability.

D. Ensure that all switches run the same Cisco IOS version. Extended VLANs will not propagate to different IOS versions when extended VLANs are in use.
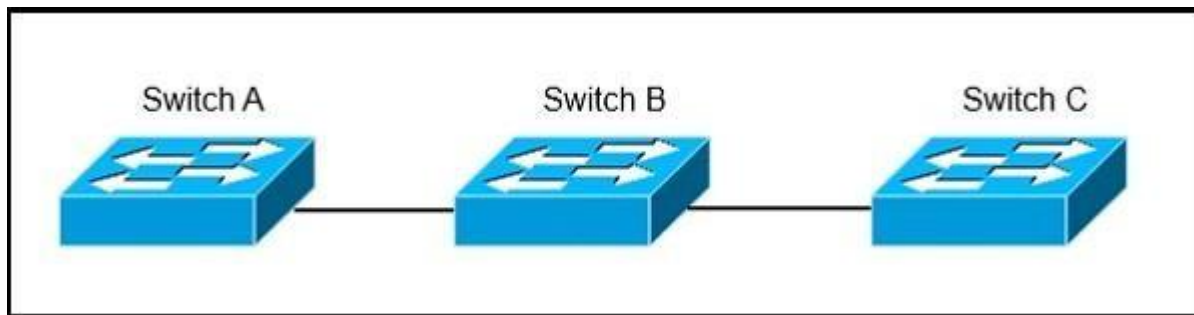
Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 7
Refer to the exhibit. Switch A, B, and C are trunked together and have been properly configured for VTP. Switch C receives VLAN information from the VTP server Switch A, but Switch B does not receive any VLAN information. What is the most probable cause of this behavior?

A. Switch B is configured in transparent mode.

B. Switch B is configured with an access port to Switch A, while Switch C is configured with a trunk port to Switch B.

C. The VTP revision number of the Switch B is higher than that of Switch A.

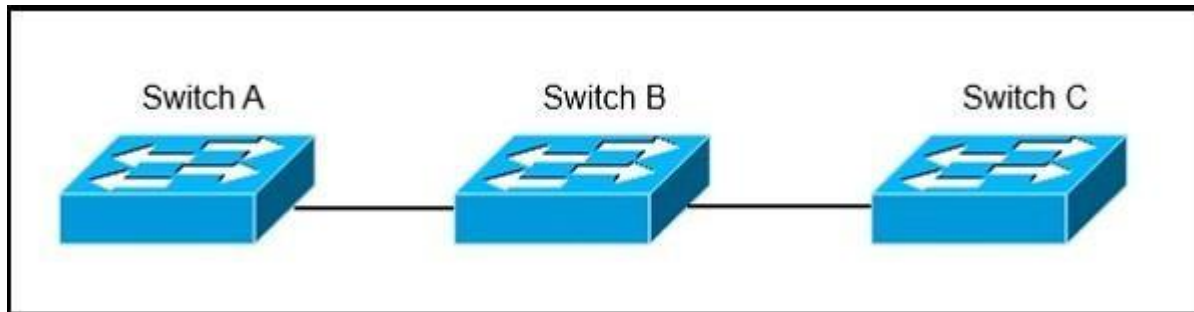D. The trunk between Switch A and Switch B is misconfigured.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 8
Refer to the exhibit. Switch A, B, and C are trunked together and have been properly configured for VTP. Switch B has all VLANs, but Switch C is not receiving traffic from certain VLANs. What would cause this issue?

A. A VTP authentication mismatch occurred between Switch A and Switch

B. B. The VTP revision number of Switch B is higher than that of Switch A.

C. VTP pruning is configured globally on all switches and it removed VLANs from the trunk interface that is connected to Switch C.

D. The trunk between Switch A and Switch B is misconfigured.

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 9
After the recent upgrade of the switching infrastructure, the network engineer notices that the port roles that were once "blocking" are now defined as "alternate" and "backup." What is the reason for this change?

A. The new switches are using RSTP instead of legacy IEEE 802.1D STP.
B. IEEE 802.1D STP and PortFast have been configured by default on all newly implemented Cisco Catalyst switches.
C. The administrator has defined the switch as the root in the STP domain.
D. The port roles have been adjusted based on the interface bandwidth and timers of the new Cisco Catalyst switches.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 10
An administrator recently configured all ports for rapid transition using PortFast. After testing, it has been determined that several ports are not transitioning as they should. What is the reason for this?

A. RSTP has been enabled per interface and not globally.
B. The STP root bridge selection is forcing key ports to remain in non-rapid transitioning mode.
C. STP is unable to achieve rapid transition for trunk links.
D. The switch does not have the processing power to ensure rapid transition for all ports.

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 11
Which technique automatically limits VLAN traffic to only the switches that require it?

A. access lists
B. DTP in nonegotiate
C. VTP pruning
D. PBR

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 12
What effect does the mac address-table aging-time 180 command have on the MAC address- table?

A. This is how long a dynamic MAC address will remain in the CAM table.
B. The MAC address-table will be flushed every 3 minutes.
C. The default timeout period will be 360 seconds.
D. ARP requests will be processed less frequently by the switch.
E. The MAC address-table will hold addresses 180 seconds longer than the default of 10 minutes.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 13
While working in the core network building, a technician accidently bumps the fiber connection between two core switches and damages one of the pairs of fiber. As designed, the link was placed into a non-forwarding state due to a fault with UDLD. After the damaged cable was replaced, the link did not recover. What solution allows the network switch to automatically recover from such an issue?

A. macros
B. errdisable autorecovery
C. IP Event Dampening
D. command aliases
E. Bidirectional Forwarding Detection

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 14
A network engineer deployed a switch that operates the LAN base feature set and decides to use the SDM VLAN template. The SDM template is causing the CPU of the switch to spike during peak working hours. What is the root cause of this issue?

A. The VLAN receives additional frames from neighboring switches.
B. The SDM VLAN template causes the MAC address-table to overflow.
C. The VLAN template disables routing in hardware.
D. The switch needs to be rebooted before the SDM template takes effect.

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 15
An access switch has been configured with an EtherChannel port. After configuring SPAN to monitor this port, the network administrator notices that not all traffic is being replicated to the management server. What is a cause for this issue?

A. VLAN filters are required to ensure traffic mirrors effectively.
B. SPAN encapsulation replication must be enabled to capture EtherChannel destination traffic.
C. The port channel can be used as a SPAN source, but not a destination.
D. RSPAN must be used to capture EtherChannel bidirectional traffic.

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 16
A DHCP configured router is connected directly to a switch that has been provisioned with DHCP snooping. IP Source Guard with the ip verify source port-security command is configured under the interfaces that connect to all DHCP clients on the switch. However, clients are not receiving an IP address via the DHCP server. Which option is the cause of this issue?

A. The DHCP server does not support information option 82.
B. The DHCP client interfaces have storm control configured.

C. Static DHCP bindings are not configured on the switch.

D. DHCP snooping must be enabled on all VLANs, even if they are not utilized for dynamic address allocation.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 17
A switch is added into the production network to increase port capacity. A network engineer is configuring the switch for DHCP snooping and IP Source Guard, but is unable to configure ip verify source under several of the interfaces. Which option is the cause of the problem?

A. The local DHCP server is disabled prior to enabling IP Source Guard.

B. The interfaces are configured as Layer 3 using the no switchport command.

C. No VLANs exist on the switch and/or the switch is configured in VTP transparent mode.

D. The switch is configured for sdm prefer routing as the switched database management template.

E. The configured SVIs on the switch have been removed for the associated interfaces.

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 18
The command storm-control broadcast level 75 65 is configured under the switch port connected to the corporate mail server. In which three ways does this command impact the traffic? (Choose three.)

A. SNMP traps are sent by default when broadcast traffic reaches 65% of the lower-level threshold.

B. The switchport is disabled when unicast traffic reaches 75% of the total interface bandwidth.

C. The switch resumes forwarding broadcasts when they are below 65% of bandwidth.

D. Only broadcast traffic is limited by this particular storm control configuration.

E. Multicast traffic is dropped at 65% and broadcast traffic is dropped at 75% of the total interface bandwidth.

F. The switch drops broadcasts when they reach 75% of bandwidth.

Correct Answer: CDF
Section: (none)

Explanation

Explanation/Reference:

QUESTION 19
After UDLD is implemented, a Network Administrator noticed that one port stops receiving UDLD packets. This port continues to reestablish until after eight failed retries. The port then transitions into the errdisable state. Which option describes what causes the port to go into the errdisable state?

A. Normal UDLD operations that prevent traffic loops.
B. UDLD port is configured in aggressive mode.
C. UDLD is enabled globally.
D. UDLD timers are inconsistent.

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 20
After reviewing UDLD status on switch ports, an engineer notices that the current bidirectional state for an access port is "Unknown." Which statement describes what this indicates about the status of the port?

A. The port is fully operational and no known issues are detected.
B. The bidirectional status of "unknown" indicates that the port will go into the disabled state because it stopped receiving UDLD packets from its neighbor.
C. UDLD moved into aggressive mode after inconsistent acknowledgements were detected.
D. The UDLD port is placed in the "unknown" state for 5 seconds until the next UDLD packet is received on the interface.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 21
Pilot testing of the new switching infrastructure finds that when the root port is lost, STP immediately replaces the root port with an alternative root port. Which spanning-tree technology is used to accomplish backup root port selection?

A. PVST+
B. PortFast
C. BackboneFast
D. UplinkFast
E. Loop Guard
F. UDLD

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 22
A network engineer must adjust the STP interface attributes to influence root port selection. Which two elements are used to accomplish this? (Choose two.)

A. port-priority
B. cost
C. forward-timers
D. link type
E. root guard

Correct Answer: AB
Section: (none)
Explanation

Explanation/Reference:

QUESTION 23
A network engineer must set the load balance method on an existing port channel. Which action must be done to apply a new load balancing method?

A. Configure the new load balancing method using port-channel load-balance.
B. Adjust the switch SDM back to "default".
C. Ensure that IP CEF is enabled globally to support all load balancing methods.
D. Upgrade the PFC to support the latest load balancing methods.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 24
Refer to the exhibit. A network engineer investigates a recent network failure and notices that one of the interfaces on the switch is still down. What is causing the line protocol on this interface to be shown as down?

```
Switch#sh int g0/12
GigabitEthernet0/23 is up, line protocol is down (monitoring)
  Hardware is C6k 1000Mb 802.3, address is 001c.f9d4.7500 (bia
  001c.f9d4.750)
  MTU 1500 bytes, BW 1000000 Kbit, DLY 10 usec,
    Reliability 255/255, txload 1/255, rxload 1/255
  Encapsulation ARPA, loopback not set
  Keepalive set (10 sec)
  Full-duplex, 1000Mb/s
```

A. There is a layer 1 physical issue.
B. There is a speed mismatch on the interface.
C. The interface is configured as the target of the SPAN session.
D. The interface is configured as the source of the SPAN session.
E. There is a duplex mismatch on the interface.

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 25
While doing network discovery using Cisco Discovery Protocol, it is found that rapid error tracking is not currently enabled. Which option must be enabled to allow for enhanced reporting mechanisms using Cisco Discovery Protocol?

A. Cisco Discovery Protocol version 2
B. Cisco IOS Embedded Event Manager
C. logging buffered
D. Cisco Discovery Protocol source interface
E. Cisco Discovery Protocol logging options

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 26
After port security is deployed throughout an enterprise campus, the network team has been overwhelmed with port reset requests. They decide to configure the network to automate the process of re-enabling user ports. Which command accomplishes this task?

A. switch(config)# errdisable recovery interval 180
B. switch(config)# errdisable recovery cause psecure-violation
C. switch(config)# switchport port-security protect
D. switch(config)# switchport port-security aging type inactivity
E. switch(config)# errdisable recovery cause security-violation

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 27
The network monitoring application alerts a network engineer of a client PC that is acting as a rogue DHCP server. Which two commands help trace this PC when the MAC address is known? (Choose two.)

A. switch# show mac address-table
B. switch# show port-security
C. switch# show ip verify source
D. switch# show ip arp inspection

E. switch# show mac address-table address <mac address>

Correct Answer: AE
Section: (none)
Explanation

Explanation/Reference:

QUESTION 28
A network engineer has just deployed a non-Cisco device in the network and wants to get information about it from a connected device. Cisco Discovery Protocol is not supported, so the open standard protocol must be configured. Which protocol does the network engineer configure on both devices to accomplish this?

A. IRDP
B. LLDP
C. NDP
D. LLTD

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 29
A manager tells the network engineer to permit only certain VLANs across a specific trunk interface. Which option can be configured to accomplish this?

A. allowed VLAN list
B. VTP pruning
C. VACL
D. L2P tunneling

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 30
For client server failover purposes, the application server team has indicated that they must not have the standard 30 second delay before their switchport enters a forwarding state. For their disaster recovery feature to operate successfully, they require the switchport to enter a forwarding state immediately. Which spanning-tree feature satisfies this requirement?

A. Rapid Spanning-Tree
B. Spanning-Tree Timers
C. Spanning-Tree FastPort
D. Spanning-Tree PortFast
E. Spanning-Tree Fast Forward

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 31
Which command does a network engineer use to verify the spanning-tree status for VLAN 10?

A. switch# show spanning-tree vlan 10
B. switch# show spanning-tree bridge
C. switch# show spanning-tree brief
D. switch# show spanning-tree summary
E. switch# show spanning-tree vlan 10 brief

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 32
A new network that consists of several switches has been connected together via trunking interfaces. If all switches currently have the default VTP domain name "null", which statement describes what happens when a domain name is configured on one of the switches?

A. The switch with the non-default domain name restores back to "null" upon reboot.
B. Switches with higher revision numbers does not accept the new domain name.

C. VTP summary advertisements are sent out of all ports with the new domain name.

D. All other switches with the default domain name become VTP clients.

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 33
While troubleshooting a network outage, a network engineer discovered an unusually high level of broadcast traffic coming from one of the switch interfaces. Which option decreases consumption of bandwidth used by broadcast traffic?

A. storm control

B. SDM routing

C. Cisco IOS parser

D. integrated routing and bridging

E. Dynamic ARP Inspection

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 34
A network engineer is setting up a new switched network. The network is expected to grow and add many new VLANs in the future. Which Spanning Tree Protocol should be used to reduce switch resources and managerial burdens that are associated with multiple spanning-tree instances?

A. RSTP

B. PVST

C. MST

D. PVST+

E. RPVST+

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 35
Which statement about the use of SDM templates in a Cisco switch is true?

A. SDM templates are used to configure system resources in the switch to optimize support for specific features, depending on how the switch is used in the network.
B. SDM templates are used to create Layer 3 interfaces (switch virtual interfaces) to permit hosts in one VLAN to communicate with hosts in another VLAN.
C. SDM templates are used to configure ACLs that protect networks and specific hosts from unnecessary or unwanted traffic.
D. SDM templates are used to configure a set of ACLs that allows the users to manage the flow of traffic handled by the route processor.
E. SDM templates are configured by accessing the switch using the web interface.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 36
Which SDM template disables routing and supports the maximum number of unicast MAC addresses?

A. VLAN
B. access
C. default
D. routing

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 37
Which SDM template is the most appropriate for a Layer 2 switch that provides connectivity to a large number of clients?

A. VLAN

B. default

C. access

D. routing

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 38
In a Cisco switch, what is the default period of time after which a MAC address ages out and is discarded?

A. 100 seconds

B. 180 seconds

C. 300 seconds

D. 600 seconds

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 39
If a network engineer applies the command mac-address-table notification mac-move on a Cisco switch port, when is a syslog message generated??

A. A MAC address or host moves between different switch ports.

B. A new MAC address is added to the content-addressable memory.

C. A new MAC address is removed from the content-addressable memory.

D. More than 64 MAC addresses are added to the content-addressable memory.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 40
Which option is a possible cause for an errdisabled interface?

A. routing loop
B. cable unplugged
C. STP loop guard
D. security violation

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 41
What is the default value for the errdisable recovery interval in a Cisco switch?

A. 30 seconds
B. 100 seconds
C. 300 seconds
D. 600 seconds

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 42
Which statement about LLDP-MED is true?

A. LLDP-MED is an extension to LLDP that operates between endpoint devices and network devices.
B. LLDP-MED is an extension to LLDP that operates only between network devices.
C. LLDP-MED is an extension to LLDP that operates only between endpoint devices.
D. LLDP-MED is an extension to LLDP that operates between routers that run BGP.

Correct Answer: A

Section: (none)
Explanation

Explanation/Reference:

QUESTION 43
Which statement about Cisco devices learning about each other through Cisco Discovery Protocol is true?

A. Each device sends periodic advertisements to multicast address 01:00:0C:CC:CC:CC.
B. Each device broadcasts periodic advertisements to all of its neighbors.
C. Each device sends periodic advertisements to a central device that builds the network topology.
D. Each device sends periodic advertisements to all IP addresses in its ARP table.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 44
Which option lists the information that is contained in a Cisco Discovery Protocol advertisement?

A. native VLAN IDs, port-duplex, hardware platform
B. native VLAN IDs, port-duplex, memory errors
C. native VLAN IDs, memory errors, hardware platform
D. port-duplex, hardware platform, memory errors

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 45
Which option describes a limitation of LLDP?

A. LLDP cannot provide information about VTP.

B. LLDP does not support TLVs.
C. LLDP can discover only Windows servers.
D. LLDP can discover up to two devices per port.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 46
Which statement about the UDLD protocol is true?

A. UDLD is a Cisco-proprietary Layer 2 protocol that enables devices to monitor the physical status of links and detect unidirectional failures.
B. UDLD is a Cisco-proprietary Layer 2 protocol that enables devices to advertise their identity, capabilities, and neighbors on a local area network.
C. UDLD is a standardized Layer 2 protocol that enables devices to monitor the physical status of links and detect unidirectional failures.
D. UDLD is a standardized Layer 2 protocol that enables devices to advertise their identity, capabilities, and neighbors on a local area network.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 47
Which option lists the modes that are available for configuring UDLD on a Cisco switch?

A. normal and aggressive
B. active and aggressive
C. normal and active
D. normal and passive
E. normal and standby

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 48
What is the default interval at which Cisco devices send Cisco Discovery Protocol advertisements?

A. 30 seconds
B. 60 seconds
C. 120 seconds
D. 300 seconds

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 49
Which statement about Cisco Discovery Protocol configuration on a Cisco switch is true?

A. CDP is enabled by default and can be disabled globally with the command no cdp run.
B. CDP is disabled by default and can be enabled globally with the command cdp enable.
C. CDP is enabled by default and can be disabled globally with the command no cdp enable.
D. CDP is disabled by default and can be enabled globally with the command cdp run.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 50
Which VTP mode is needed to configure an extended VLAN, when a switch is configured to use VTP versions 1 or 2?

A. transparent
B. client
C. server
D. Extended VLANs are only supported in version 3 and not in versions 1 or 2.

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:
Explanation:
VTP version 1 and version 2 support VLANs 1 to 1000 only. Extended-range VLANs are supported only in VTP version 3.
If converting from VTP version 3 to VTP version 2, VLANs in the range 1006 to 4094 are removed from VTP control.
http://www.cisco.com/en/US/docs/switches/lan/catalyst6500/ios/12.2SX/configuration/guide/vtp.html

QUESTION 51
What is the size of the VLAN field inside an 802.1q frame?

A. 8-bit
B. 12-bit
C. 16-bit
D. 32-bit

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 52
What is the maximum number of VLANs that can be assigned to an access switchport without a voice VLAN?

A. 0
B. 1
C. 2
D. 1024

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 53

Refer to the exhibit. Which option shows the expected result if a show vlan command is issued?

```
Interface GigabitEthernet1/0/1
 switchport access vlan 10
 switchport trunk encapsulation dot1q
 switchport mode trunk
 switchport voice vlan 11
 spanning-tree portfast
!
```

A.
```
Switch#sh vlan

VLAN Name                             Status    Ports
---- -------------------------------- --------- -------------------------------
1    default                          active    Gi1/0/2, Gi1/0/3, Gi1/0/4
                                                Gi1/0/5, Gi1/0/6, Gi1/0/7
                                                Gi1/0/8, Gi1/0/9, Gi1/0/10
                                                Gi1/0/11, Gi1/0/12, Gi1/0/13
                                                Gi1/0/14, Gi1/0/15, Gi1/0/16
                                                Gi1/0/17, Gi1/0/18, Gi1/0/19
                                                Gi1/0/20, Gi1/0/21, Gi1/0/22
                                                Gi1/0/23, Gi1/0/24
10   Data                             active
11   Voice                            active
1002 fddi-default                     act/unsup
1003 token-ring-default               act/unsup
1004 fddinet-default                  act/unsup
1005 trnet-default                    act/unsup
```

B.
```
Switch#sh vlan

VLAN Name                             Status    Ports
---- -------------------------------- --------- -------------------------------
1    default                          active    Gi1/0/2, Gi1/0/3, Gi1/0/4
                                                Gi1/0/5, Gi1/0/6, Gi1/0/7
                                                Gi1/0/8, Gi1/0/9, Gi1/0/10
                                                Gi1/0/11, Gi1/0/12, Gi1/0/13
                                                Gi1/0/14, Gi1/0/15, Gi1/0/16
                                                Gi1/0/17, Gi1/0/18, Gi1/0/19
                                                Gi1/0/20, Gi1/0/21, Gi1/0/22
                                                Gi1/0/23, Gi1/0/24
10   Data                             active    Gi1/0/1
11   Voice                            active    Gi1/0/1
1002 fddi-default                     act/unsup
1003 token-ring-default               act/unsup
1004 fddinet-default                  act/unsup
1005 trnet-default                    act/unsup
```

C.
```
Switch#sh vlan

VLAN Name                          Status     Ports
---- -------------------------      ---------  -------------------------------
1    default                        active     Gi1/0/1, Gi1/0/2, Gi1/0/3
                                               Gi1/0/4, Gi1/0/5, Gi1/0/6
                                               Gi1/0/7, Gi1/0/8, Gi1/0/9
                                               Gi1/0/10, Gi1/0/11, Gi1/0/12
                                               Gi1/0/13, Gi1/0/14, Gi1/0/15
                                               Gi1/0/16, Gi1/0/17, Gi1/0/18
                                               Gi1/0/19, Gi1/0/20, Gi1/0/21
                                               Gi1/0/22, Gi1/0/23, Gi1/0/24
10   Data                           active
11   voice                          active     Gi1/0/1
1002 fddi-default                   act/unsup
1003 token-ring-default             act/unsup
1004 fddinet-default                act/unsup
1005 trnet-defaul
```

D.
```
Switch#sh vlan

VLAN Name                          Status     Ports
---- -------------------------      ---------  -------------------------------
1    default                        active     Gi1/0/2, Gi1/0/3, Gi1/0/4
                                               Gi1/0/5, Gi1/0/6, Gi1/0/7
                                               Gi1/0/8, Gi1/0/9, Gi1/0/10
                                               Gi1/0/11, Gi1/0/12, Gi1/0/13
                                               Gi1/0/14, Gi1/0/15, Gi1/0/16
                                               Gi1/0/17, Gi1/0/18, Gi1/0/19
                                               Gi1/0/20, Gi1/0/21, Gi1/0/22
                                               Gi1/0/23, Gi1/0/24
10   Data                           active     Gi1/0/1
11   voice                          active
1002 fddi-default                   act/unsup
1003 token-ring-default             act/unsup
1004 fddinet-default                act/unsup
1005 trnet-default                  act/unsup
```

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 54
Which feature is automatically enabled when a voice VLAN is configured, but not automatically disabled when a voice VLAN is removed?

A. portfast
B. port-security
C. spanning tree
D. storm control

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 55
In which portion of the frame is the 802.1q header found?

A. within the Ethernet header
B. within the Ethernet payload
C. within the Ethernet FCS
D. within the Ethernet source MAC address

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 56
Which VLAN range is eligible to be pruned when a network engineer enables VTP pruning on a switch?

A. VLANs 1-1001
B. VLANs 1-4094
C. VLANs 2-1001
D. VLANs 2-4094

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 57
Which action allows a network engineer to limit a default VLAN from being propagated across all trunks?

A. Upgrade to VTP version 3 for advanced feature set support.

B. Enable VTP pruning on the VTP server.

C. Manually prune default VLAN with switchport trunk allowed vlans remove.

D. Use trunk pruning vlan 1.

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 58
What is required for a LAN switch to support 802.1q Q-in-Q encapsulation?

A. Support less than 1500 MTU

B. Support 1504 MTU or higher

C. Support 1522 layer 3 IP and IPX packet

D. Support 1547 MTU only

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 59
Refer to the exhibit. How many bytes are added to each frame as a result of the configuration?

```
3512xl(config)#int fastEthernet 0/1
3512xl(config-if)#switchport mode trunk
3512xl(config-if)#switchport trunk encapsulation dot1q
```

A. 4-bytes except the native VLAN

B. 8-bytes except the native VLAN

C. 4-bytes including native VLAN

D. 8-bytes including native VLAN

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 60
A network engineer configured a fault-tolerance link on Gigabit Ethernet links G0/1, G0/2, G0/3, and G0/4 between two switches using Ethernet port-channel. Which action allows interface G0/1 to always actively forward traffic in the port-channel?

A. Configure G0/1 as half duplex and G0/2 as full duplex.
B. Configure LACP port-priority on G0/1 to 1.
C. Configure LACP port-priority on G0/1 to 65535.
D. LACP traffic goes through G0/4 because it is the highest interface ID.

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 61
Which statement about the use of PAgP link aggregation on a Cisco switch that is running Cisco IOS Software is true?

A. PAgP modes are off, auto, desirable, and on. Only the combinations auto-desirable, desirable- desirable, and on-on allow the formation of a channel.
B. PAgP modes are active, desirable, and on. Only the combinations active-desirable, desirable- desirable, and on-on allow the formation of a channel.
C. PAgP modes are active, desirable, and on. Only the combinations active-active, desirable- desirable, and on-on allow the formation of a channel.
D. PAgP modes are off, active, desirable, and on. Only the combinations auto-auto, desirable- desirable, and on-on allow the formation of a channel.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 62
Refer to the exhibit. Which EtherChannel negotiation protocol is configured on the interface f0/13 ?f0/15?

```
SW1#show etherchannel summary
Flags: D - down P - in port-channel
I - stand-alone s - suspended
H - Hot-standby (LACP only)
R - Layer3 S - Layer2
U - in use f - failed to allocate aggregator
u - unsuitable for bundling
w - waiting to be aggregated
d - default port
Number of channel-groups in use: 3
Number of aggregators: 3
Group    Port-channel     Protocol        Ports
------+-------------+----------+---------------------------------------
12       Po12 (SU)        -        Fa0/13(P) Fa0/14(P) Fa0/15(P)
13       Po13 (SU)        -        Fa0/16(P) Fa0/17(P) Fa0/18(P)
14       Po14 (SU)        -        Fa0/19(P) Fa0/20(P) Fa0/21(P)


SW1#show interface trunk
Port Mode Encapsulation Status Native vlan
Po12 desirable n-isl trunking 1
Po13 desirable n-isl trunking 1
Po14 desirable n-isl trunking 1
Port Vlans allowed on trunk
Po12 1-4094
Po13 1-4094
Po14 1-4094
```

A. Link Combination Control Protocol
B. Port Aggregation Protocol
C. Port Combination Protocol
D. Link Aggregation Control Protocol

Correct Answer: B
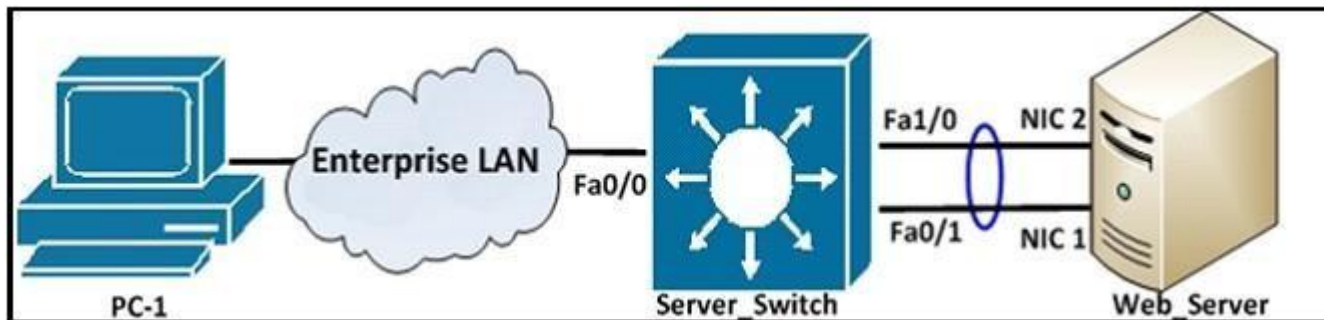**Section: (none)**

Explanation

Explanation/Reference:

QUESTION 63
Refer to the exhibit. Users of PC-1 experience slow connection when a webpage is requested from the server. To increase bandwidth, the network engineer configured an EtherChannel on interfaces Fa1/0 and Fa0/1 of the server farm switch, as shown here:

```
Server_Switch#sh etherchannel load-balance
EtherChannel Load-Balancing Operational State (src-mac):
Non-IP: Source MAC address
IPv4: Source MAC address
IPv6: Source IP address
Server_Switch#
```

However, traffic is still slow. Which action can the engineer take to resolve this issue?

A. Disable EtherChannel load balancing.
B. Upgrade the switch IOS to IP services image.
C. Change the load-balance method to dst-mac.
D. Contact Cisco TAC to report a bug on the switch.

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 64

A network engineer changed the port speed and duplex setting of an existing EtherChannel bundle that uses the PAgP protocol. Which statement describes what happens to all ports in the bundle?

A. PAgP changes the port speed and duplex for all ports in the bundle.
B. PAgP drops the ports that do not match the configuration.
C. PAgP does not change the port speed and duplex for all ports in the bundle until the switch is rebooted.
D. PAgP changes the port speed but not the duplex for all ports in the bundle.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 65
Which statement about using EtherChannel on Cisco IOS switches is true?

A. A switch can support up to eight compatibly configured Ethernet interfaces in an EtherChannel.
   The EtherChannel provides full-duplex bandwidth up to 800 Mbps only for Fast EtherChannel or 8 Gbps only for Gigabit EtherChannel.
B. A switch can support up to 10 compatibly configured Ethernet interfaces in an EtherChannel.
   The EtherChannel provides full-duplex bandwidth up to 1000 Mbps only for Fast EtherChannel or 8 Gbps only for Gigabit EtherChannel.
C. A switch can support up to eight compatibly configured Ethernet interfaces in an EtherChannel.
   The EtherChannel provides full-duplex bandwidth up to 800 Mbps only for Fast EtherChannel or 16 Gbps only for Gigabit EtherChannel.
D. A switch can support up to 10 compatibly configured Ethernet interfaces in an EtherChannel.
   The EtherChannel provides full-duplex bandwidth up to 1000 Mbps only for Fast EtherChannel or 10 Gbps only for Gigabit EtherChannel.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 66
Refer to the exhibit. Which statement about switch S1 is true?

```
S1# show etherchannel summary
Flags:  D - down       P - bundled in port-channel
        I - stand-alone s - suspended
        H - Hot-standby (LACP only)
        R - Layer3     S - Layer2
        U - in use     f- failed to allocate aggregator

M -  not in use, minimum links not met
     u - unsuitable for bundling
     w - waiting to be aggregated
     d - default port

Number of channel-groups in use: 1
Number of aggregators:        1

Group Port-channel Protocol  Ports
------+-------------+-----------+---------------------------------------------
1   Po1(SU)     LACP    Fa0/13(P)  Fa0/14(P)  Fa0/15(P)
```

A. Physical port Fa0/13, Fa0/14, and Fa0/15 successfully formed a Layer 2 port-channel interface using an open standard protocol.
B. Logical port Fa0/13, Fa0/14, and Fa0/15 successfully formed a Layer 2 physical port- channel interface using a Cisco proprietary protocol.
C. Physical port Fa0/13, Fa0/14, and Fa0/15 successfully formed a Layer 3 port-channel interface using a Cisco proprietary protocol.
D. Logical port Fa0/13, Fa0/14, and Fa0/15 successfully formed a Layer 3 physical port- channel interface using an open standard protocol.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 67
What happens on a Cisco switch that runs Cisco IOS when an RSTP-configured switch receives 802.1d BPDU?

A. 802.1d does not understand RSTP BPDUs because they are different versions, but when a RSTP switch receives an 802.1d BPDU, it responds with a 802.1d BPDU and eventually the two switches run 802.1d to communicate.
B. 802.1d understands RSTP BPDUs because they are the same version, but when a RSTP switch receives a 802.1d BPDU, it responds with a 802.1d BPDU and eventually the two switches run 802.1d to communicate.
C. 802.1d does not understand RSTP BPDUs because they are different versions, but when a RSTP switch receives a 802.1d BPDU, it does not respond with a 802.1d BPDU.
D. 802.1d understands RSTP BPDUs because they are the same version, but when a RSTP switch receives a 802.1d BPDU, it does not respond with a 802.1d BPDU and eventually the two switches run 802.1d to communicate.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 68
When two MST instances (MST 1 and MST 2) are created on a switch, what is the total number of spanning-tree instances running on the switch?
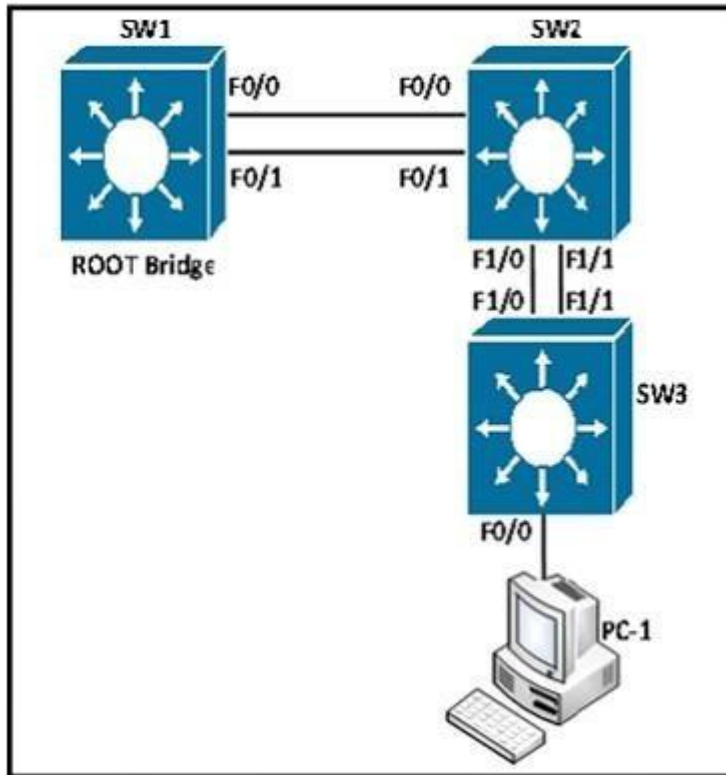
A. 1
B. 2
C. 3
D. 4

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 69
Refer to the exhibit. f1/0 and f1/1 have the same end-to-end path cost to the designated bridge. Which action is needed to modify the Layer 2 spanning-tree network so that traffic for PC1 VLAN from switch SW3 uses switchport f1/1 as a primary port?

A. Modify the spanning-tree port-priority on SW1 f1/1 to 0 and f1/0 to 16.
B. Modify the spanning-tree port-priority on SW1 f1/1 to 16 and f1/0 to 0.
C. Modify the spanning-tree port-priority on SW2 f1/1 to 0 and f1/0 to 16.
D. Modify the spanning-tree port-priority on SW2 f1/1 to 16 and f1/0 to 0.

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 70
Refer to the exhibit. Why would the switch be considered as a root bridge?

```
SW1#show spanning-tree vlan 1
VLAN0001
Spanning tree enabled protocol ieee
Root ID Priority 1
Address 001b.bbbb.dddd
This bridge is the root
Hello Time 2 sec Max Age 20 sec Forward Delay 15 sec
Bridge ID Priority 1 (priority 0 sys-id-ext 1)
Address 001b.bbbb.dddd

Hello Time 2 sec Max Age 20 sec Forward Delay 15 sec
Aging Time 300

Interface  Role  Sts   Cost   Prio.Nbr  Type
---------  ----  ----  ----   --------  ----
Fa0/1      Desg  FWD   19     128.15    P2p
Fa0/2      Desg  FWD   19     128.16    P2p
Fa0/3      Desg  FWD   19     128.17    P2p
Fa0/4      Desg  FWD   19     128.18    P2p
Fa0/5      Desg  FWD   19     128.19    P2p
Fa0/6      Desg  FWD   19     128.19    P2p
```

A. The bridge priority is 1 and all ports are forwarding.

B. The switch priority for VLAN 1 and the macro specifies "This Bridge is the root".

C. The bridge priority is 128.19 and all ports are forwarding.

D. The switch priority value is zero, it has the lowest priority value for VLAN 1.

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 71
A network engineer is trying to deploy a PC on a network. The engineer observes that when the PC is connected to the network, it takes 30 to 60

seconds for the PC to see any activity on the network interface card. Which Layer 2 enhancement can be used to eliminate this delay?

A. Configure port duplex and speed to auto negotiation.
B. Configure port to duplex full and speed 1000.
C. Configure spanning-tree portfast.
D. Configure no switchport.

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 72
Refer to the exhibit. All ports are members of VLAN 10. Considering the default cost of upstream bridges to the root bridge is equal, which option will be the new root port for VLAN 10?

```
Switch# Show run
interface FastEthernet0/13
spanning-tree cost 1000
!
interface FastEthernet0/14
spanning-tree cost 1000
!
interface FastEthernet0/15
spanning-tree cost 1000
!
interface FastEthernet0/20
spanning-tree cost 2
!
interface FastEthernet0/21
spanning-tree cost 1
```

A. interface f0/13
B. interface f0/14
C. interface f0/15

D. interface f0/21

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 73
A network engineer configured an Ethernet switch using these commands.

```
Switchone(config) # Spanning-tree portfast bpdufilter default
```

Which statement about the spanning-tree portfast feature on the switch is true?

A. If an interface is enabled for portfast receives BDPU, the port goes through the spanning-tree listening, learning, and forwarding states.
B. If an interface is enabled for portfast receives BDPU, the port does not go through the spanning- tree listening, learning, and forwarding states.
C. If an interface is enabled for portfast receives BDPU, the port is shut down immediately.
D. If an interface is enabled for portfast receives BDPU, the port goes into the spanning- tree inconsistent state.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 74
Which statement describes what happens when a port configured with root guard receives a superior BPDU?

A. The port goes into errdisabled state and stops forwarding traffic.
B. The port goes into BPDU-inconsistent state and stops forwarding traffic.
C. The port goes into loop-inconsistent state and stops forwarding traffic.
D. The port goes into root-inconsistent state and stops forwarding traffic.

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 75
Which option is a benefit of using VSS?

A. reduces cost
B. simplifies configuration
C. provides two independent supervisors with two different control planes
D. removes the need for a First Hop Redundancy Protocol

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 76
Which statement about restrictions for multichassis LACP is true?

A. It is available only on a Cisco Catalyst 6500 Series chassis.
B. It does not support 1Gb links.
C. Converting a port channel to mLACP can cause a service disruption.
D. It is not available in VSS.

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 77
What is the maximum number of 10 Gigabit Ethernet connections that can be utilized in an EtherChannel for the virtual switch link?

A. 4
B. 6
C. 8
D. 12

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 78
Which statement describes what happens if all VSL connections between the virtual switch members are lost?

A. Both virtual switch members cease to forward traffic.
B. The VSS transitions to the dual active recovery mode, and both virtual switch members continue to forward traffic independently.
C. The virtual switch members reload.
D. The VSS transitions to the dual active recovery mode, and only the new active virtual switch continues to forward traffic.

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 79
Which statement describes what happens when a switch enters dual active recovery mode?

A. The switch shuts down and waits for the VSL link to be restored before sending traffic.
B. All interfaces are shut down in the formerly active virtual switch member, but the new active virtual switch forwards traffic on all links.
C. The switch continues to forward traffic out all links and enables spanning tree on VSL link and all other links to prevent loops.
D. The VSS detects which system was last in active state and shuts down the other switch.

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 80
Which command globally enables AAA on a device?

A. aaa new-model

B. aaa authentication
C. aaa authorization
D. aaa accounting

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 81
Which AAA Authorization type includes PPP, SLIP, and ARAP connections?

A. network
B. IP mobile
C. EXEC
D. auth-proxy

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 82
Which authentication service is needed to configure 802.1x?

A. RADIUS with EAP Extension
B. TACACS+
C. RADIUS with CoA
D. RADIUS using VSA

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 83
Refer to the exhibit. Which login credentials are required when connecting to the console port in this output?

```
username cisco password cisco
!
aaa new-model
radius-server host 10.1.1.50 auth-port 1812 key C1sc0123
aaa authentication login default group radius local line
aaa authentication loging NO_AUTH none
!
line vty 0 15
login authentication default
password linepass
line console 0
login authentication NO_AUTH
```

A. none required
B. username cisco with password cisco
C. no username with password linepass
D. login authentication default

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 84
Refer to the exhibit. When a network administrator is attempting an SSH connection to the device, in which order does the device check the login credentials?

```
username cisco password cisco
!
aaa new-model
radius-server host 10.1.1.50 auth-port 1812 key C1sc0123
aaa authentication login default group radius local line
aaa authentication loging NO_AUTH none
!
line vty 0 15
login authentication default
password linepass
line console 0
login authentication NO_AUTH
```

A. RADIUS server, local username, line password
B. RADIUS server, line password, local username
C. Line password, local username, RADIUS server
D. Line password, RADIUS server, local username

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 85
Which type of information does the DHCP snooping binding database contain?

A. untrusted hosts with leased IP addresses
B. trusted hosts with leased IP addresses
C. untrusted hosts with available IP addresses
D. trusted hosts with available IP addresses

Correct Answer: A
Section: (none)
Explanation

QUESTION 86
Which switch feature determines validity based on IP-to-MAC address bindings that are stored in a trusted database?

A. Dynamic ARP Inspection
B. storm control
C. VTP pruning
D. DHCP snooping

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 87
Which command is needed to enable DHCP snooping if a switchport is connected to a DHCP server?

A. ip dhcp snooping trust
B. ip dhcp snooping
C. ip dhcp trust
D. ip dhcp snooping information

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 88
When you configure private VLANs on a switch, which port type connects the switch to the gateway router?

A. promiscuous
B. community
C. isolated
D. trunked

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 89
When you configure a private VLAN, which type of port must you configure the gateway router port as?

A. promiscuous port
B. isolated port
C. community port
D. access port

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 90
Which First Hop Redundancy Protocol is an IEEE Standard?

A. GLBP
B. HSRP
C. VRRP
D. OSPF

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 91
What is the default amount by which the hot standby priority for the router is decremented or incremented when the interface goes down or comes back up?

A. 1
B. 5
C. 10
D. 15

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 92
What is the maximum number of virtual MAC addresses that GLBP allows per group?

A. 2
B. 4
C. 6
D. 8

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 93
Which gateway role is responsible for answering ARP requests for the virtual IP address in GLBP?

A. active virtual forwarder
B. active virtual router
C. active virtual gateway
D. designated router

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 94
Which VRRP router is responsible for forwarding packets that are sent to the IP addresses of the virtual router?

A. virtual router master
B. virtual router backup
C. virtual router active
D. virtual router standby

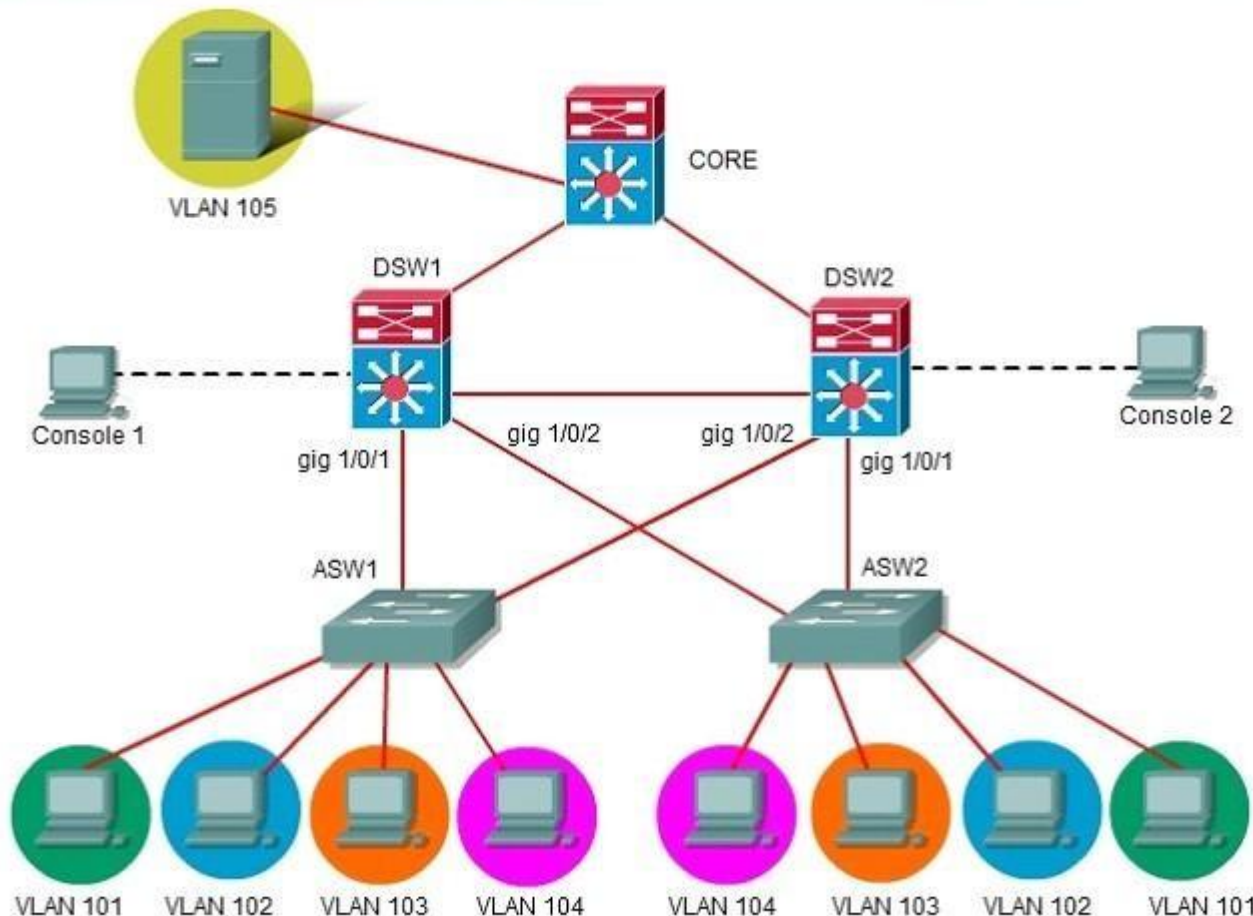**Correct Answer:** A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 95
Hotspot - HSRP

Ferris Plastics, Inc. is a medium sized company, with an enterprise network (access, distribution and core switches) that provides LAN connectivity from user PCs to corporate servers. The distribution switches are configured to use HSRPto provide a high availability solution.

```
- DSW1 -primary device for VLAN 101 VLAN 102 andVLAN 105
- DSW2 - primary device for VLAN 103 and VLAN 104
- A failure of GigabitEthemet1/0/1 on primary device should cause the primary device to release its status as
the primary device, unless GigabitEthernet1/0/1 on backup device has also failed.
```

Troubleshooting has identified several issues. Currently all interfaces are up. Using the running configurations and show commands, you have been asked to investigate and respond to the following question.

Topology

During routine maintenance, it became necessary to shut down the GigabitEthernet1/0/1 interface on DSW1 and DSW2. All other interfaces were up. During this time, DSW1 became the active router for the VLAN 104HSRP group. As related to the VLAN 104HSRP group, what can to be done to make the group function properly?

A. On DSW1, disable preempt.
B. On DSW2, decrease the priority value to a value less than 150.
C. On DSW1, increase the decrement value in the track command to a value greater than 6.
D. On DSW1, decrease the decrement value in the track command to a value less than 1.

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:
Explanation:

```
interface Vlan104                          interface Vlan104
 ip address 192.168.104.1 255.255.255.0     ip address 192.168.104.2 255.255.255.0
 standby 4 ip 192.168.104.254               standby 4 ip 192.168.104.254
 standby 4 priority 150                     standby 4 priority 200
 standby 4 preempt                          standby 4 preempt
 standby 4 track GigabitEthernet1/0/1 1     standby 4 track GigabitEthernet1/0/1 55
```

We should NOT disable preempt on DS1. By do that, you will make Vlan104's HSRP group fail function.
Example: if we are disable preempt on DS1. It can not become active device when G1/0/1 on DS2 fail. In this question, G0/1/0 on DS1 & DS2 is shutdown. Vlan104 (left) : 150 -1 = 149. Vlan104 (right) : 200 -155 = 145. Result is priority 149 > 145 (Vlan104 on DS1 is active). If increase the decrement in the track value to a value greater than 6 (> or = 6). Vlan104 (left) : 150 -6 = 144. Result is priority 144 < 145 (vlan104 on DS2 is active).
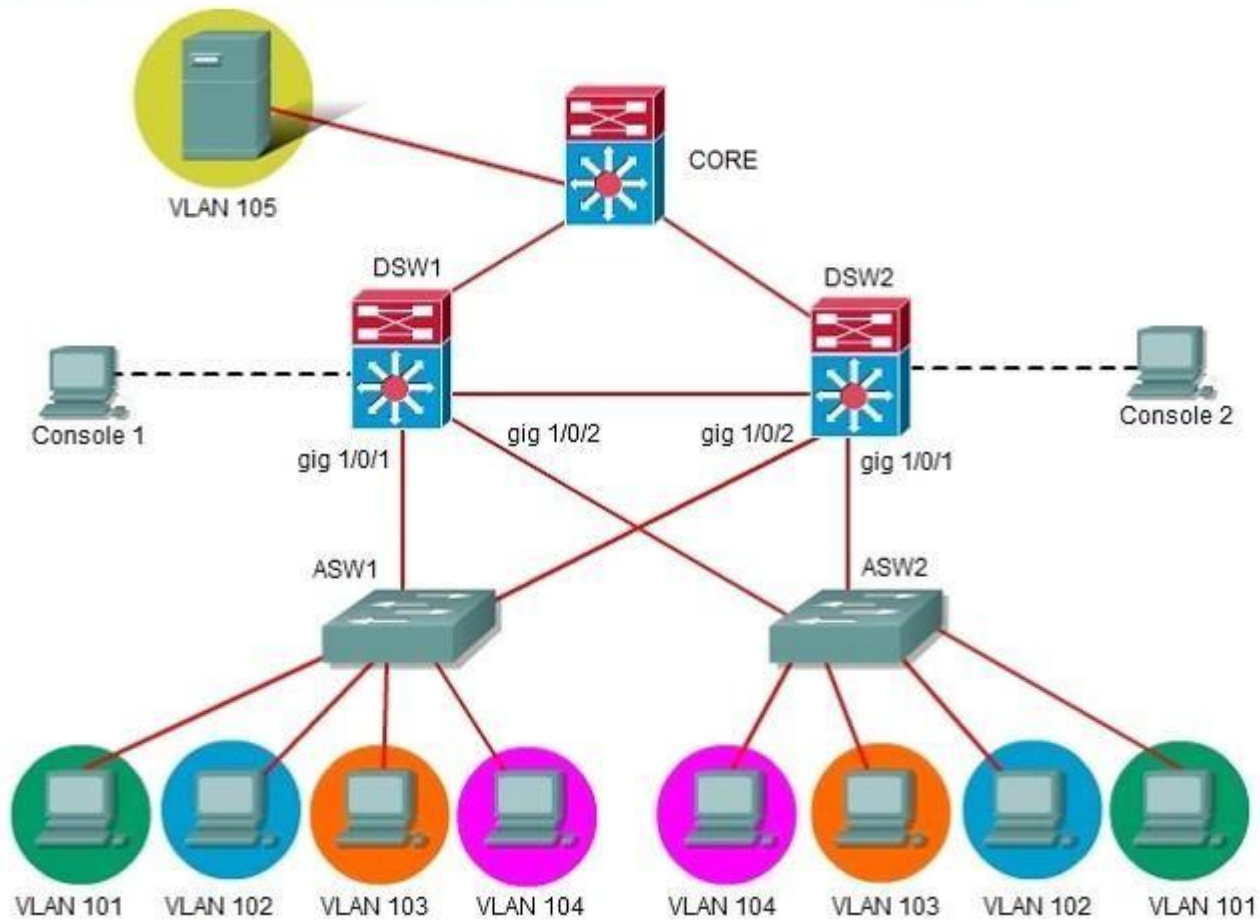
QUESTION 96
Hotspot - HSRP

Ferris Plastics, Inc. is a medium sized company, with an enterprise network (access, distribution and core switches) that provides LAN connectivity from user PCs to corporate servers. The distribution switches are configured to use HSRPto provide a high availability solution.

```
- DSW1 -primary device for VLAN 101 VLAN 102 andVLAN 105
- DSW2 - primary device for VLAN 103 and VLAN 104
- A failure of GigabitEthemet1/0/1 on primary device should cause the primary device to release its status as
the primary device, unless GigabitEthernet1/0/1 on backup device has also failed.
```

Troubleshooting has identified several issues. Currently all interfaces are up. Using the running configurations and show commands, you have been asked to investigate and respond to the following question.

Topology   ⬜⬜

What is the priority value of the VLAN 105 HSRP group on DSW2?

A. 50
B. 100
C. 150
D. 200

Correct Answer: B

Section: (none)
Explanation

Explanation/Reference:
Explanation:
Use "show stantby brieft" command on console2. Very easy to see priority of Vlan105 is 100.

```
Vlan105 - Group 5
  State is Standby
    10 state changes, last state change 02:54:51
  Virtual IP address is 192.168.105.254
  Active virtual MAC address is 0000.0c07.ac05
    Local virtual MAC address is 0000.0c07.ac05 (v1 default)
  Hello time 3 sec, hold time 10 sec
    Next hello sent in 1.516 secs
  Preemption enabled
  Active router is 192.168.105.1, priority 150 (expires in 7.786 sec)
  Standby router is local
  Priority 100 (default 100)
    Track interface GigabitEthernet1/0/1 state Up decrement 10
  IP redundancy name is "hsrp-Vl105-5" (default)
SW2#
```
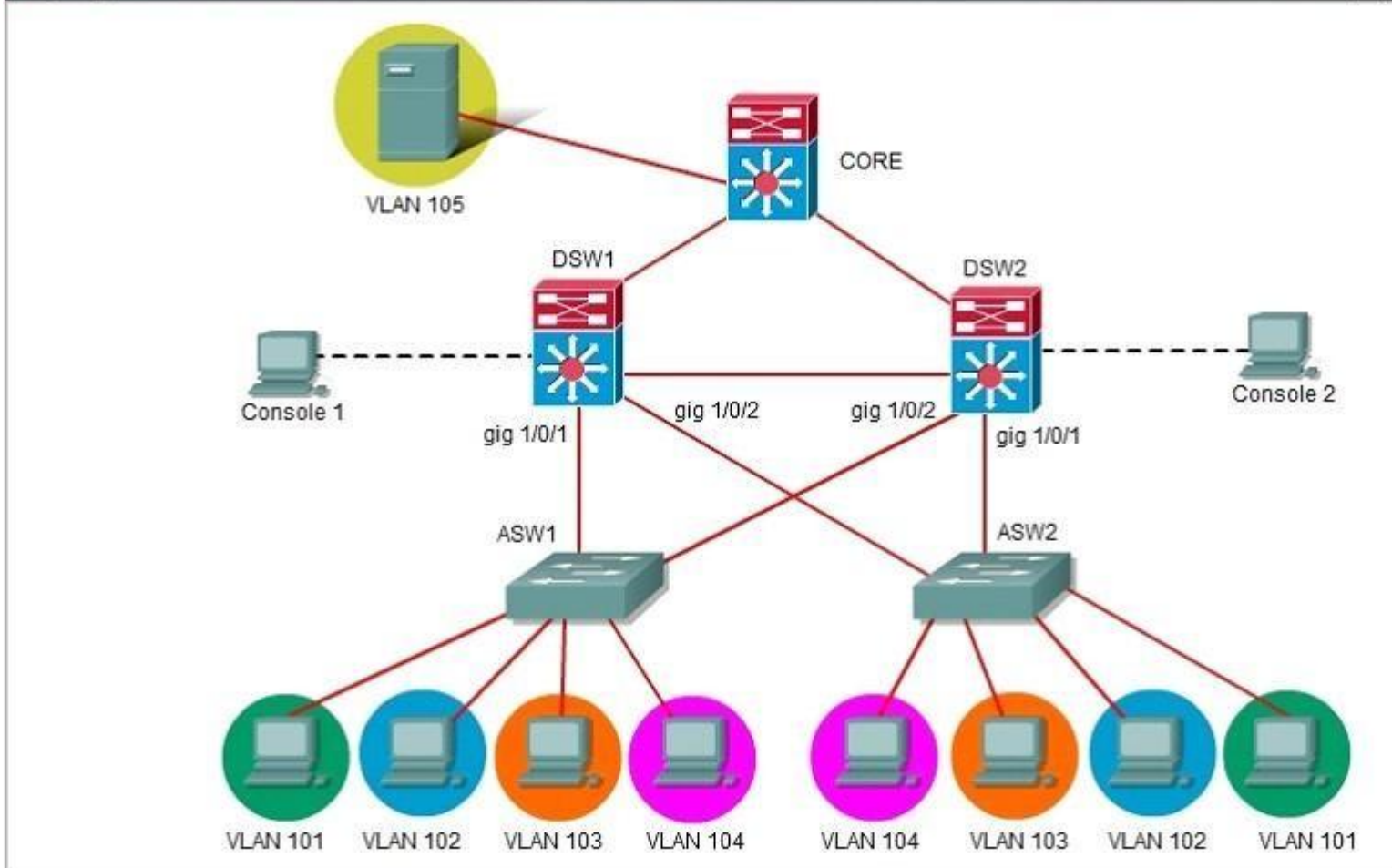
QUESTION 97
Hotspot - HSRP

Ferris Plastics, Inc. is a medium sized company, with an enterprise network (access, distribution and core switches) that provides LAN connectivity from user PCs to corporate servers. The distribution switches are configured to use HSRPto provide a high availability solution.

```
- DSW1 -primary device for VLAN 101 VLAN 102 andVLAN 105
- DSW2 - primary device for VLAN 103 and VLAN 104
- A failure of GigabitEthemet1/0/1 on primary device should cause the primary device to release its status as
the primary device, unless GigabitEthernet1/0/1 on backup device has also failed.
```

Troubleshooting has identified several issues. Currently all interfaces are up. Using the running configurations and show commands, you have been asked to investigate and respond to the following question.

If GigabitEthemet1/0/1 on DSW2 is shutdown, what will be the resulting priority value of the VLAN 105 HSRP group on router DSW2?

A. 90
B. 100
C. 150
D. 200

Correct Answer: A

Section: (none)
Explanation

Explanation/Reference:
Explanation:
As seen below, the current priority for VLAN 105 is 100, and the tracking feature for Gig 1/0/0 is enabled which will decrement the priority by 10 if this interface goes down for a priority value of 90.

```
Vlan105 - Group 5
  State is Standby
    10 state changes, last state change 02:54:51
  Virtual IP address is 192.168.105.254
  Active virtual MAC address is 0000.0c07.ac05
    Local virtual MAC address is 0000.0c07.ac05 (v1 default)
  Hello time 3 sec, hold time 10 sec
    Next hello sent in 1.516 secs
  Preemption enabled
  Active router is 192.168.105.1, priority 150 (expires in 7.786 sec)
  Standby router is local
  Priority 100 (default 100)
    Track interface GigabitEthernet1/0/1 state Up decrement 10
  IP redundancy name is "hsrp-Vl105-5" (default)


DSW2#
```

QUESTION 98
Lab Simulation - MLS and EIGRP

You have been tasked with configuring multilayer SwitchC, which has a partial configuration and has been attached to RouterC as shown in the topology diagram.

You need to configure SwitchC so that Hosts H1 and H2 can successfully ping the server S1. Also SwitchC needs to be able to ping server S1.

Due to administrative restrictions and requirements you should not add/delete vlans or create trunk links. Company policies forbid the use of static or default routing. All routes must be learned via EIGRP 65010 routing protocol.

You do not have access to RouteC. RouterC is correctly configured. No trunking has been configured on RouterC.

Routed interfaces should use the lowest host on a subnet when possible. The following subnets are available to implement this solution:
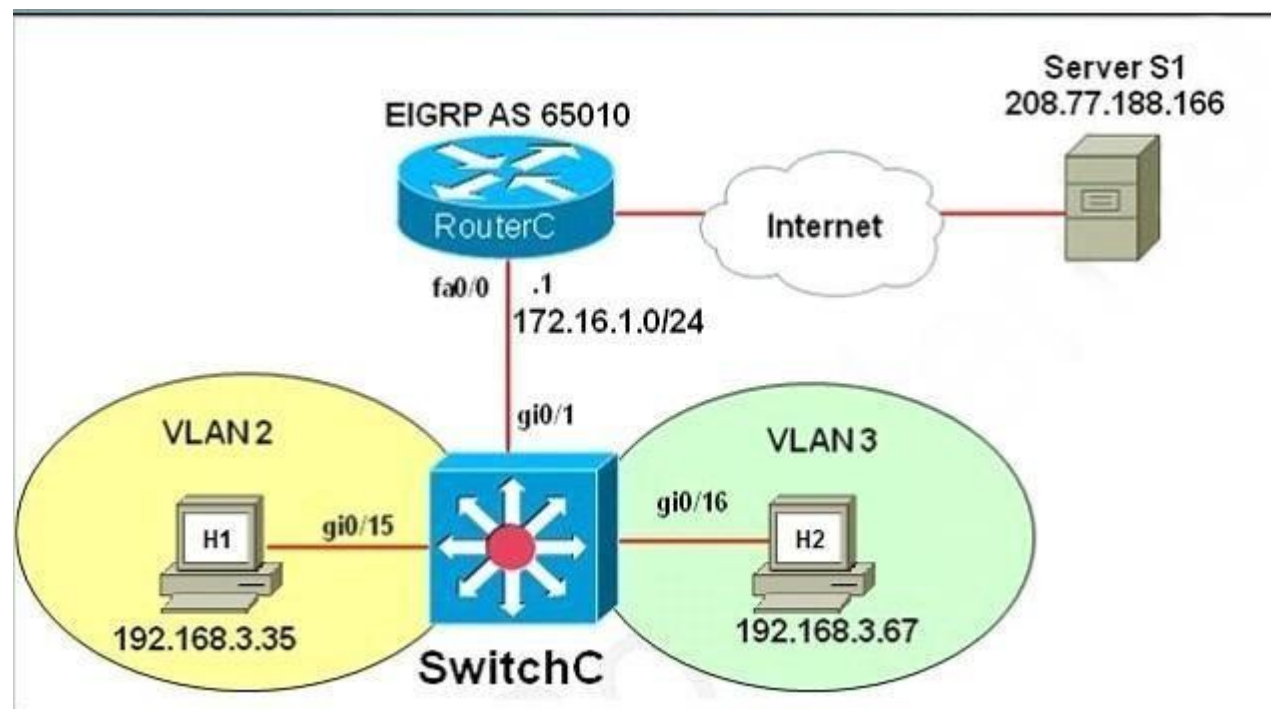
```
- 10.10.10.0/24
- 190.200.250.32/27
- 190.200.250.64/27
```

Hosts H1 and H2 are configured with the correct IP address and default gateway.

SwitchC uses Cisco as the enable password.

Routing must only be enabled for the specific subnets shown in the diagram.

Note: Due to administrative restrictions and requirements you should not add or delete VLANs, changes VLAN port assignments or create trunks. Company policies forbid the use of static or default routing. All routes must be learned via the EIGRP routing protocol.

A. See the explanation

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:
In real life, there are two ways to configure interVLAN routing in this case:

+ Use RouterC as a "router on a stick" and SwitchC as a pure Layer2 switch. Trunking must be established between RouterC and SwitchC.
+ Only use SwitchC for interVLAN routing without using RouterC, SwitchC should be configured as a Layer 3 switch (which supports ip routing function as a router). No trunking requires.

The question clearly states "No trunking has been configured on RouterC" so RouterC does not contribute to interVLAN routing of hosts H1 & H2 -> SwitchC must be configured as a Layer 3 switch with SVIs for interVLAN routing.

We should check the default gateways on H1 & H2. Click on H1 and H2 and type the "ipconfig" command to get their default gateways.

```
C:\>ipconfig
```

We will get the default gateways as follows:

Host1:
+ Default gateway: 190.200.250.33

Host2:
+ Default gateway: 190.200.250.65

Now we have enough information to configure SwitchC (notice the EIGRP AS in this case is 650)

Note: VLAN2 and VLAN3 were created and gi0/10, gi0/11 interfaces were configured as access ports so we don't need to configure them in this sim.

```
SwitchC# configure terminal
SwitchC(config)# int gi0/1
SwitchC(config-if)#no switchport -> without using this command, the simulator does not let you assign IP address on Gi0/1 interface.
SwitchC(config-if)# ip address 10.10.10.2 255.255.255.0 ->RouterC has used IP 10.10.10.1 so this is the lowest usable IP address.
SwitchC(config-if)# no shutdown
SwitchC(config-if)# exit
SwitchC(config)# int vlan 2
SwitchC(config-if)# ip address 190.200.250.33 255.255.255.224
SwitchC(config-if)# no shutdown
SwitchC(config-if)# int vlan 3
SwitchC(config-if)# ip address 190.200.250.65 255.255.255.224
SwitchC(config-if)# no shutdown
SwitchC(config-if)#exit
```

```
SwitchC(config)# ip routing  (Notice: MLS will not work without this command)
SwitchC(config)# router eigrp 650
SwitchC(config-router)# network 10.10.10.0 0.0.0.255
SwitchC(config-router)# network 190.200.250.32 0.0.0.31
SwitchC(config-router)# network 190.200.250.64 0.0.0.31
```

NOTE: THE ROUTER IS CORRECTLY CONFIGURED, so you will not miss within it in the exam , also don't modify/delete any port just do the above configuration. Also some reports said the "no auto-summary" command can't be used in the simulator, in fact it is not necessary because the network 190.200.0.0/16 is not used anywhere else in this topology.
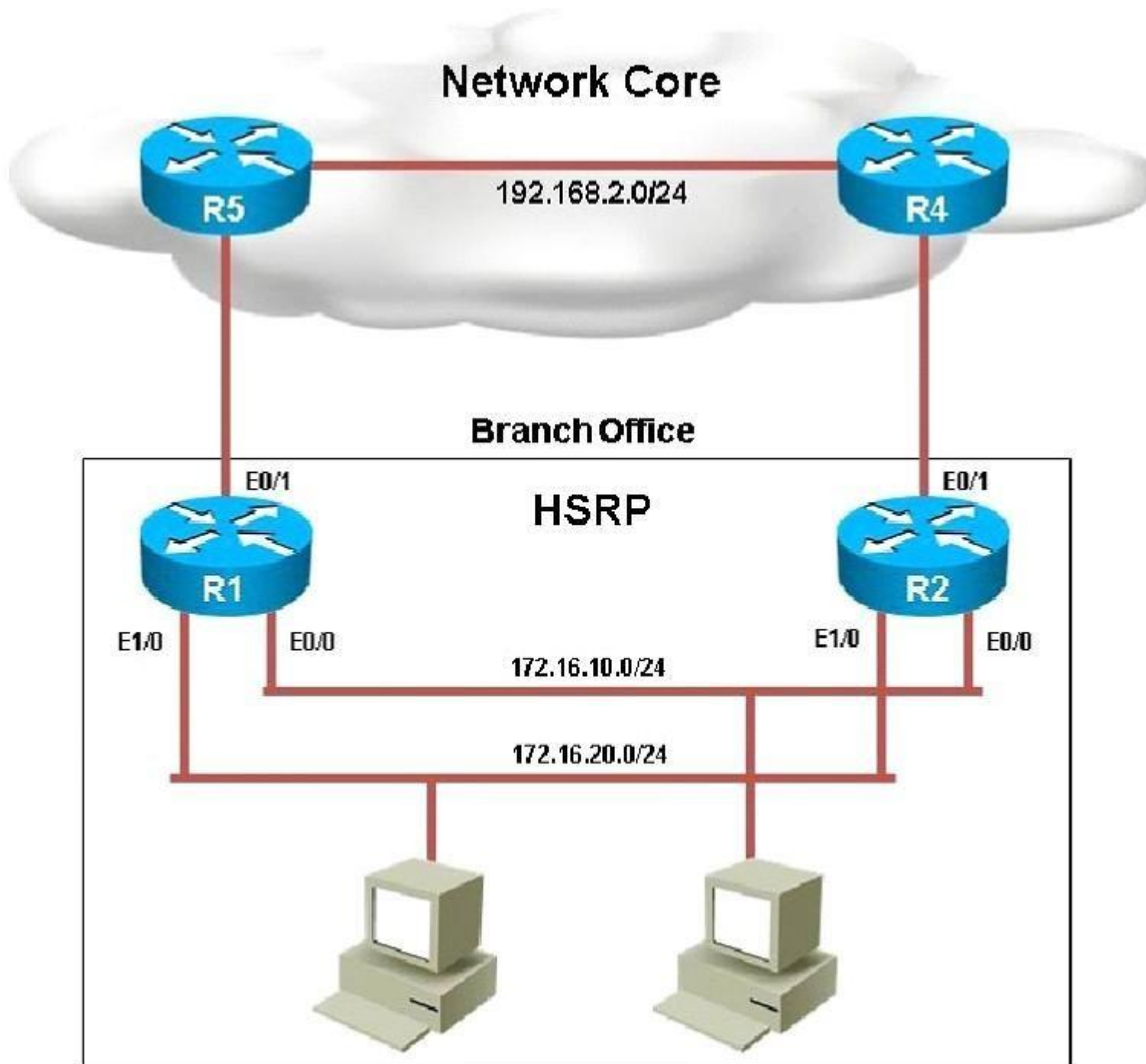
In order to complete the lab , you should expect the ping to SERVER to succeed from the MLS , and from the PCs as well.

Also make sure you use the correct EIGRP AS number (in the configuration above it is 650 but it will change when you take the exam) but we are not allowed to access RouterC so the only way to find out the EIGRP AS is to look at the exhibit above. If you use wrong AS number, no neighbor relationship is formed between RouterC and SwitchC.

In fact, we are pretty sure instead of using two commands "network 190.200.250.32 0.0.0.31" and "network 190.200.250.64 0.0.0.31" we can use one simple command "network 190.200.0.0" because it is the nature of distance vector routing protocol like EIGRP: only major networks need to be advertised; even without "no auto-summary" command the network still works correctly. But in the exam the sim is just a flash based simulator so we should use two above commands, just for sure. But after finishing the configuration, we can use "show run" command to verify, only the summarized network 190.200.0.0 is shown.

QUESTION 99
Your customer has asked you to come in and verify the operation of routers R1 and R2 which are configured to use HSRP. They have questions about how these two devices will perform in the event of a device failure.

Network Core

R5

192.168.2.0/24

R4

Branch Office

E0/1

HSRP

E0/1

R1

R2

E1/0   E0/0

E1/0   E0/0

172.16.10.0/24

172.16.20.0/24

· IT Certifications

What percentage of the outgoing traffic from the 172.16.10.0/24 subnet is being forwarded through R1?

A. R1-0%
B. R1-50 %, R2-50%
C. R2-100%
D. R1-100%

Correct Answer: D
Section: (none)
Explanation

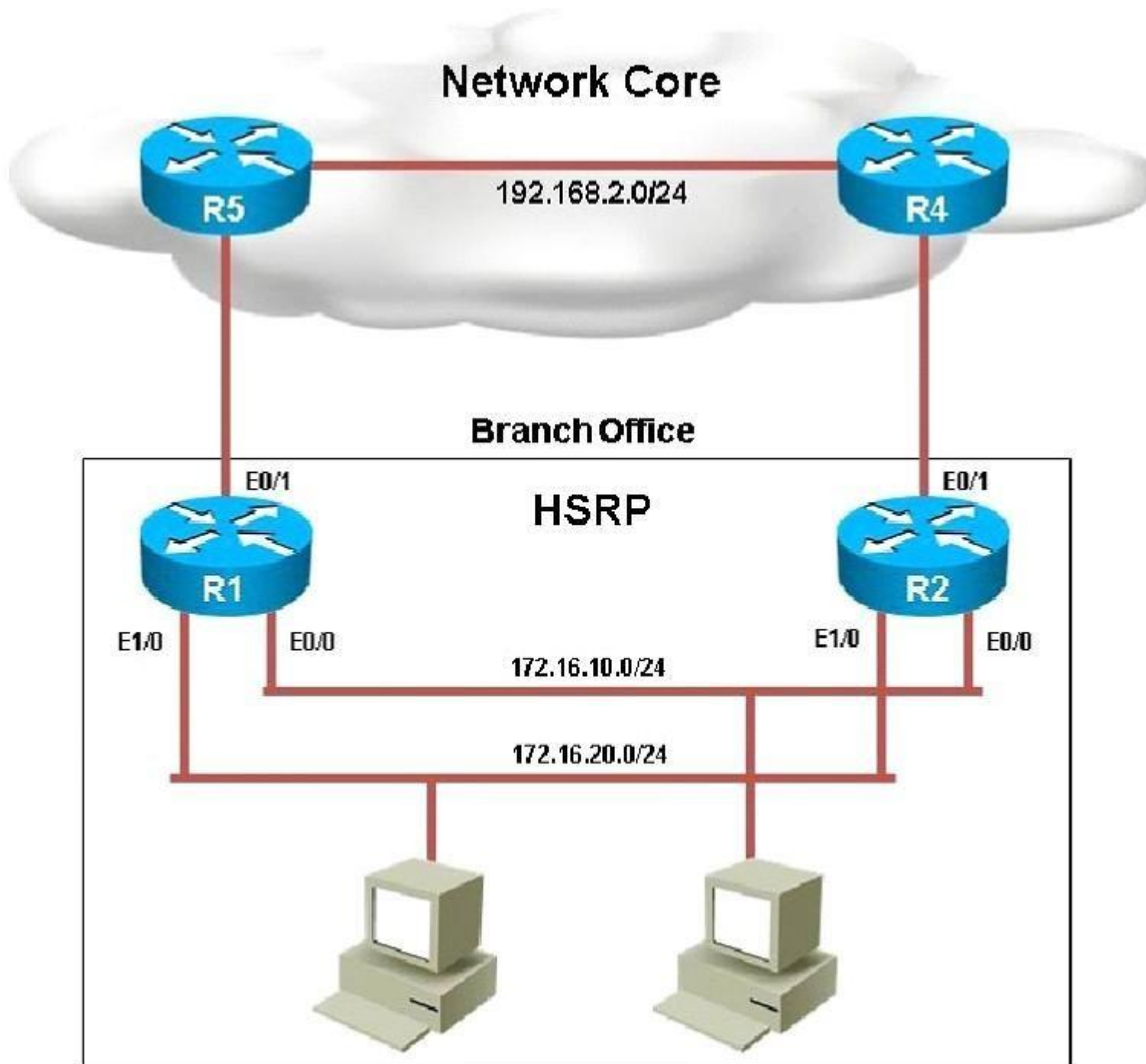**Explanation/Reference:**
Explanation:
Based on the following output, we see that R1 is the active standby router for the Ethernet 0/0 link, so all outgoing traffic will be forwarded to R1.

R1

```
R1#show standby
Ethernet0/0 - Group 1
  State is Active
    2 state changes, last state change 00:05:01
  Virtual IP address is 172.16.10.254
  Active virtual MAC address is 4000.0000.0010 (MAC In Use)
    Local virtual MAC address is 4000.0000.0010 (cfgd)
  Hello time 3 sec, hold time 10 sec
    Next hello sent in 1.936 secs
  Authentication text, string "cisco123"
  Preemption enabled, delay reload 180 secs
  Active router is local
  Standby router is 172.16.10.1, priority 100 (expires in 10.464 sec)
  Priority 130 (configured 130)
    Track object 1 state Up decrement 40
  Group name is "hsrp-Et0/0-1" (default)
```

QUESTION 100
Your customer has asked you to come in and verify the operation of routers R1 and R2 which are configured to use HSRP. They have questions about how these two devices will perform in the event of a device failure.

Network Core

R5

192.168.2.0/24

R4

Branch Office

E0/1

HSRP

E0/1

R1

R2

E1/0

E0/0

172.16.10.0/24

E1/0

E0/0

172.16.20.0/24

· IT Certifications

Refer to the exhibit. If router R1 interface Etherne0/0 goes down and recovers, which of the statement regarding HSRP priority is true?

A. The interface will have the priority decremented by 40 for HSRP group 1.
B. The interface will have the priority decremented by 60 for HSRP group 1
C. The interface will have its current priority incremented by 40 for HSRP group 1
D. The interface will have its current priority incremented by 60 for HSRP group 1
E. The interface will default to the a priority of 100 for HSRP group 1

Correct Answer: C
Section: (none)
Explanation

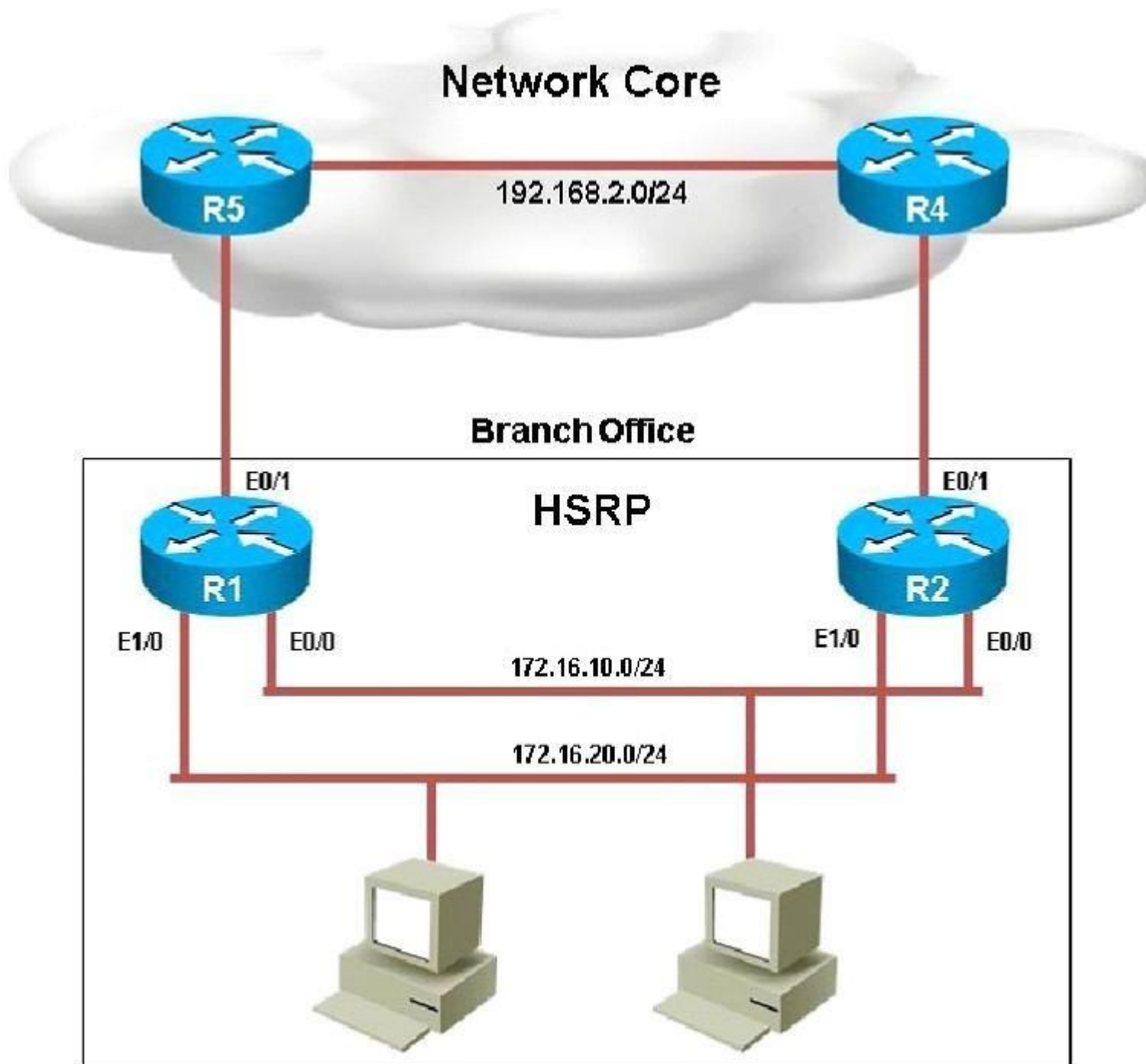**Explanation/Reference:**
Explanation:
Here is the HSRP configuration seen on R1:


```
R1
!
interface Ethernet0/0
 description Link to R2
 ip address 172.16.10.2 255.255.255.0
 standby 1 ip 172.16.10.254
 standby 1 priority 130
 standby 1 preempt delay reload 180
 standby 1 authentication cisco123
 standby 1 mac-address 4000.0000.0010
 standby 1 track 1 decrement 40
!
interface Ethernet0/1
```

Here, when the Ethernet 0/0 interface goes down, the standby 1 track decrement command will lower the priority from 130 to 90. However, when it comes back up, it will then increment it by 40 back to 130 for HSRP group 1.

QUESTION 101
Your customer has asked you to come in and verify the operation of routers R1 and R2 which are configured to use HSRP. They have questions about how these two devices will perform in the event of a device failure.

Network Core

R5

192.168.2.0/24

R4

Branch Office

E0/1

HSRP

E0/1

R1

R2

E1/0   E0/0

172.16.10.0/24

E1/0   E0/0

172.16.20.0/24

What issue is causing Router R1 and R2 to both be displayed as the HSRP active router for group 2?

A. The HSRP group number mismatch
B. The HSRP group authentication is misconfigured
C. The HSRP Hello packets are blocked
D. The HSRP timers mismatch
E. The HSRP group priorities are different

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:
Explanation:
Based on the configuration output, we see that authentication is configured on R2, but not on R1:


```
R1

!
interface Ethernet1/0
 description Link to R2
 ip address 172.16.20.2 255.255.255.0
 standby 2 ip 172.16.20.254
!
```

R2

```
!
interface Ethernet1/0
 description Link to R1
 ip address 172.16.20.1 255.255.255.0
 standby 2 ip 172.16.20.254
 standby 2 priority 130
 standby 2 preempt delay reload 180
 standby 2 authentication cisco123
 standby 2 track 1 decrement 40
!
```

This can be further verified by issuing the "show standby" command on each router.
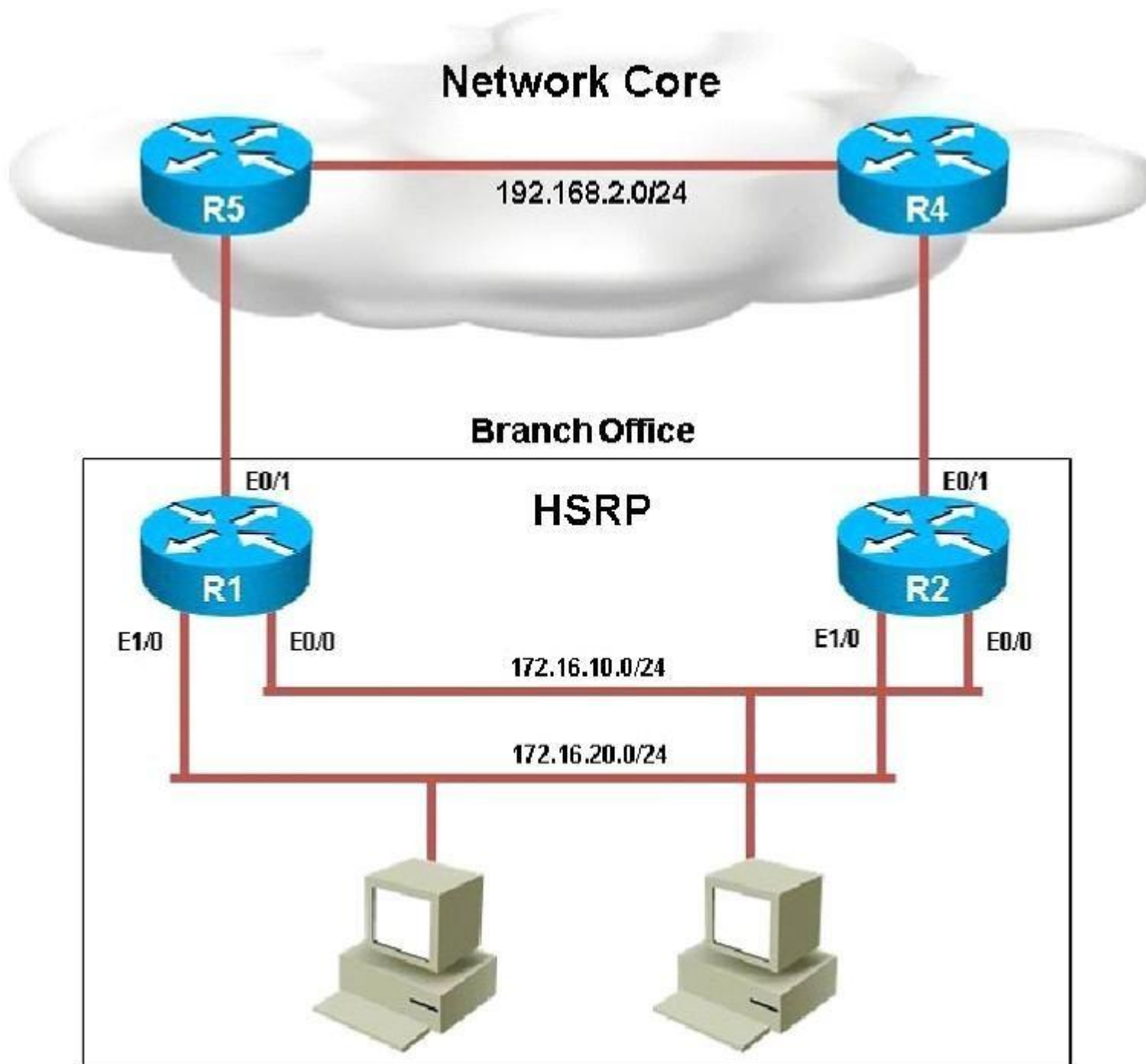
```
R1
Ethernet1/0 - Group 2
  State is Active
    2 state changes, last state change 00:05:03
  Virtual IP address is 172.16.20.254
  Active virtual MAC address is 0000.0c07.ac02 (MAC In Use)
    Local virtual MAC address is 0000.0c07.ac02 (v1 default)
  Hello time 3 sec, hold time 10 sec
    Next hello sent in 0.656 secs
  Preemption disabled
  Active router is local
  Standby router is unknown
  Priority 100 (default 100)
  Group name is "hsrp-Et1/0-2" (default)
R1#
% Ambiguous command
R1#
```

```
R2
Ethernet1/0 - Group 2
  State is Active
    2 state changes, last state change 00:04:48
  Virtual IP address is 172.16.20.254
  Active virtual MAC address is 0000.0c07.ac02 (MAC In Use)
    Local virtual MAC address is 0000.0c07.ac02 (v1 defaul
  Hello time 3 sec, hold time 10 sec
    Next hello sent in 2.400 secs
  Authentication text, string "cisco123"
  Preemption enabled, delay reload 180 secs
  Active router is local
  Standby router is unknown
  Priority 130 (configured 130)
    Track object 1 state Up decrement 40
  Group name is "hsrp-Et1/0-2" (default)
R2#
```

\\psf\Home\.Trash\Screen Shot 2014-10-16 at 4.45.29 PM.png

QUESTION 102
Your customer has asked you to come in and verify the operation of routers R1 and R2 which are configured to use HSRP. They have questions about how these two devices will perform in the event of a device failure.

Network Core

R5 ——— 192.168.2.0/24 ——— R4

Branch Office

E0/1   E0/1

HSRP

R1   R2

E1/0   E0/0   172.16.10.0/24   E1/0   E0/0

172.16.20.0/24

· IT Certifications

What is the virtual mac-address of HSRP group 1?

A. 0000.0c07.ac02
B. 4000.0000.0010
C. 0000.0c07.ac01
D. 4000.0000.ac01
E. 4000.0000.ac02
F. 0000.0c07.0010

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:
Explanation:
Issuing the "show standby" command on either router shows us that the virtual MAC used by HSRP group 1 is 4000.0000.0010.

R1

```
R1#show standby
Ethernet0/0 - Group 1
  State is Active
    2 state changes, last state change 00:05:01
  Virtual IP address is 172.16.10.254
  Active virtual MAC address is 4000.0000.0010 (MAC In Use)
    Local virtual MAC address is 4000.0000.0010 (cfgd)
  Hello time 3 sec, hold time 10 sec
    Next hello sent in 1.936 secs
  Authentication text, string "cisco123"
  Preemption enabled, delay reload 180 secs
  Active router is local
  Standby router is 172.16.10.1, priority 100 (expires in 10.464 sec)
  Priority 130 (configured 130)
    Track object 1 state Up decrement 40
  Group name is "hsrp-Et0/0-1" (default)
```
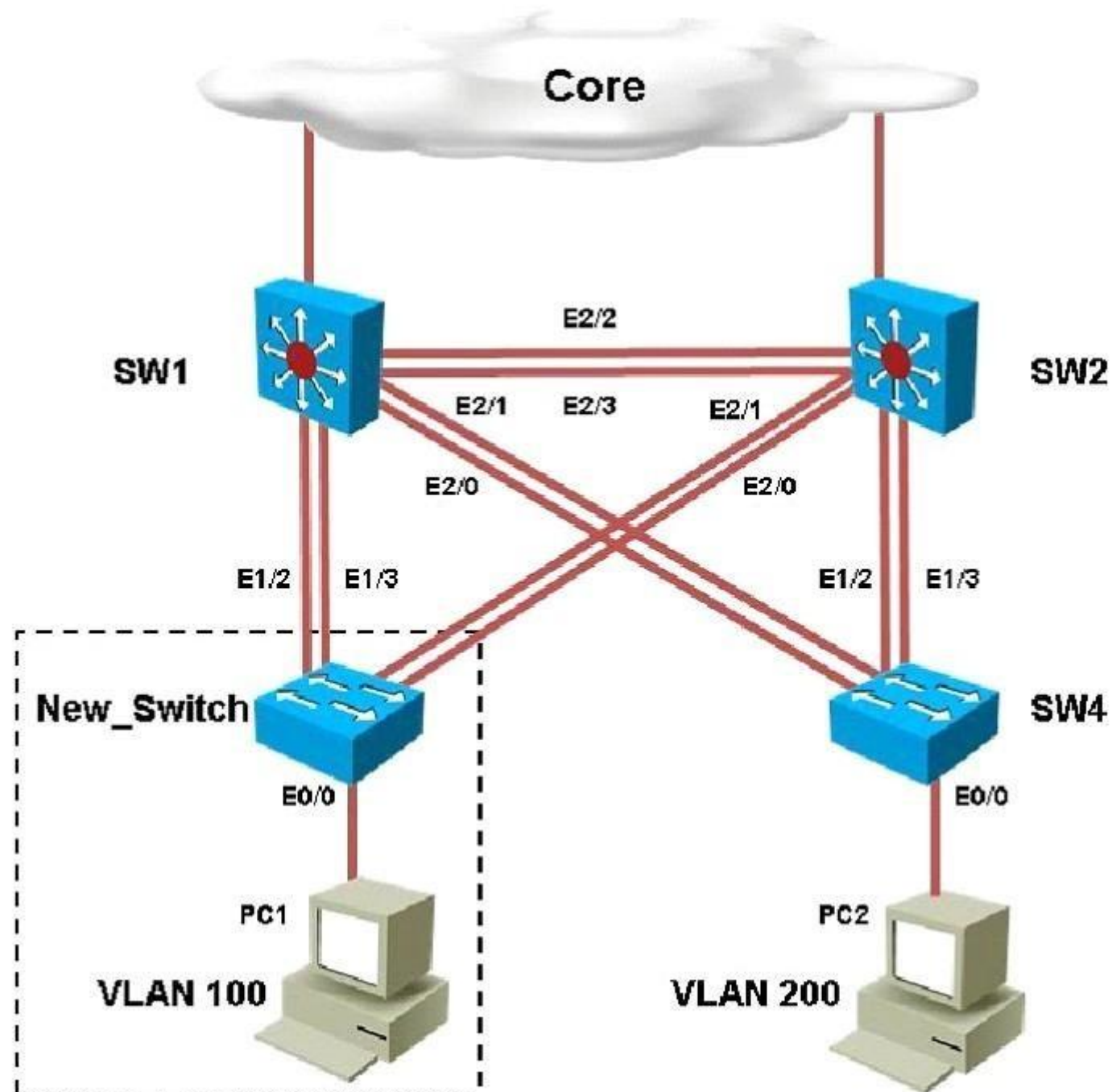
R2

```
R2#show standby
Ethernet0/0 - Group 1
  State is Standby
    1 state change, last state change 00:04:38
  Virtual IP address is 172.16.10.254
  Active virtual MAC address is 4000.0000.0010 (MAC Not In Use)
    Local virtual MAC address is 4000.0000.0010 (cfgd)
  Hello time 3 sec, hold time 10 sec
    Next hello sent in 0.128 secs
  Authentication text, string "cisco123"
  Preemption disabled
  Active router is 172.16.10.2, priority 130 (expires in 10.512 sec)
  Standby router is local
  Priority 100 (default 100)
  Group name is "hsrp-Et0/0-1" (default)
```

QUESTION 103
You have been asked to install and configure a new switch in a customer network. Use the console access to the existing and new switches to configure and verify correct device configuration.

You are connecting the New_Switch to the LAN topology; the switch has been partially configured and you need to complete the rest of configuration to enable PC1 communication with PC2.
Which of the configuration is correct?

○ vtp domain CCNP_TEST
  vtp password cisco123
  vtp version 3
  vtp mode server
  int e0/0
  switchport mode access
  switchport access vlan 100

○ vtp domain CCNP_TEST
  vtp password cisco123
  vtp version 3
  vtp mode client
  int e0/0
  switchport mode access
  switchport access vlan 200

○ vtp domain CCNP_TEST
  vtp password cisco123
  vtp version 2
  vtp mode client
  int e0/0
  switchport mode access
  switchport access vlan 100

○ vtp domain CCNP
  vtp password cisco
  vtp version 3
  vtp mode client
  int e0/0
  switchport mode access
  switchport access vlan 100

○ vtp domain CCNP
  vtp password cisco
  vtp version 2
  vtp mode transparent
  int e0/0
  switchport mode access
  switchport access vlan 200

A. Option A
B. Option B
C. Option C
D. Option D
E. Option E

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:
Explanation:
Within any VTP, the VTP domain name must match. So, step one is to find the correct VTP name on the other switches. Logging in to SW1 and using the "show vtp status" command we see this:

SW1

```
SW1#show vtp status
VTP Version capable             : 1 to 3
VTP version running             : 3
VTP Domain Name                 : CCNP
VTP Pruning Mode                : Enabled
VTP Traps Generation            : Disabled
Device ID                       : aabb.cc00.2500

Feature VLAN:
---------------
VTP Operating Mode              : Server
Number of existing VLANs        : 8
Number of existing extended VLANs : 0
Maximum VLANs supported locally : 4096
Configuration Revision          : 11
Primary ID                      : aabb.cc00.2b00
Primary Description             : SW1
MD5 digest                      : 0xA2 0xFA 0x6E 0x8D 0xD0 0xDE 0x5A 0xEF
                                  0xE3 0x65 0x9A 0xF7 0x03 0xBF 0xBA 0x10


Feature MST:
```
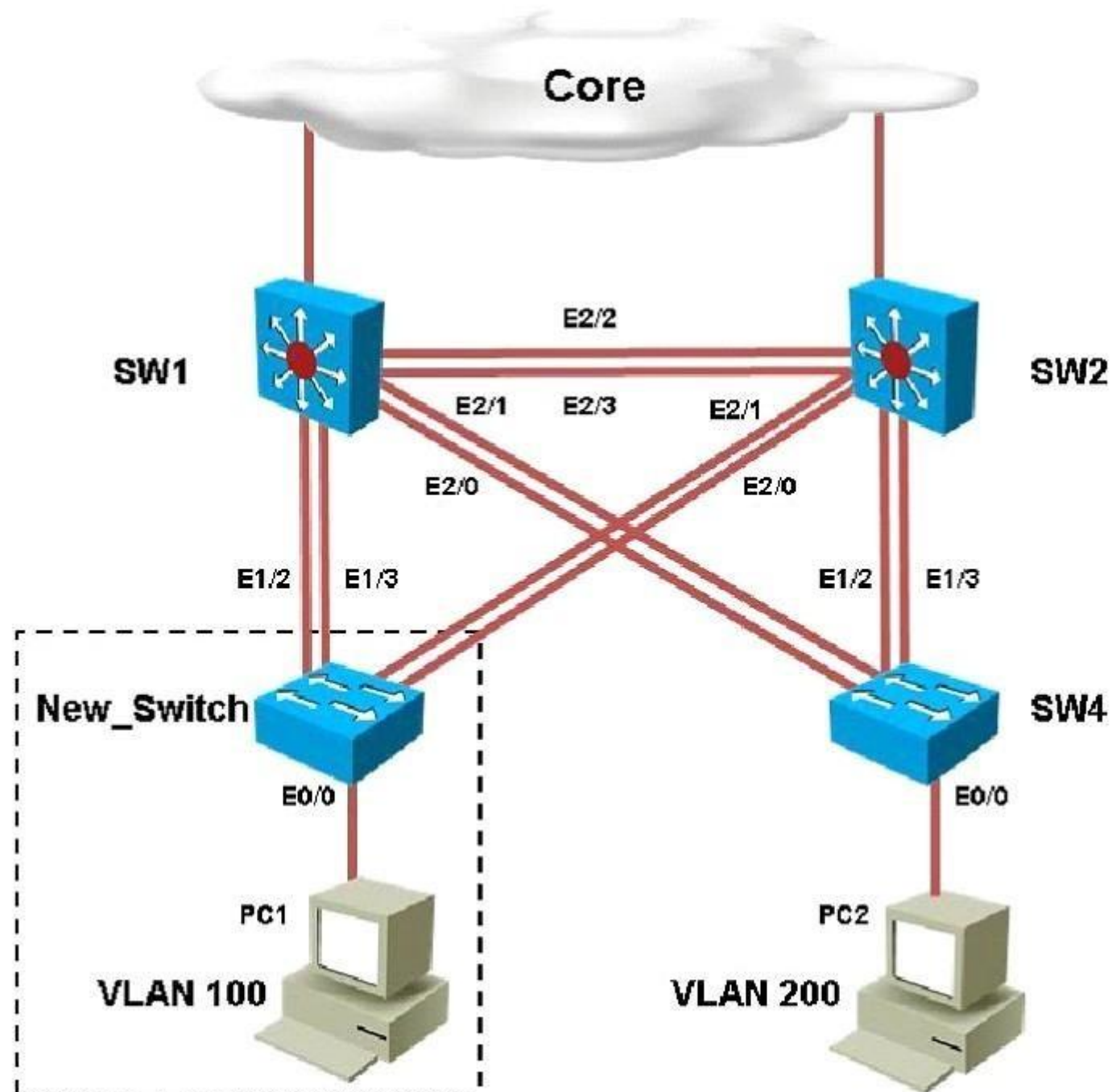
So we know that the VTP domain must be CCNP. This leaves only choice D and E. We also see from the topology diagram that eth 0/0 of the new switch connects to a PC in VLNA 100, so we know that this port must be an access port in VLAN 100, leaving only choice D as correct. Note that the

VTP versions supported in this network are 1, 2, 3 so either VTP version 2 or 3 can be configured on the new switch.

QUESTION 104
You have been asked to install and configure a new switch in a customer network. Use the console access to the existing and new switches to configure and verify correct device configuration.

Core

SW1

SW2

E2/2

E2/1   E2/3   E2/1

E2/0   E2/0

E1/2   E1/3   E1/2   E1/3

New_Switch

SW4

E0/0   E0/0

PC1   PC2

VLAN 100   VLAN 200

Refer to the configuration. For which configured VLAN are untagged frames sent over trunk between SW1 and SW2?

A. VLAN1
B. VLAN 99
C. VLAN 999
D. VLAN 40
E. VLAN 50
F. VLAN 200
G. VLAN 300

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:
Explanation:
The native VLAN is used for untagged frames sent along a trunk. By issuing the "show interface trunk" command on SW1 and SW2 we see the native VLAN is 99.

SW1

```
SW1#show interfaces trunk

Port           Mode                Encapsulation   Status        Native vlan
Et1/2          on                  802.1q          trunking      99
Et1/3          on                  802.1q          trunking      99
Et2/0          on                  802.1q          trunking      99
Et2/1          on                  802.1q          trunking      99
Et2/2          on                  802.1q          trunking      99
Et2/3          on                  802.1q          trunking      99
```

SW2

```
SW2#show interfaces trunk

Port          Mode              Encapsulation  Status      Native vlan
Et1/2         on                802.1q         trunking    99
Et1/3         on                802.1q         trunking    99
Et2/0         on                802.1q         trunking    99
Et2/1         on                802.1q         trunking    99
Et2/2         on                802.1q         trunking    99
Et2/3         on                802.1q         trunking    99
```
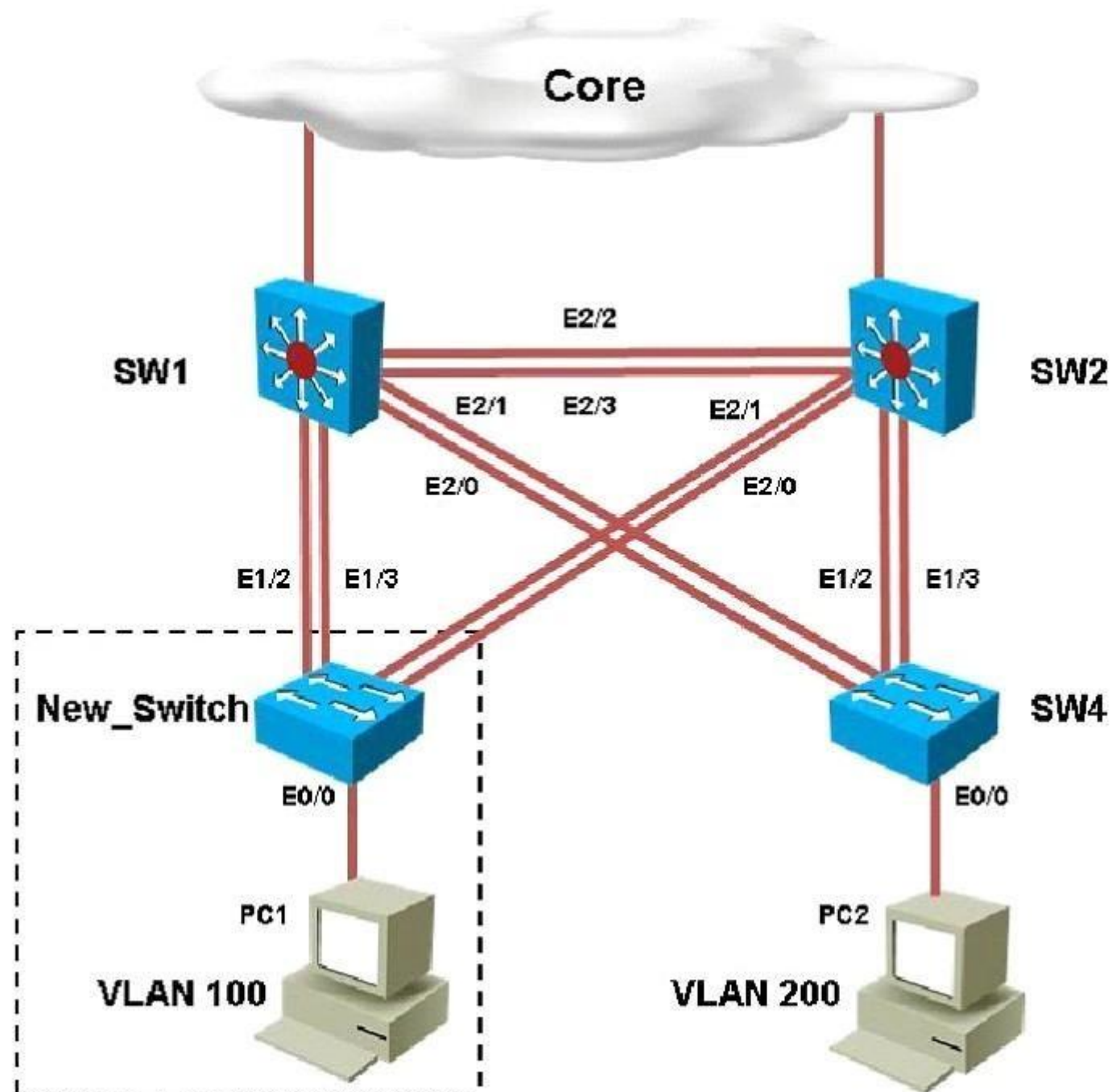
QUESTION 105
You have been asked to install and configure a new switch in a customer network. Use the console access to the existing and new switches to configure and verify correct device configuration.

You are adding new VLANs. VLAN500 and VLAN600 to the topology in such way that you need to configure SW1 as primary root for VLAN 500 and secondary for VLAN 600 and SW2 as primary root for VLAN 600 and secondary for VLAN 500. Which configuration step is valid?

A. Configure VLAN 500 & VLAN 600 on both SW1 & SW2

B. Configure VLAN 500 and VLAN 600 on SW1 only

C. Configure VLAN 500 and VLAN 600 on SW2 only

D. Configure VLAN 500 and VLAN 600 on SW1 ,SW2 and SW4

E. On SW2; configure vtp mode as off and configure VLAN 500 and VLAN 600; configure back to vtp server mode.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:
Explanation:
By issuing the "show vtp status command on SW2, SW2, and SW4 we see that both SW1 and SW2 are operating in VTP server mode, but SW4 is a client, so we will need to add both VLANs to SW1 and SW2.

SW1

```
SW1#show vtp status
VTP Version capable                     : 1 to 3
VTP version running                     : 3
VTP Domain Name                         : CCNP
VTP Pruning Mode                        : Enabled
VTP Traps Generation                    : Disabled
Device ID                               : aabb.cc00.2500

Feature VLAN:
---------------
VTP Operating Mode                      : Server
Number of existing VLANs                : 8
Number of existing extended VLANs       : 0
Maximum VLANs supported locally         : 4096
Configuration Revision                  : 11
Primary ID                              : aabb.cc00.2b00
Primary Description                     : SW1
MD5 digest                              : 0xA2 0xFA 0x6E 0x8D 0xD0 0xDE 0x5A 0xEF
                                          0xE3 0x65 0x9A 0xF7 0x03 0xBF 0xBA 0x10
```

SW2

```
SW2#show vtp status
VTP Version capable             : 1 to 3
VTP version running             : 3
VTP Domain Name                 : CCNP
VTP Pruning Mode                : Enabled
VTP Traps Generation            : Disabled
Device ID                       : aabb.cc00.2600

Feature VLAN:
---------------
VTP Operating Mode              : Server
Number of existing VLANs        : 8
Number of existing extended VLANs : 0
Maximum VLANs supported locally : 4096
Configuration Revision          : 11
Primary ID                      : aabb.cc00.2b00
Primary Description             : SW1
MD5 digest                      : 0xA2 0xFA 0x6E 0x8D 0xD0 0xDE 0x5A 0xEF
                                  0xE3 0x65 0x9A 0xF7 0x03 0xBF 0xBA 0x10
```

```
SW4

SW4#show vtp status
VTP Version capable                  : 1 to 3
VTP version running                  : 3
VTP Domain Name                      : CCNP
VTP Pruning Mode                     : Enabled
VTP Traps Generation                 : Disabled
Device ID                            : aabb.cc00.2800

Feature VLAN:
---------------
VTP Operating Mode                   : Client
Number of existing VLANs             : 8
Number of existing extended VLANs    : 0
Maximum VLANs supported locally      : 4096
Configuration Revision               : 11
Primary ID                           : aabb.cc00.2b00
Primary Description                  : SW1
MD5 digest                           : 0xA2 0xFA 0x6E 0x8D 0xD0 0xDE 0x5A 0xEF
                                       0xE3 0x65 0x9A 0xF7 0x03 0xBF 0xBA 0x10
```
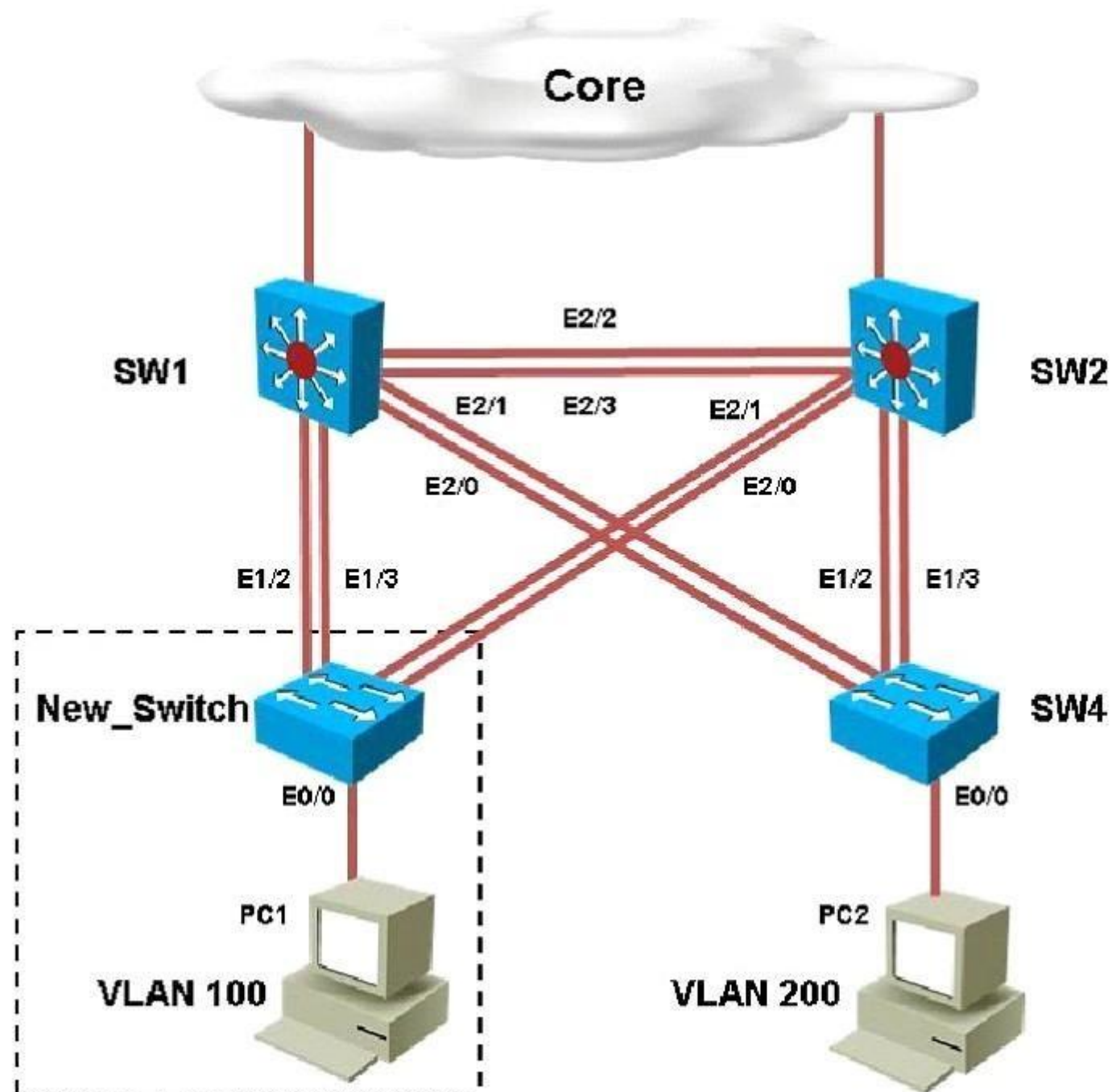
QUESTION 106
You have been asked to install and configure a new switch in a customer network. Use the console access to the existing and new switches to configure and verify correct device configuration.

Examine the VTP configuration. You are required to configure private VLANs for a new server deployment connecting to the SW4 switch. Which of the following configuration steps will allow creating private VLANs?

A. Disable VTP pruning on SW1 only
B. Disable VTP pruning on SW2 only
C. Disable VTP pruning on SW4 only
D. Disable VTP pruning on SW2, SW4 and New_Switch
E. Disable VTP pruning on New_Switch and SW4 only.

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:
Explanation:
To create private VLANs, you will need to only disable pruning on the switch that contains the private VLANs. In this case, only SW4 will connect to servers in a private VLAN.

QUESTION 107
What is the maximum number of switches that can be stacked using Cisco StackWise?

A. 4
B. 5
C. 8
D. 9
E. 10
F. 13

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 108
A network engineer wants to add a new switch to an existing switch stack. Which configuration must be added to the new switch before it can be added to the switch stack?

A. No configuration must be added.

B. stack ID

C. IP address

D. VLAN information

E. VTP information

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 109
What percentage of bandwidth is reduced when a stack cable is broken?

A. 0

B. 25

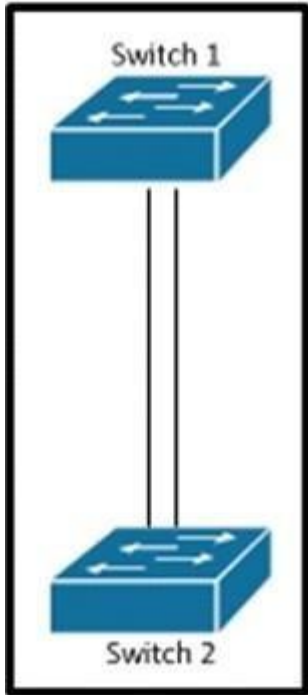C. 50

D. 75

E. 100

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 110
Refer to the exhibit. Which set of configurations will result in all ports on both switches successfully bundling into an EtherChannel?

A. switch1
   channel-group 1 mode active
   switch2
   channel-group 1 mode auto

B. switch1
   channel-group 1 mode desirable
   switch2
   channel-group 1 mode passive

C. switch1
   channel-group 1 mode on
   switch2
   channel-group 1 mode auto

D. switch1
   channel-group 1 mode desirable
   switch2
   channel-group 1 mode auto

Correct Answer: D

Section: (none)
Explanation

Explanation/Reference:

QUESTION 111
Refer to the exhibit. How can the traffic that is mirrored out the GigabitEthernet0/48 port be limited to only traffic that is received or transmitted in VLAN 10 on the GigabitEthernet0/1 port?

```
interface GigabitEthernet0/1
  switchport
  switchport mode trunk
  switchport trunk allowed vlan 1-100
!
interface GigabitEthernet0/48
  switchport
  switchport mode access
!
monitor session 1 source interface GigabitEthernet0/1
monitor session 1 destination interface GigabitEthernet0/48
```

A. Change the configuration for GigabitEthernet0/48 so that it is a member of VLAN 10.
B. Add an access list to GigabitEthernet0/48 to filter out traffic that is not in VLAN 10.
C. Apply the monitor session filter globally to allow only traffic from VLAN 10.
D. Change the monitor session source to VLAN 10 instead of the physical interface.

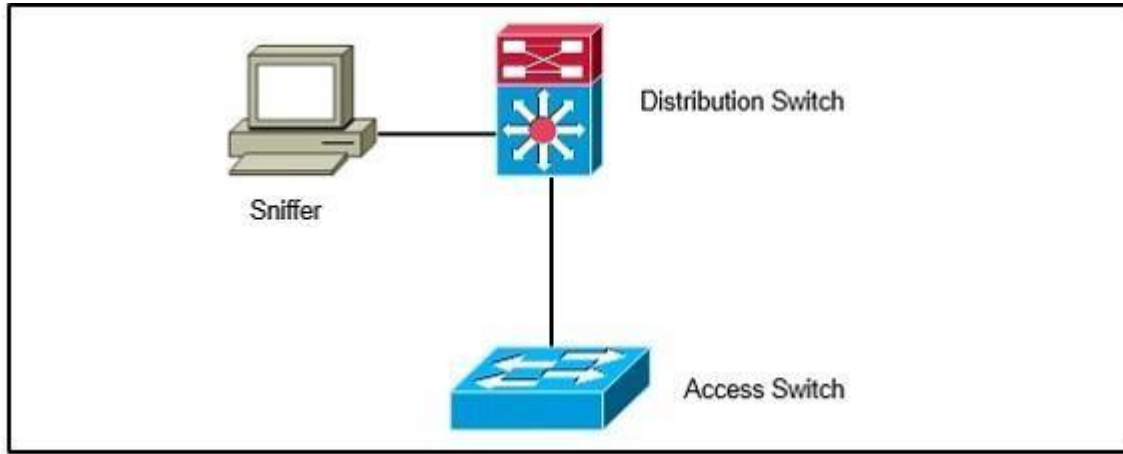**Correct Answer:** C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 112
Refer to the exhibit. A network engineer wants to analyze all incoming and outgoing packets for an interface that is connected to an access switch.
Which three items must be configured to mirror traffic to a packet sniffer that is connected to the distribution switch? (Choose three.)

A. A monitor session on the distribution switch with a physical interface as the source and the remote SPAN VLAN as the destination
B. A remote SPAN VLAN on the distribution and access layer switch
C. A monitor session on the access switch with a physical interface source and the remote SPAN VLAN as the destination
D. A monitor session on the distribution switch with a remote SPAN VLAN as the source and physical interface as the destination
E. A monitor session on the access switch with a remote SPAN VLAN source and the physical interface as the destination
F. A monitor session on the distribution switch with a physical interface as the source and a physical interface as the destination

Correct Answer: BCD
Section: (none)
Explanation

Explanation/Reference:

QUESTION 113
After an EtherChannel is configured between two Cisco switches, interface port channel 1 is in the down/down state. Switch A is configured with channel-group 1 mode active, while Switch B is configured with channel-group 1 mode desirable. Why is the EtherChannel bundle not working?

A. The switches are using mismatched EtherChannel negotiation modes.
B. The switch ports are not configured in trunking mode.
C. LACP priority must be configured on both switches.
D. The channel group identifier must be different for Switch A and Switch B.

Correct Answer: A

Section: (none)
Explanation

Explanation/Reference:

QUESTION 114
Which feature must be enabled to eliminate the broadcasting of all unknown traffic to switches that are not participating in the specific VLAN?

A. VTP pruning
B. port-security
C. storm control
D. bpdguard

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 115
Refer to the exhibit. The users in an engineering department that connect to the same access switch cannot access the network. The network engineer found that the engineering VLAN is missing from the database. Which action resolves this problem?

```
Switch1 (config)#vlan 10
VTP vlan configuration not allowed when device is in CLIENT mode.
Switch1#show interfaces trunk
Switch1#
```

A. Disable VTP pruning and disable 802.1q.
B. Update the VTP revision number.
C. Change VTP mode to server and enable 802.1q.
D. Enable VTP pruning and disable 802.1q.

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 116
A network engineer wants to ensure Layer 2 isolation of customer traffic using a private VLAN. Which configuration must be made before the private VLAN is configured?

A. Disable VTP and manually assign VLANs.
B. Ensure all switches are configured as VTP server mode.
C. Configure VTP Transparent Mode.
D. Enable VTP version 3.

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 117
Refer to the exhibit. The network switches for two companies have been connected and manually configured for the required VLANs, but users in company A are not able to access network resources in company B when DTP is enabled. Which action resolves this problem?

```
Company A# show vtp status

VTP Version            : 2
Configuration Revision    : 0
Maximum VLANs supported locally: 1005
Number of existing VLANs    : 9
VTP Operating Mode       : Server
VTP Domain Name          : company
VTP Pruning Mode         : Disabled
VTP V2 Mode            : Disabled
VTP Traps Generation       : Disabled


Company B# show vtp status

VTP Version            : 2
Configuration Revision    : 2
Maximum VLANs supported locally: 1005
Number of existing VLANs    : 42
VTP Operating Mode       : Server
VTP Domain Name          : company
VTP Pruning Mode         : Disabled
VTP V2 Mode            : Disabled
VTP Traps Generation       : Disable
```

A. Delete vlan.dat and ensure that the switch with lowest MAC address is the VTP server.
B. Disable DTP and document the VTP domain mismatch.
C. Manually force trunking with switchport mode trunk on both switches.
D. Enable the company B switch with the vtp mode server command.

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 118
A network engineer must implement Ethernet links that are capable of transporting frames and IP traffic for different broadcast domains that are mutually isolated. Consider that this is a multivendor environment. Which Cisco IOS switching feature can be used to achieve the task?

A. PPP encapsulation with a virtual template
B. Link Aggregation Protocol at the access layer
C. dot1q VLAN trunking
D. Inter-Switch Link

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 119
Which statement about using native VLANs to carry untagged frames is true?

A. Cisco Discovery Protocol version 2 carries native VLAN information, but version 1 does not.
B. Cisco Discovery Protocol version 1 carries native VLAN information, but version 2 does not.
C. Cisco Discovery Protocol version 1 and version 2 carry native VLAN information.
D. Cisco Discovery Protocol version 3 carries native VLAN information, but versions 1 and 2 do not.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 120
Refer to the exhibit. A multilayer switch has been configured to send and receive encapsulated and tagged frames. VLAN 2013 on the multilayer switch is configured as the native VLAN. Which option is the cause of the spanning-tree error?

```
SW-1#sh logging
%SPANTREE-SP-2-RECV_PVID_ERR: Received BPDU with inconsistent peer
Vlan id 1 on GigabitEthernet11/2 VLAN2013.
%SPANTREE-SP-2-BLOCK_PVID_PEER: Blocking GigabitEthernet11/2 on
VLAN0001. Inconsistent peer vlan.
```

A. VLAN spanning-tree in SW-2 is configured.

B. spanning-tree bpdu-filter is enabled.

C. 802.1q trunks are on both sides, both with native VLAN mismatch.

D. VLAN ID 1 should not be used for management traffic because its unsafe.

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 121
A network engineer must improve bandwidth and resource utilization on the switches by stopping the inefficient flooding of frames on trunk ports where the frames are not needed. Which Cisco IOS feature can be used to achieve this task?

A. VTP pruning

B. access list

C. switchport trunk allowed VLAN

D. VLAN access-map

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:
Explanation:
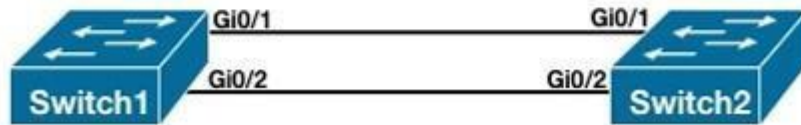Cisco advocates the benefits of pruning VLANs in order to reduce unnecessary frame flooding.
The"vtp pruning"command prunes VLANs automatically, which stops the inefficient flooding of frames where they are not needed.
http://www.cisco.com/c/en/us/support/docs/switches/catalyst-6500-series-switches/24330-185.html

QUESTION 122
Refer to the exhibit. What is the result of the configuration?

```
hostname Switch1                      hostname Switch2
<output omitted>                      <output omitted>
!                                     !
port-channel load-balance dst-ip      port-channel load-balance src-mac
!                                     !
interface GigabitEthernet0/1          interface GigabitEthernet0/1
 channel-group 10 mode active          channel-group 10 mode passive
!                                     !
interface GigabitEthernet0/2          interface GigabitEthernet0/2
 channel-group 10 mode passive         channel-group 10 mode active
!                                     !
```


A. The EtherChannels would not form because the load-balancing method must match on the devices.

B. The EtherChannels would form and function properly even though the load-balancing and EtherChannel modes do not match.

C. The EtherChannels would form, but network loops would occur because the load- balancing methods do not match.

D. The EtherChannels would form and both devices would use the dst-ip load-balancing method because Switch1 is configured with EtherChannel mode active.

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 123
A network engineer tries to configure storm control on an EtherChannel bundle. What is the result of the configuration?

A. The storm control settings will appear on the EtherChannel, but not on the associated physical ports.

B. The configuration will be rejected because storm control is not supported for EtherChannel.

C. The storm control configuration will be accepted, but will only be present on the physical interfaces.

D. The settings will be applied to the EtherChannel bundle and all associated physical interfaces.

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 124
A Cisco Catalyst switch that is prone to reboots continues to rebuild the DHCP snooping database. What is the solution to avoid the snooping database from being rebuilt after every device reboot?

A. A DHCP snooping database agent should be configured.

B. Enable DHCP snooping for all VLANs that are associated with the switch.

C. Disable Option 82 for DHCP data insertion.

D. Use IP Source Guard to protect the DHCP binding table entries from being lost upon rebooting.

E. Apply ip dhcp snooping trust on all interfaces with dynamic addresses.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 125
Which portion of AAA looks at what a user has access to?

A. authorization

B. authentication

C. accounting

D. auditing

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 126
Which command creates a login authentication method named "login" that will primarily use RADIUS and fail over to the local user database?

A. (config)# aaa authentication login default radius local
B. (config)# aaa authentication login login radius local
C. (config)# aaa authentication login default local radius
D. (config)# aaa authentication login radius local

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 127
What is the function of NSF?

A. forward traffic simultaneously using both supervisors
B. forward traffic based on Cisco Express Forwarding
C. provide automatic failover to back up supervisor in VSS mode
D. provide nonstop forwarding in the event of failure of one of the member supervisors

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 128
Which configuration command ties the router hot standby priority to the availability of its interfaces?

A. standby group
B. standby priority
C. backup interface
D. standby track

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 129
What is the default HSRP priority?

A. 50
B. 100
C. 120
D. 1024

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 130
A server with a statically assigned IP address is attached to a switch that is provisioned for DHCP snooping. For more protection against malicious attacks, the network team is considering enabling dynamic ARP inspection alongside DHCP snooping. Which solution ensures that the server maintains network reachability in the future?

A. Disable DHCP snooping information option.
B. Configure a static DHCP snooping binding entry on the switch.
C. Trust the interface that is connected to the server with the ip dhcp snooping trust command.
D. Verify the source MAC address of all untrusted interfaces with ip dhcp snooping verify mac- address command.

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 131

DHCP snooping and IP Source Guard have been configured on a switch that connects to several client workstations. The IP address of one of the workstations does not match any entries found in the DHCP binding database. Which statement describes the outcome of this scenario?

A. Packets from the workstation will be rate limited according to the default values set on the switch.
B. The interface that is connected to the workstation in question will be put into the errdisabled state.
C. Traffic will pass accordingly after the new IP address is populated into the binding database.
D. The packets originating from the workstation are assumed to be spoofed and will be discarded.

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 132
Which technique allows specific VLANs to be strictly permitted by the administrator?

A. VTP pruning
B. transparent bridging
C. trunk-allowed VLANs
D. VLAN access-list
E. L2P tunneling

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 133
For security reasons, the IT manager has prohibited users from dynamically establishing trunks with their associated upstream switch. Which two actions can prevent interface trunking? (Choose two.)

A. Configure trunk and access interfaces manually.
B. Disable DTP on a per interface basis.
C. Apply BPDU guard and BPDU filter.
D. Enable switchport block on access ports.

Correct Answer: AB
Section: (none)
Explanation

Explanation/Reference:

QUESTION 134
Which two protocols can be automatically negotiated between switches for trunking? (Choose two.)

A. PPP
B. DTP
C. ISL
D. HDLC
E. DLCI
F. DOT1Q

Correct Answer: CF
Section: (none)
Explanation

Explanation/Reference:

QUESTION 135
A network is running VTPv2. After verifying all VTP settings, the network engineer notices that the new switch is not receiving the list of VLANs from the server. Which action resolves this problem?

A. Reload the new switch.
B. Restart the VTP process on the new switch.
C. Reload the VTP server.
D. Verify connected trunk ports.

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 136
After configuring new data VLANs 1020 through 1030 on the VTP server, a network engineer notices that none of the VTP clients are receiving the updates. What is the problem?

A. The VTP server must be reloaded.

B. The VTP version number must be set to version 3.

C. After each update to the VTP server, it takes up to 4 hours propagate.

D. VTP must be stopped and restarted on the server.

E. Another switch in the domain has a higher revision number than the server.

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 137
A network engineer is extending a LAN segment between two geographically separated data centers.
Which enhancement to a spanning-tree design prevents unnecessary traffic from crossing the extended LAN segment?

A. Modify the spanning-tree priorities to dictate the traffic flow.

B. Create a Layer 3 transit VLAN to segment the traffic between the sites.

C. Use VTP pruning on the trunk interfaces.

D. Configure manual trunk pruning between the two locations.

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:
Explanation:
Pruning unnecessary VLANs from the trunk can be performed with one of two methods:
• Manual pruning of the unnecessary VLAN on the trunk - This is the best method, and it avoids the use of the spanning tree. Instead, the method runs the pruned VLAN on trunks.
• VTP pruning - Avoid this method if the goal is to reduce the number of STP instances.
VTP-pruned VLANs on a trunk are still part of the spanning tree. Therefore, VTP-pruned VLANs do not reduce the number of spanning tree port instances.
Since the question asked for the choice that is an enhancement to the STP design, VTP pruning is the best choice.
http://www.cisco.com/en/US/tech/tk389/tk689/technologies_tech_note09186a0080890613.shtml

QUESTION 138
The network manager has requested that several new VLANs (VLAN 10, 20, and 30) are allowed to traverse the switch trunk interface. After the command switchport trunk allowed vlan 10,20,30 is issued, all other existing VLANs no longer pass traffic over the trunk. What is the root cause of the problem?

A. The command effectively removed all other working VLANs and replaced them with the new VLANs.
B. VTP pruning removed all unused VLANs.
C. ISL was unable to encapsulate more than the already permitted VLANs across the trunk.
D. Allowing additional VLANs across the trunk introduced a loop in the network.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 139
When you design a switched network using VTPv2, how many VLANs can be used to carry user traffic?

A. 1000
B. 1001
C. 1024
D. 2048
E. 4095
F. 4096

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 140
What does the command vlan dot1q tag native accomplish when configured under global configuration?

A. All frames within the native VLAN are tagged, except when the native VLAN is set to 1.
B. It allows control traffic to pass using the non-default VLAN.
C. It removes the 4-byte dot1q tag from every frame that traverses the trunk interface(s).

D. Control traffic is tagged.

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 141
Which private VLAN access port belongs to the primary VLAN and can communicate with all interfaces, including the community and isolated host ports?

A. promiscuous port
B. isolated port
C. community port
D. trunk port

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 142
Which private VLAN can have only one VLAN and be a secondary VLAN that carries unidirectional traffic upstream from the hosts toward the promiscuous ports and the gateway?

A. isolated VLAN
B. primary VLAN
C. community VLAN
D. promiscuous VLAN

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 143
Which database is used to determine the validity of an ARP packet based on a valid IP-to- MAC address binding?

A. DHCP snooping database
B. dynamic ARP database
C. dynamic routing database
D. static ARP database

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 144
When IP Source Guard with source IP filtering is enabled on an interface, which feature must be enabled on the access VLAN for that interface?

A. DHCP snooping
B. storm control
C. spanning-tree portfast
D. private VLAN

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 145
Which switch feature prevents traffic on a LAN from being overwhelmed by continuous multicast or broadcast traffic?

A. storm control
B. port security
C. VTP pruning
D. VLAN trunking

Correct Answer: A
Section: (none)

Explanation

Explanation/Reference:

QUESTION 146
Which command would a network engineer apply to error-disable a switchport when a packet- storm is detected?

A. router(config-if)#storm-control action shutdown
B. router(config-if)#storm-control action trap
C. router(config-if)#storm-control action error
D. router(config-if)#storm-control action enable

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 147
A network engineer configures port security and 802.1x on the same interface. Which option describes what this configuration allows?

A. It allows port security to secure the MAC address that 802.1x authenticates.
B. It allows port security to secure the IP address that 802.1x authenticates.
C. It allows 802.1x to secure the MAC address that port security authenticates.
D. It allows 802.1x to secure the IP address that port security authenticates.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 148
Which feature describes MAC addresses that are dynamically learned or manually configured, stored in the address table, and added to the running configuration?

A. sticky

B. dynamic
C. static
D. secure

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 149
On which interface can port security be configured?

A. static trunk ports
B. destination port for SPAN
C. EtherChannel port group
D. dynamic access point

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 150
VLAN maps have been configured on switch R1. Which of the following actions are taken in a VLAN map that does not contain a match clause?

A. Implicit deny feature at end of list.
B. Implicit deny feature at start of list.
C. Implicit forward feature at end of list
D. Implicit forward feature at start of list.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 151
Given the configuration on a switch interface, what happens when a host with the MAC address of 0003.0003.0003 is directly connected to the switch port?

```
switchport mode access
switchport port-security
switchport port-security maximum 2
switchport port-security mac-address 0002.0002.0002
switchport port-security violation shutdown
```

A. The host will be allowed to connect.

B. The port will shut down.

C. The host can only connect through a hub/switch where 0002.0002.0002 is already connected.

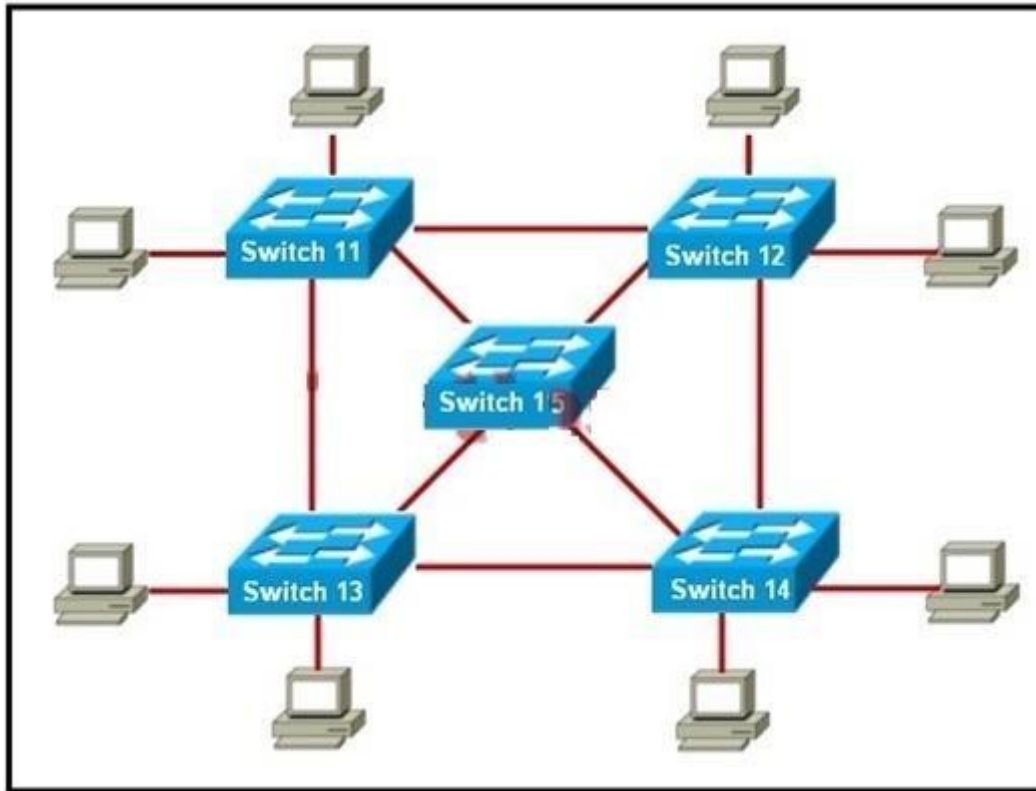D. The host will be refused access.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 152
Refer to the exhibit. Switch 15 is configured as the root switch for VLAN 10 but not for VLAN 20. If the STP configuration is correct, what will be true about Switch 15?

A. All ports will be in forwarding mode.
B. All ports in VLAN 10 will be in forwarding mode.
C. All ports in VLAN 10 will be in forwarding mode and all ports in VLAN 20 will be in blocking mode.
D. All ports in VLAN 10 will be in forwarding mode and all ports in VLAN 20 will be in standby mode.

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 153
Which of the following HSRP router states does an active router enter when it is preempted by a higher priority router? (Select the best answer.)

A. active
B. speak
C. learn
D. listen
E. init
F. standby

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 154
Refer to the exhibit. On the basis of the output of the show spanning-tree inconsistentports command, which statement about interfaces FastEthernet 0/1 and FastEthernet 0/2 is true?

```
SW1# show spanning-tree inconsistentports

Name                    Interface               Inconsistency
-------------------     -------------------     -------------------
VLAN0001                FastEthernet0/ 1        Root Inconsistent
VLAN0001                rastztnernetu/2         Root Inconsistent

Number of inconsistent ports (segments) in the system : 2
```

A. They have been configured with the spanning-tree bpdufilter disable command.
B. They have been configured with the spanning-tree bpdufilter enable command.
C. They have been configured with the spanning-tree bpduguard disable command.
D. They have been configured with the spanning-tree bpduguard enable command.
E. They have been configured with the spanning-tree guard loop command.
F. They have been configured with the spanning-tree guard root command.

Correct Answer: F

Section: (none)
Explanation

Explanation/Reference:

QUESTION 155
Which describes the default load balacing scheme used by the Gateway Load Balancing Protocol (GLBP)?

A. Per host using a strict priority scheme
B. Per session using a round-robin scheme
C. Per session using a strict priority scheme
D. Per GLBP group using a strict priority scheme
E. Per host basis using a round robin-scheme
F. Per GLBP group using a round-robin scheme

Correct Answer: E
Section: (none)
Explanation

Explanation/Reference:

QUESTION 156
Drag and Drop Question

Select and Place:

Syslog information can generate messages up to and including the configured severity level. Organize the levels by dragging each name from the left to the right. Put the highest level at the top and the lowest level at the bottom.

debugging	
notification	
error	
alert	
emergency	
critical	
warning	
informational	

Correct Answer:

Syslog information can generate messages up to and including the configured severity level. Organize the levels by dragging each name from the left to the right. Put the highest level at the top and the lowest level at the bottom.

	emergency
	alert
	critical
	error
	warning
	notification
	informational
	debugging

Section: (none)
Explanation

Explanation/Reference:

QUESTION 157
Drag and Drop Question

Select and Place:

Drag the choices on the left to the boxes on the right that should be included when creating a VLAN-based implementation plan. Not all choices will be used.

| reference to design documents |
| roll back guidelines |
| VTP assignments |
| detailed implementation plans |
| time required to perform the implementation |

Correct Answer:

Drag the choices on the left to the boxes on the right that should be included when creating a VLAN-based implementation plan. Not all choices will be used.

	reference to design documents
	roll back guidelines
	detailed implementation plans
VTP assignments	time required to perform the implementation

Section: (none)
Explanation

Explanation/Reference:

QUESTION 158
Drag and Drop Question

Select and Place:

You have been tasked with planning a VLAN solution that will connect a server in one building to several hosts in another building. The solution should be built using the local VLAN model and Layer 3 switching at the distribution layer. Drag the questions that you would ask the network administrator before you start the planning from the left to the right. Not all questions will be used.

Is there interswitch connectivity?		Questions Related to the VLAN Solution
What version of VTP is being used?		
What routing protocol will be used?		
What VLANs are available on each switch?		
What operating system is used on the server?		
What switch ports are available in each building?		
What IP addresses are available on each subnet?		
What operating system is used on each host?		

Correct Answer:

You have been tasked with planning a VLAN solution that will connect a server in one building to several hosts in another building. The solution should be built using the local VLAN model and Layer 3 switching at the distribution layer. Drag the questions that you would ask the network administrator before you start the planning from the left to the right. Not all questions will be used.

What version of VTP is being used?	**Questions Related to the VLAN Solution**
	Is there interswitch connectivity?
	What routing protocol will be used?
What operating system is used on the server?	What VLANs are available on each switch?
	What switch ports are available in each building?
	What IP addresses are available on each subnet?
What operating system is used on each host?	

Section: (none)
Explanation

Explanation/Reference:

QUESTION 159
Drag and Drop Question

Select and Place:

Drag the attributes on the left to the types of VLAN designs that they describe on the right.

Attributes	End-to-End VLANs
Created with physical boundaries in mind rather than the departments or organizations of the users on the end devices.	
VLANs on one switch are not advertised to all other switches in the network, nor do they need to be created in the VLAN database of any other switch.	
As a user moves through a campus, the VLAN membership of the user remains the same, regardless of the physical switch this user attaches to.	Local VLANs
Users are grouped into each VLAN regardless of physical location.	

Correct Answer:

Drag the attributes on the left to the types of VLAN designs that they describe on the right.

	End-to-End VLANs
	As a user moves through a campus, the VLAN membership of the user remains the same, regardless of the physical switch this user attaches to.
	Users are grouped into each VLAN regardless of physical location.
	Local VLANs
	Created with physical boundaries in mind rather than the departments or organizations of the users on the end devices.
	VLANs on one switch are not advertised to all other switches in the network, nor do they need to be created in the VLAN database of any other switch.

Section: (none)
Explanation

Explanation/Reference:

QUESTION 160
Drag and Drop Question

Select and Place:

Place the DTP mode with its correct description.

Trunk

Nonegotiate

Access

Dynamic Auto

Dynamic Desirable

specifies that DTP packets are not sent out this interface

sets the switch port to trunk mode and negotiates to become a trunk

sets a switch port to permanent nontrunking mode

sets the switch port to respond, but not actively send DTP frames

makes the interface actively attempt to convert the link to a trunk link

Correct Answer:

Place the DTP mode with its correct description.

	Nonegotiate
	Trunk
	Access
	Dynamic Auto
	Dynamic Desirable

Section: (none)
Explanation

Explanation/Reference:

QUESTION 161
Drag and Drop Question

Select and Place:

Drag the port states to their correct description.

| blocking |

| listening |

| learning |

| forwarding |

| disabled |

| sends and receives BPDUs to determine root, but does not update the MAC address table |

| does not participate in frame forwarding or in STP |

| does not participate in frame forwarding |

| sends and receives data frames |

| populates the MAC address table, but will not forward user data |

Correct Answer:

Drag the port states to their correct description.

| | listening |

| | disabled |

| | blocking |

| | forwarding |

| | learning |

Section: (none)
Explanation

Explanation/Reference:

QUESTION 162
Drag and Drop Question

Select and Place:

Capabilities of SNMP are dependent on the version implemented. Drag the feature descriptions on the left to the respective SNMP versions on the right.

| increased 64-bit counters for new data types |

| security levels |

| get next request |

| informed request |

| unsolicited agent alarm message |

| usernames |

SNMPv1

SNMPv2

SNMPv3

Correct Answer:

Capabilities of SNMP are dependent on the version implemented. Drag the feature descriptions on the left to the respective SNMP versions on the right.

SNMPv1

get next request

unsolicited agent alarm message

SNMPv2

increased 64-bit counters for new data types

informed request

SNMPv3

security levels

usernames

Section: (none)
Explanation

Explanation/Reference:

QUESTION 163
Drag and Drop Question

Select and Place:

You have a VLAN implementation that requires inter-VLAN routing using Layer 3 switches. Drag the steps from the left to the right that should be part of the verification plan. Not all choices will be used.

Verify that VTP is pruning the proper access ports.

Verify that there is inter-switch connectivity.

Verify that the data and voice VLANs are NOT assigned a trunk's native VLAN.

Verify that the needed switch virtual interfaces have been created.

Verify that the VLAN ports are in promiscuous mode.

Verify that the proper ports are assigned to the VLAN.

Correct Answer:

You have a VLAN implementation that requires inter-VLAN routing using Layer 3 switches. Drag the steps from the left to the right that should be part of the verification plan. Not all choices will be used.

Verify that VTP is pruning the proper access ports.	Verify that there is inter-switch connectivity.
	Verify that the data and voice VLANs are NOT assigned a trunk's native VLAN.
	Verify that the needed switch virtual interfaces have been created.
Verify that the VLAN ports are in promiscuous mode.	Verify that the proper ports are assigned to the VLAN.

Section: (none)
Explanation

Explanation/Reference:

QUESTION 164
Drag and Drop Question

Select and Place:

Prioritize the traffic types by dragging them from the left to the appropriate Cisco priority level on the right. Put the highest priority at the top and the lowest priority at the bottom.

network management	
video - interactive	
IP routing	
voice	
video - streaming	
call signaling	

Correct Answer:

Prioritize the traffic types by dragging them from the left to the appropriate Cisco priority level on the right. Put the highest priority at the top and the lowest priority at the bottom.

	voice
	video - interactive
	video - streaming
	call signaling
	IP routing
	network management

Section: (none)
Explanation

Explanation/Reference:

QUESTION 165
Drag and Drop Question

Match the HSRP states on the left with the correct definition on the right.

Select and Place:

Select from these | **Place here**

Learn

Listen

Speak

Standby

Active

Initial

	State from which the routers begin the HSRP process
	A candidate to become the next active router
	The router is still waiting to hear from the active router
	The router is currently forwarding packets
	Listens for hello messages from the active and standby router
	Participates in the election for the active or standby router

Correct Answer:

Select from these | **Place here**

Initial	State from which the routers begin the HSRP process
Standby	A candidate to become the next active router
Learn	The router is still waiting to hear from the active router
Active	The router is currently forwarding packets
Listen	Listens for hello messages from the active and standby router
Speak	Participates in the election for the active or standby router

Section: (none)
Explanation

Explanation/Reference:

QUESTION 166
Drag and Drop Question

Select and Place:

Categorize the high availability network resources or feature items on the left by dragging them to the appropriate resiliency or management level on the right.

dual power supplies
RSTP
IP SLA responder
NSF
NTP
SSO

Management Level

Network Level

System Level

Correct Answer:

Categorize the high availability network resources or feature items on the left by dragging them to the appropriate resiliency or management level on the right.

Management Level

IP SLA responder

NTP

Network Level

RSTP

NSF

System Level

dual power supplies

SSO

Section: (none)
Explanation

Explanation/Reference:

QUESTION 167
Refer to the exhibit.

```
Switch(config)#spanning-tree portfast default
%Warning: this command enables portfast by default on all interfaces. You
should now disable portfast explicitly on switched ports leading to hubs,
switches and bridges as they may create temporary bridging loops.
Switch(config)#
```

When troubleshooting a network problem, a network analyzer is connected to Port f0/1 of a LAN switch. Which command can prevent BPDU transmission on this port?

A. spanning-tree portfast bpduguard enable
B. spanning-tree bpduguard default
C. spanning-tree portfast bpdufilter default
D. no spanning-tree link-type shared

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 168
Which four LACP components are used to determine which hot-standby links become active after an interface failure within an EtherChannel bundle?
(Choose four.)

A. LACP system priority
B. LACP port priority
C. interface MAC address
D. system ID
E. port number
F. hot-standby link identification number
G. interface bandwidth

Correct Answer: ABDE
Section: (none)
Explanation

Explanation/Reference:

QUESTION 169
Which statement about the MAC address sticky entries in the switch when the copy run start command is entered is true?

A. A sticky MAC address is retained when the switch reboots.
B. A sticky MAC address can be a unicast or multicast address.
C. A sticky MAC address is lost when the switch reboots.
D. A sticky MAC address ages out of the MAC address table after 600 seconds.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 170
Enablement of which feature puts the port into err-disabled state when the port has PortFast enabled and it receives BPDUs?

A. BPDU filtering
B. BackboneFast
C. EtherChannel
D. BPDU guard
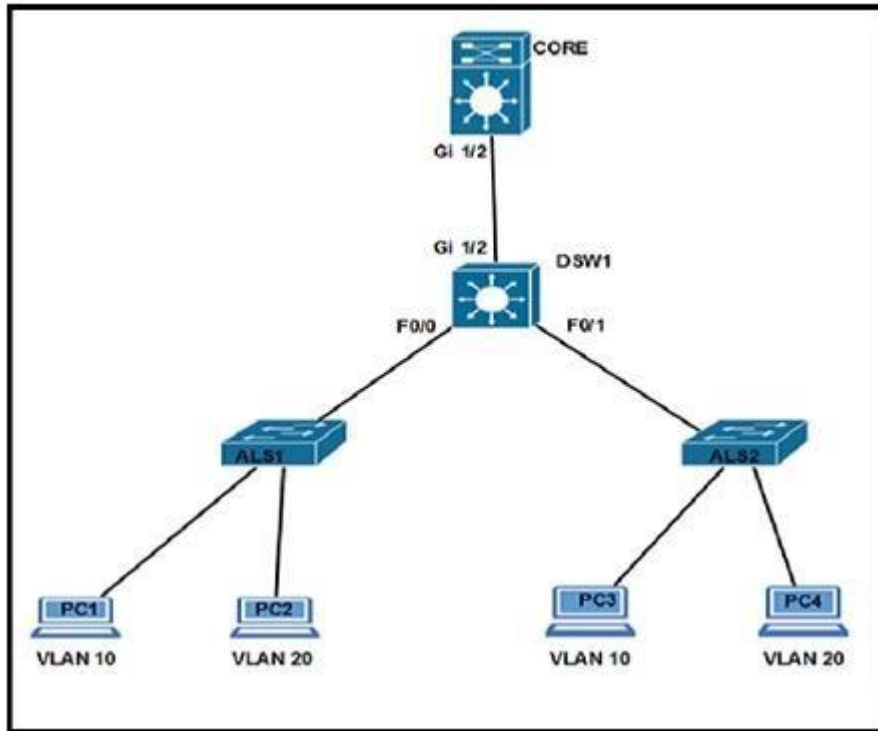
Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 171
Refer to the exhibit. Which configuration ensures that the Cisco Discovery Protocol packet update frequency sent from DSW1 to ALS1 is half of the default value?

A. DSW1(config)#cdp timer 90
B. DSW1(config-if)#cdp holdtime 60
C. DSW1(config)#cdp timer 30
D. DSW1(config)#cdp holdtime 90
E. DSW1(config-if)#cdp holdtime 30
F. DSW1(config-if)#cdp timer 60

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 172
Interfaces are assigned to a VLAN, and then the VLAN is deleted. Which state are these interfaces in after the VLAN is deleted?

A. They remain up, but they are reassigned to the default VLAN.
B. They go down until they are reassigned to a VLAN.
C. They go down, but they are reassigned to the default VLAN.
D. They remain up, but they are reassigned to the native VLAN.

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 173
Which feature is automatically configured when an administrator enables a voice VLAN?

A. 802.1Q trunking
B. PortFast
C. QoS
D. private VLANs

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 174
Which statement describes one major issue that VTP can cause in an enterprise network when a new switch is introduced in the network in VTP mode server?

A. It can cause network access ports to go into err-disabled state.
B. It can cause a network-wide VLAN configuration change if the revision number on the new switch is higher.
C. It can cause a network-wide VLAN configuration change if the revision number on the new switch is lower.
D. It can cause routing loops.

Correct Answer: B
Section: (none)
Explanation

QUESTION 175
A network administrator configures 10 extended VLANs ranging from VLANs 3051 to 3060 in an enterprise network. Which version of VTP supports these extended VLANs?

A. version 1
B. version 2
C. version 3
D. VTP does not recognize extended VLANs.

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 176
An engineer is configuring an EtherChannel between two switches using LACP. If the EtherChannel mode on switch 1 is configured to active, which two modes on switch 2 establish an operational EtherChannel? (Choose two.)

A. active
B. auto
C. desirable
D. on
E. passive

Correct Answer: AE
Section: (none)
Explanation

Explanation/Reference:

QUESTION 177
When a Layer 2 EtherChannel is configured, which statement about placement of the IP address is true?

A. The IP address is placed on the highest numbered member port.

B. The IP address is placed on the port-channel logical interface.
C. The IP address is placed on the lowest numbered member port.
D. The IP address is assigned via DHCP only.

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 178
Which option is valid for EtherChannel load balancing?

A. source MAC address and source IP address
B. destination MAC address and destination IP address
C. source MAC address and destination IP address
D. source MAC address and destination MAC address

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 179
Refer to the exhibit. An engineer is configuring EtherChannel between two switches and notices the console message on switch 2.
Based on the output, which option describes the reason for this error?

```
Switch2#
01:25:08: %PM-4-ERR_DISABLE: channel-misconfig error detected on
Fa0/23, putting Fa0/23 in err-disable
state
01:25:08: %PM-4-ERR_DISABLE: channel-misconfig error detected on
Fa0/24, putting Fa0/24 in err-disable
state
Switch2#


Switch1#show etherchannel summary

!output omitted

Group  Port-channel  Protocol    Ports
------+-------------+-----------+-----------
1      Po2(SD)        LACP        Fa1/0/23(D)


Switch2#show etherchannel summary

!output omitted

Group  Port-channel  Protocol    Ports
------+-------------+-----------+----------------------
1      Po1(SD)        -           Fa0/23(D)   Fa0/24(D)
```

A. Switch 1 does not have enough member ports configured.

B. Switch 2 has too many member ports configured.

C. The port channel interface numbers do not match.

D. The EtherChannel protocols do not match.

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 180
Refer to the exhibit. DSW1 should share the same MST region with switch DSW2. Which statement is true?

```
DSW1#sh vtp status
VTP Version                    : running VTP1 (VTP2 capable)
Configuration Revision         : 2
Maximum VLANs supported locally : 1005
Number of existing VLANs       : 7
VTP Operating Mode             : Client
VTP Domain Name                : DALLAS
VTP Pruning Mode               : Disabled
VTP V2 Mode                    : Disabled
VTP Traps Generation           : Disabled
MD5 digest                     : 0xF1 0xAC 0x5E 0xCF 0xF7 0xEE 0x9E 0xD6
Configuration last modified by 10.101.101.11 at 3-1-93 23:57:30


DSW2#sh vtp status
VTP Version                    : running VTP1 (VTP2 capable)
Configuration Revision         : 3
Maximum VLANs supported locally : 1005
Number of existing VLANs       : 7
VTP Operating Mode             : Server
VTP Domain Name                : DALLAS
VTP Pruning Mode               : Disabled
VTP V2 Mode                    : Disabled
VTP Traps Generation           : Disabled
MD5 digest                     : 0xE5 0x4D 0xC1 0xF0 0x8F 0xF1 0x4B 0x9C
Configuration last modified by 10.101.101.11 at 3-1-93 23:50:31


DSW2#sh spanning-tree mst configuration
Name      [DALLAS]
Revision  3      Instances configured 3

Instance  Vlans mapped
========  ===========================================================  ======
0         1-9,11-19,21-29,41-4094
1         10,20
2         30-40
========================================================================
```

A. Configure DSW1 with the same version number, and VLAN-to-instance mapping as shown on DSW2.
B. DSW2 uses the VTP server mode to automatically propagate the MST configuration to DSW1.
C. DSW1 automatically inherits MST configuration from DSW2 because they have the same domain name.
D. Configure DSW1 with the same region name, revision number, and VLAN-to-instance mapping as shown on DSW2.
E. DSW1 is in VTP client mode with a lower configuration revision number, therefore, it automatically inherits MST configuration from DW2.

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 181
Which two statements about SPAN source and destination ports during an active session are true? (Choose two.)

A. The source port can be only an Ethernet physical port.
B. The source port can be monitored in multiple SPAN sessions.
C. The destination port can be destination in multiple SPAN sessions.
D. The destination port does not participate in STP.
E. You can mix individual source ports and source VLANs within a single session.

Correct Answer: BD
Section: (none)
Explanation

Explanation/Reference:

QUESTION 182
In a switch stack environment, what is the total bidirectional traffic flow between two logical counter-rotating paths?

A. 16 Gbps
B. 32 Gbps
C. 64 Gbps
D. 128 Gbps

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 183
Refer to the exhibit. Which statement about the SPAN and RSPAN configuration on SW1 is true?

```
SW1#sh monitor session all
Session 1
------------

Type                    : Remote Destination Session
Source RSPAN VLAN       : 50


Session 2
------------

Type                    : Local Session
Source Ports            :
        Both            : Fa0/14
   Destination Ports    : Fa0/15
      Encapsulation     : Native
             Ingress    : Disables
```

A. SPAN session 2 only monitors egress traffic exiting port FastEthernet 0/14.
B. RSPAN session 1 monitors activity on VLAN 50 of a remote switch.
C. RSPAN session 1 is incompletely configured for monitoring.
D. SPAN session 2 monitors all traffic entering and exiting port FastEthernet 0/15.

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 184
Which information does the subordinate switch in a switch stack keep for all the VLANs that are configured on it?

A. VLAN database
B. DHCP snooping database
C. spanning trees
D. routing information

Correct Answer: C

Section: (none)
Explanation

Explanation/Reference:

QUESTION 185
Which option is the minimum number of bindings that the DHCP snooping database can store?

A. 1000 bindings
B. 2000 bindings
C. 5000 bindings
D. 8000 bindings

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 186
On which layer does IP source guard provide filtering to prevent a malicious host from impersonating the IP address of a legitimate host?

A. Layer 1
B. Layer 2
C. Layer 3
D. Layer 7

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 187
By default, what is the state of port security on a switch?

A. disabled

B. on
C. off
D. learning

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 188
Which two statements about HSRP, GLBP, and VRRP are true? (Choose two.)

A. HSRP is the preferred protocol to be used on multivendor environments.
B. VRRP has one master router, one standby router, and many listening routers.
C. GLBP allows for a maximum of four MAC addresses per group.
D. HSRP supports up to 255 groups on the same switch or router.
E. VRRP is a Cisco proprietary protocol.

Correct Answer: CD
Section: (none)
Explanation

Explanation/Reference:

QUESTION 189
Refer to the exhibit. Which option is the most likely explanation of the duplicate address message logged?

```
R2#show standby
FastEthernet1/0 - Group 50
   State is Active
      2 state changes, last state change 00:04:02
   Virtual IP address is 10.10.1.1
   Active virtual MAC address is 0000.0c07.ac32 (MAC In Use)
      Local virtual MAC address is 0000.0c07.ac32 (v1 default)
   Hello time 3 sec, hold time 10 sec
      Next hello sent in 1.504 secs
   Preemption enabled, delay reload 90 secs
   Active router is local
   Standby router is unknown
   Priority 200 (configured 200)
      Track interface FastEthernet0/0 state Up decrement 20
   Group name is "hsrp-Fa1/0-50" (default)
R2#
%IP-4-DUPADDR: Duplicate address 10.10.1.1 on FastEthernet1/0, sourced by 0000.0c07.ac28
R2#
```

A. spanning-tree loop
B. HSRP misconfiguration
C. a PC with IP of 10.10.1.1
D. a hardware problem

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 190
Refer to the exhibit. A network engineer changes the default native VLAN to VLAN 999. After applying the settings on the uplinks to the core switches, the switch control traffic, such as CDP and VTP, is no longer working. The standard configuration is used for each uplink.
What is wrong with the configuration?

```
switch#sh run
Building configuration...

Interface FastEthernet0/1
 description Uplink to Core
 switchport
 switchport trunk encapsulation dot1q
 switchport trunk allowed vlan 1-90,100-199,200-900,1000-4000
 switchport mode trunk
```

A. The interface is administratively down.

B. The encapsulation type is incorrect.

C. The switchport mode trunk command should be first in the output.

D. The native VLAN is not present on the trunk.

E. The control traffic must be manually enabled on the new native VLAN.

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 191
Which two options are two results of using the command spanning-tree vlan 50 root primary within a spanning-tree network under global configuration?
(Choose two.)

A. Spanning tree determines the priority of the current root for VLAN 50 and reduces the priority of the local switch to a lower value.

B. The priority value for VLAN 50 is set to 4094 on the root while the local switch priority is set to 32768.

C. The spanning-tree timers are reduced to improve the convergence time for VLAN 50.

D. All ports that are configured on the current switch with VLAN 50 transition to designated ports.

E. The switchport that is configured for VLAN 50 is the primary connection to the spanning-tree root switch.

Correct Answer: AD
Section: (none)
Explanation

QUESTION 192
An access switch at a remote location is connected to the spanning-tree root with redundant uplinks. A network engineer notices that there are issues with the physical cabling of the current root port. The engineer decides to force the secondary link to be the desired forwarding root port.
Which action accomplishes this task?

A. Change the link-type to point-to-point.

B. Enable Rapid Spanning Tree to converge using the secondary link.

C. Adjust the secondary link to have a lower priority than the primary link.

D. Apply a BPDU filter on the primary interface of the remote switches.

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 193
A network engineer wants to make sure that an access switch will never become a Spanning Tree root for VLAN 5. What action will accomplish this task?

A. adjust STP priority to the maximum value

B. disable STP globally

C. apply root guard to all outgoing neighbor interfaces

D. enable MSTP and use a different revision number than all other switches

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:
Exam B

QUESTION 194
Drag and Drop Question

Drag and drop the characteristic from the left to the matching Layer 2 protocol on the right.

Select and Place:

	CDP
sends topology change notification	
Default time between protocol frames is 60 seconds.	
uses multicast address 01-80-C2-00-00-0E	
Default time between protocol frames is 30 seconds.	LLDP
uses multicast address 0100.0ccc.cccc	
supports IEEE 802.2 and 802.3 encapsulation	

Correct Answer:

CDP

uses multicast address 0100.0ccc.cccc

supports IEEE 802.2 and 802.3 encapsulation

Default time between protocol frames is 60 seconds.

LLDP

sends topology change notification

uses multicast address 01-80-C2-00-00-0E

Default time between protocol frames is 30 seconds.

Section: (none)
Explanation

Explanation/Reference: