Chapters 1 – 5: L2 Redundancy Exam (Answers)

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CCNPv8 ENCOR (Version 8.0) - L2 Redundancy Exam

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1. What is the goal of Layer 3 switching?

- to process packets at Layer 2 switching speeds while utilizing the scalability of routing
- to provide a better path to the Internet without using routing protocols
- to implement the routing process by using routed protocols
- to integrate all of the networking functions into one device

Explanation: Switches that perform Layer 3 switching process packets at Layer 2 hardware speeds while providing the scalability of routing.

2. Which two statements are true about routed ports on a multilayer switch? (Choose two.)

- To create a routed port requires removal of Layer 2 port functionality with the no switchport interface configuration command.
- A routed port is a physical switch port with Layer 2 capability.
- A routed port is not associated with a particular VLAN.
- A routed port behaves like a regular router interface and supports VLAN subinterfaces.
- The interface vlan global configuration command is used to create a routed port.

Explanation: A switch routed port is a Layer 3 port that requires removal of Layer 2 port functionality with the no switchport interface configuration command. VLANs are associated with switch Layer 2 access and trunk ports.

3. Which two statements are true about the 802.1Q trunking protocol? (Choose two.)

- The native VLAN interface configurations must match at both ends of the link or frames could be dropped.
- Untagged frames will be placed in the configured native VLAN of a port.
- Private VLAN configurations are not supported.
- It is a proprietary protocol that is supported on Cisco switches only.

Explanation:802.1Q is a standard trunking protocol where untagged frames are placed on the native VLAN. The native VLAN must be configured the same at both ends of the trunk link.

4. Which technology does CEF switching use on Cisco hardware-based routers to forward packets?

- router general-purpose CPU
- interVLAN routing using subinterfaces
- forwarding engines implemented in specialized ASICs
- route processors using stateful switchover

Explanation: CEF switching on Cisco hardware-based routers uses forwarding engines implemented in specialized ASICs to forward packets. Cisco software-based routers use the general-purpose CPU for packet switching. InterVLAN routing using subinterfaces is not a CEF technology, and route processors using stateful switchover is a redundancy technology used by routers.

5. What type of specialized memory is used to facilitate high performance switching in Cisco multilayer switches?

- address resolution protocol (ARP) memory
- ternary content addressable memory (TCAM)
- Cisco Express Forwarding (CEF) memory
- content-addressable memory (CAM)

Explanation: CAM is used by ARP to store MAC and IPv4 address pairs. CEF uses a FIB.

6. Which protocol is required for Cisco Express Forwarding to be able to successfully forward packets on a multilayer switch?

- VLAN Trunking Protocol
- Cisco Discovery Protocol
- Spanning Tree Protocol
- Address Resolution Protocol
- Dynamic Trunking Protocol

Explanation: In order to forward packets, Cisco Express Forwarding (CEF) requires the MAC address of the next hop provided by ARP.

7. Which two network design features require Spanning Tree Protocol (STP) to ensure correct network operation? (Choose two.)

- link-state dynamic routing that provides redundant routes
- removing single points of failure with multiple Layer 2 switches
- implementing VLANs to contain broadcasts
- static default routes
- redundant links between Layer 2 switches

Explanation: Spanning Tree Protocol (STP) is required to ensure correct network operation when designing a network with multiple interconnected Layer 2 switches or using redundant links to eliminate single points of failure between Layer 2 switches. Routing is a Layer 3 function and does not relate to STP. VLANs do reduce the number of broadcast domains but relate to Layer 3 subnets, not STP.

8. If left to default configuration settings, what will determine which switch becomes the spanning-tree root bridge in a Layer 2 domain?

- the highest bridge priority
- the lowest switch MAC address
- the highest bridge ID
- the highest management IP address

Explanation: By default, all switches will have the same priority value, so the election of the root bridge will be based on the lowest MAC address.

9. During the implementation of Spanning Tree Protocol, all switches are rebooted by the network administrator. What is the first step of the spanning-tree election process?

- Each switch determines the best path to forward traffic.
- All the switches send out BPDUs advertising themselves as the root bridge.
- Each switch determines what port to block to prevent a loop from occurring.
- Each switch with a lower root ID than its neighbor will not send BPDUs.

Explanation: After a Cisco switch boots, it will send out BPDUs containing its individual BID and the root ID for the network. By default, the initial root ID at bootup will be the ID of that individual switch. After a root bridge is elected, port states and paths are chosen.

10. After the election of the root bridge has been completed, how will switches find the best paths to the root bridge?

• Each switch will analyze the sum of the hops to reach the root and use the path with the fewest hops.

- Each switch will analyze the port states of all neighbors and use the designated ports to forward traffic to the root.
- Each switch will analyze the BID of all neighbors to reach the root and use the path through the lowest BID neighbors.
- Each switch will analyze the sum of all port costs to reach the root and use the path with the lowest cost.

Explanation: After the election of a root bridge has occurred, each switch will have to determine the best path to the root bridge from its location. The path is determined by summing the individual port costs along the path from each switch port to the root bridge.

11. Which statement describes the term bridge priority in the operation of STP?

- It is a value that decides which switch can become the root bridge.
- It is a value that is used, in the event of a loop, to decide which port on the switch must be put into forwarding state.
- It is a feature that allows access ports to bypass the earlier learning and listening states and forward traffic immediately.
- It is a safety mechanism that shuts down ports configured with STP portfast upon receipt of a BPDU.

12. Which three components are combined to form a bridge ID?

- MAC address
- cost
- bridge priority
- IP address
- port ID
- extended system ID

Explanation: The three components that are combined to form a bridge ID are bridge priority, extended system ID, and MAC address.

13. In which two port states does a switch learn MAC addresses and process BPDUs in a PVST network? (Choose two.)

- listening
- disabled
- learning
- forwarding
- blocking

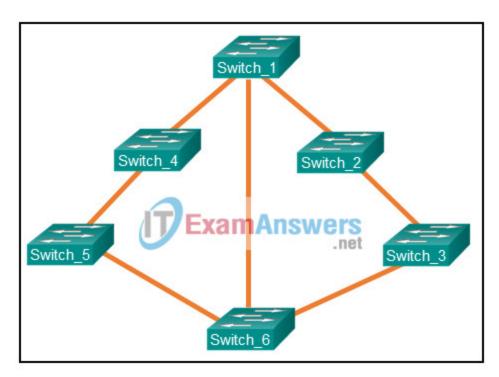
Explanation: Switches learn MAC addresses at the learning and forwarding port states. They receive and process BPDUs at the blocking, listening, learning, and forwarding port states.

14. Which STP priority configuration would ensure that a switch would always be the root switch?

- spanning-tree vlan 10 priority o
- spanning-tree vlan 10 priority 61440
- spanning-tree vlan 10 priority 4096
- spanning-tree vlan 10 root primary

Explanation: Although the spanning-tree vlan 10 root primary command will ensure a switch will have a bridge priority value lower than other bridges introduced to the network, the spanning-tree vlan 10 priority 0 command ensures the bridge priority takes precedence over all other priorities.

15. Refer to the exhibit. The network has converged and Switch_6 has been elected root bridge of the STP tree. However, network traffic analysis indicates that Switch_1 would be a better root bridge. How can the network administrator make this change, assuming that the spanning-tree priorities are at the default settings?



- Set the bridge priority of Switch_1 to 4,096.
- Set the bridge priority of Switch_6 to 255.
- Set the bridge priority of Switch_6 to 65,565.
- Set the bridge priority of Switch_1 to 32,768.

Explanation: The switch priority is a value between 0-61,440 in increments of 4,096. Switch priority is initially set to 32,768 (the default). Therefore, Switch_1 can become the root bridge if the priority is set to a value between 0-28,672.

16. Why is it important that the network administrator consider the spanningtree network diameter when choosing the root bridge?

- BPDUs may be discarded because of expiring timers.
- The network diameter limitation is 9.
- The cabling distance between the switches is 100 meters.
- Convergence is slower as the BPDU travels away from the root.

Explanation: The optional diameter keyword in the spanning-tree vlan vlan-id root {primary | secondary} [diameter diameter] command allows for tuning of the STP convergence. The diameter keyword should reference the maximum number of Layer 2 hops that a switch can be from the root bridge and modify the timers accordingly. The timers do not need to be modified on other switches because they are carried throughout the topology through the root bridge BPDUs.

17. A network administrator enters the spanning-tree portfast bpduguard default command. What is the result of this command being issued on a Cisco switch?

- Any switch port that receives a BPDU will ignore the BPDU message.
- Any switch port will be error-disabled if it receives a BPDU.
- Any trunk ports will be allowed to connect to the network immediately, rather than waiting to converge.
- Any switch port that has been configured with PortFast will be errordisabled if it receives a BPDU.

Explanation: The spanning-tree bpduguard default command will enable BPDU guard on all switch ports that have PortFast-enabled. This will put the port in an error-disabled state if a BPDU from another switch is received on a PortFast-enabled interface.

18. In what situation would a network administrator most likely implement root guard?

- on all switch ports that connect to a Layer 3 device
- on all switch ports that connect to another switch
- on all switch ports that connect to host devices
- on all switch ports (used or unused)
- on all switch ports that connect to another switch that is not the root bridge

Explanation: Root guard in conjunction with PortFast, and BPDU guard is used to prevent an STP manipulation attack.

19. Which two statements describe the MST internal spanning tree instance? (Choose two)

- It carries all VLANs traffic.
- It carries identical setup information among interconnected MST regions.
- It is always instance o.
- It runs on all switch port interfaces of switches that are designated as root bridges.
- It runs on all switch port interfaces of switches in the MST region.

Explanation: MST uses a special STP instance called the internal spanning tree (IST), which is always the first instance, instance o. The IST runs on all switch port interfaces for switches in the MST region, regardless of the VLANs associated with the ports.

20. What are the two options that describe the effects of the spanning-tree portfast command? (Choose two.)

- Portfast bypasses the learning state and moves immediately into blocking.
- If a switch port is configured with PortFast, it is an access port that immediately transitions from a blocking to forwarding state.
- Portfast enables the port to bypass the listening and learning states of STP.
- Enabling PortFast on trunks that connect to other switches improves convergence.
- If the switch port is configured with PortFast, it waits 15 seconds before transitioning from a blocking to forwarding state.

Explanation: The portfast feature is enabled on a specific access port with the spanning-tree portfast command. One of the benefits of the STP portfast feature, is that the access ports bypass the earlier 802.1D STP states (learning and listening) and forward traffic immediately.

21. Which LACP technology is used for designating a specific number of member interfaces that must remain active in order for the EtherChannel bundle to be usable?

- LACP port priority
- LACP fast
- LACP min-links
- LACP system priority

Explanation: LACP fast advertises an LACP packet every second and after three seconds of not receiving an LACP packet, removes the link from the EtherChannel bundle. LACP port priority allows an LACP enabled switch to select which member interfaces are

active within a port-channel that has more member interfaces than the maximum allowed. LACP system priority allows an LACP enabled switch to be designated as the master switch for a port-channel.

LACP min-links is used to configure a required minimum number of physical connections that must be active in order for the EtherChannel to stay active.

22. Which statement describes the term root port in the operation of STP?

- It indicates that the port has transitioned from a blocking state and can send or receive BPDUs, but cannot forward any other network traffic.
- It is a port state that can forward all network traffic and can update the MAC address table.
- It is a port state that can modify the MAC address table with any network traffic that it receives, but only forwards BPDUs and not any other network traffic.
- It is a port that connects to the root bridge or an upstream switch in the spanning-tree topology.

23. What are two configuration parameters that must match for all switches in the same MST region? (Choose two.)

- bridge priority
- region name
- version number
- trunk link encapsulation method
- port status

Explanation: The mst version number and region name must match for all switches in the same MST region. These parameters can be adjusted through MST configuration.

24. Assuming that all switches in a network have the default bridge priority for each MST instance, what effect does the command spanning-tree mst 10 root seconday have when entered on a single switch?

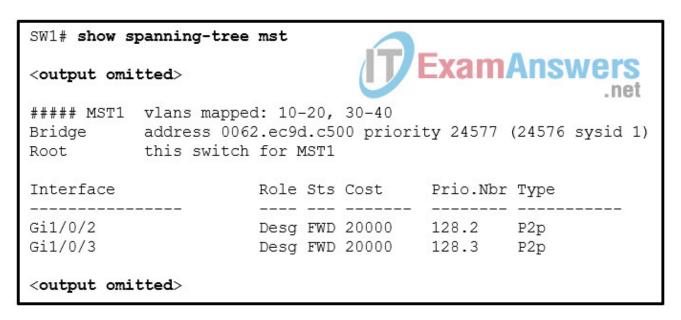
- sets the bridge priority on the switch to 28672 for MST instance 10
- sets the bridge priority on the switch to 24586 for MST instance 10
- sets the bridge priority on the switch to 24582 for MST instance 10
- sets the bridge priority on the switch to 24576 for MST instance 10

Explanation: In MST configuration, an MST instance priority can be defined in one of two methods:

spanning-tree mst instance-number priority priority, where the priority is a value between 0 and 61,440, in increments of 4096

spanning-tree mst instance-number root { primary | secondary }[diameter diameter], where the primary keyword sets the priority to 24,576, and the secondary keyword sets the priority to 28,672

25. Refer to the exhibit. A network administrator issues the show spanning-tree command to verify the MST configuration. Which two conclusions can be drawn based on the output? (Choose two.)



- SW1 is running IEEE 802.1W STP protocol.
- SW1 is the root bridge for instance 1.
- The command spanning-tree mst 1 root secondary was entered.
- SW1 is running IEEE 802.1S protocol.
- PortFast is enabled on ports Gi1/0/2 and Gi1/0/3.

Explanation: SW1 is running MST, which is IEEE 802.1S standard. IEEE 802.1W is the standard for RSTP. SW1 is the root bridge for instance 1. The instance 1 priority is set as 24576. If it is set through the secondary keyword, it would be 28672. If the portfast feature is enabled on a port, the port type would be P2p Edge.

26. Refer to the exhibit. A network administrator is configuring MST tuning on SW1. The objective is to change the path cost value of the interface Gi1/0/1 to represent a higher-speed bandwidth link. Which value could be used in the command spanning-tree mst o cost for this task?

SW1# show spanning-tree mst 0 **ExamAnswe** <output omitted> Prio.Nbr Type Interface Role Sts Cost P2p Gi1/0/1 Root FWD 20000 128.1 Gi1/0/2 128.2 Altn BLK 20000 P2p Gi1/0/5 Desg FWD 20000 128.5 P2p

- O
- 1
- 24576
- 32768

Explanation: As shown in the output, the interface STP cost is derived from the media speed of the interface using the long-mode method. Using this method, the range of the interface path cost is from 1 to 20000000. A lower path cost represents higher-speed transmission bandwidth.

27. What are two misconfigurations within an MST region that might introduce port blocking unintentionally? (Choose two.)

- trunk link pruning
- too many VLANs assigned to an instance
- VLAN assignment to the IST
- misconfigured revision number across the MST region
- misconfigured region name across the MST region

Explanation: VLAN assignment to the IST and trunk link pruning are two common misconfigurations within the MST region. A misconfigured region name or misconfigured revision number will cause the failure in forming the MST region.

28. How does an MST region send VLAN information through the PVST simulation mechanism to a switch that runs PVST+?

- It sends out PVST+ BPDUs, one for each VLAN, using the information from the IST.
- It sends out one PVST+ BPDU with the information from the IST.
- It sends out one PVST+ BPDU that maps all VLANs into VLAN1.
- It sends out multiple PVST+ BPDUs, one for each VLAN, plus the IST.

Explanation: The PVST simulation mechanism sends out PVST+ including RSTP BPDUs, one for each VLAN, using the information derived from the internal spanning tree (IST). This requires a mapping of one topology in IST to multiple VLANs toward the PVST link.

29. Which two VTP modes allow for the creation, modification, and deletion of VLANs on the local switch? (Choose two.)

- transparent
- distribution
- client
- server
- slave
- master

Explanation: The three VTP modes are server, client, and transparent. In server VTP mode, the switch can create, modify, and delete VLANs and send this information on to other switches that are in the same VTP domain. Switches in transparent VTP mode can do the same except that information is not transmitted to other switches.

30. Given the following configuration, which two statements are true? (Choose two.)

```
switch(vlan)# vtp version 2
switch(vlan)# vtp mode server
switch(vlan)# vtp domain Cisco
switch(vlan)# vtp password mypassword
```

- This switch can advertise its VLAN configuration to other switches in the Cisco domain only, but can receive advertisements from other domains.
- The password will prevent unauthorized routers from participating in the Cisco domain.
- This switch can send and receive advertisements from only the Cisco domain.
- This switch can create, modify, and delete all VLANs within the Cisco domain.
- This switch maintains a full list of all VLANs and can create VLANs, but cannot delete or modify existing VLANs.

Explanation: A switch in VTP server mode can create, modify, and delete VLANs as well as transmit that information (if the switch has the highest VTP configuration revision number) to other switches in the same VTP domain.

31. Which Cisco proprietary protocol is used for dynamically forming a trunk connection between two switches?

- VTP
- STP
- DTP
- PAgP

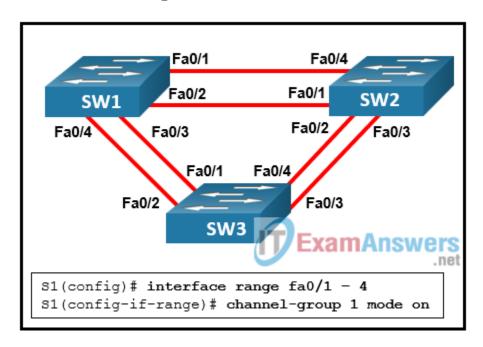
Explanation: Dynamic Trunking Protocol (DTP) is a Cisco proprietary protocol used for dynamically negotiating a trunk connection between two Cisco switches.

32. Which is a characteristic of EtherChannel?

- STP treats all interfaces in an EtherChannel bundle as a single logical link.
- EtherChannel uses physical ports that have been upgraded to provide a faster connection.
- EtherChannel configuration is applied to each physical port.
- STP will not block redundant EtherChannel bundles between two switches.

Explanation: Because EtherChannel creates one logical link out of a number of physical ports, STP will treat the one logical link as an individual connection. When a physical port that is part of the logical link fails, the link will stay active and STP will not recalculate.

33. Refer to the exhibit. The administrator tried to create an EtherChannel between S1 and the other two switches via the commands that are shown, but was unsuccessful. What is the problem?

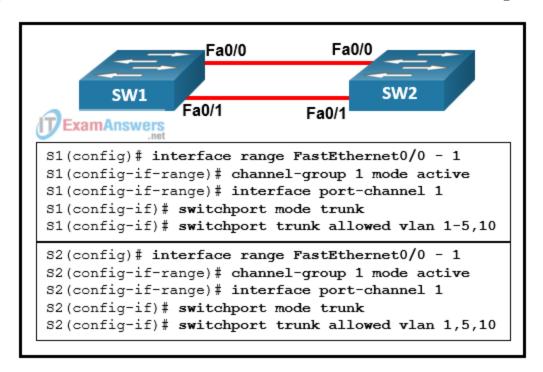


- Traffic can only be sent to two different switches if EtherChannel is implemented on Gigabit Ethernet interfaces.
- Traffic can only be sent to two different switches if EtherChannel is implemented on Layer 3 switches.

- Traffic cannot be sent to two different switches, but only to two different devices like an EtherChannel-enabled server and a switch.
- Traffic cannot be sent to two different switches through the same EtherChannel link.

Explanation: An EtherChannel link can only be created between two switches or between an EtherChannel-enabled server and a switch. Traffic cannot be sent to two different switches through the same EtherChannel link.

34. Refer to the exhibit. An EtherChannel was configured between switches S1 and S2, but the interfaces do not form an EtherChannel. What is the problem?



- The EtherChannel was not configured with the same allowed range of VLANs on each interface.
- The switch ports were not configured with speed and duplex mode.
- The switch ports have to be configured as access ports with each port having a VLAN assigned.
- The interface port-channel number has to be different on each switch.

Explanation: The guidelines for configuring an EtherChannel link are as follows:

- Interfaces which form an EtherChannel can be physically discontiguous, and on different modules.
- Interfaces in an EtherChannel have to operate at the same speed and in the same duplex mode.
- Interfaces in the EtherChannel must be assigned to the same VLAN, or be configured as a trunk.

• Interfaces in the EtherChannel have to support the same allowed range of VLANs.

35. Which two DTP mode combinations will form a trunk link between two switches? (Choose two.)

- access and dynamic auto
- dynamic auto and dynamic auto
- trunk and access
- trunk and dynamic desirable
- dynamic auto and dynamic desirable

Explanation: There are five DTP mode combinations that will result in successful trunk link negotiation between two switches. dynamic auto and dynamic desirable dynamic desirable and dynamic desirable trunk and trunk trunk and dynamic auto trunk and dynamic desirable

36. Which statement is true about the port roles of the 802.1w Rapid Spanning Tree Protocol?

- Cisco-proprietary enhancements to the legacy 802.1D, such as UplinkFast and BackboneFast, are compatible with RSTP.
- An alternate or backup port can immediately change to a forwarding state without waiting for the network to converge.
- $\bullet~$ It takes an edge port 15 seconds to go from blocking to forwarding.
- Ports are manually configured to be in the designated role.

Explanation: In order to create a loop-free topology, 802.1w RSTP has the following port roles: root, designated, alternate, edge, and backup. RSTP is able to actively confirm that a port can safely transition to the forwarding state without having to rely on a timer configuration.

37. Which technology is used to protect the switched infrastructure from problems caused by receiving BPDUs on ports that should not be receiving them?

- Loop guard
- PortFast
- BPDU guard
- RSPAN
- Root guard

Explanation: To form a single path through a Layer 2 network, Layer 2 devices communicate with one another by the use of bridge protocol data units (BPDUs) as part of the Spanning Tree Protocol (STP). An attacker manipulates STP by spoofing the root bridge so that a device that is controlled by the attacker becomes a root bridge. The attacker can then obtain more information about the network or networks. BPDU guard can be used on ports that connect to user devices that are configured with PortFast so that BPDUs will not be accepted through that port.

38. Which statement describes the term blocking in the operation of STP?

- It is a port state that can modify the MAC address table with any network traffic that it receives, but only forwards BPDUs and not any other network traffic.
- It indicates that the port is in an administratively off position.
- It is a port state that is enabled but does not forward any traffic to ensure that a loop does not occur.
- It indicates that the port has transitioned from a blocking state and can send or receive BPDUs, but cannot forward any other network traffic.
- 39. The network administrator wants to configure a switch to pass VLAN update information to other switches in the domain but not update its own local VLAN database. Which two steps should the administrator perform to achieve this? (Choose two.)
 - Configure VTP version 1 on the switch.
 - Configure the switch with the same VTP domain name as other switches in the network.
 - Verify that the switch has a higher configuration revision number.
 - Reset the VTP counters.
 - Configure the VTP mode of the switch to transparent.

Explanation: Besides the VTP domain name and mode needing to be configured, the switch must connect to other switches in the same VTP domain through a trunk in order to transmit/receive VTP information.

- 40. Which LACP technology is used for designating whuch member interfaces will be active in a port-channel configuration where there are more member interfaces than the maximum allowed?
 - LACP min-links
 - LACP port priority
 - LACP system priority
 - LACP fast

41. Which LACP technology can identify and remove a LACP enabled link from an EtherChannel within three seconds when the link is experiencing connectivity issues?

- LACP min-links
- LACP port priority
- LACP system priority
- LACP fast

Explanation: LACP fast advertises an LACP packet every second and after three seconds of not receiving an LACP packet, removes the link from the EtherChannel bundle.

LACP port priority allows an LACP enabled switch to select which member interfaces are active within a port-channel that has more member interfaces than the maximum allowed. LACP system priority allows an LACP enabled switch to be designated as the master switch for a port-channel.

LACP min-links is used to configure a required minimum number of physical connections that must be active in order for the EtherChannel to stay active.

42. Which two statements descibe the MST internal spanning tree instance? (Choose two)

- It runs on all switch port interfaces of switches that are designated as root bridges.
- It is always instance o.
- It carries identical setup information among interconnected MST regions.
- It runs on all switch port interfaces of the switches in the MST region.
- It carries all VLANs traffic.

Explanation: MST uses a special STP instance called the internal spanning tree (IST), which is always the first instance, instance o. The IST runs on all switch port interfaces for switches in the MST region, regardless of the VLANs associated with the ports.

43. Which statement describes the term root bridge in the operation of STP?

- It is a switch that is at the top of the spanning tree and whose ports are all forwarding and are all categorized as designated ports.
- It is a value that decides which switch can become the root bridge.
- It is a feature that prevents any alternative or root ports from becoming designated ports because of a loss of BPDUs on the root port.
- It is a safety mechanism that shuts down ports configured with STP portfast upon receipt of a BPDU.

44. Refer to the exhibit. Access1 is a new switch that is to be connected as a VTP client to the network once it has been configured. Given the output generated by the VTP server switch Dist-2, which series of configuration commands would

successfully introduce the client switch into the VTP domain?

```
Dist-2# show vtp status
VTP Version
Configuration Revision
Maximum VLANs supported locally : 250
Number of existing VLANs
VTP Operating Mode
VTP Domain Name
                             : MYCORP
VTP Pruning Mode
                             : Disabled
VTP V2 Mode
                             : Enabled
                         : Disabled
VTP Traps Generation
                             : 0x0B 0xA5 0xDF 0xA7 0x52 0xBD 0x93 0x4D
Configuration last modified by 172.16.0.22 at 3-1-93 03:56:18
Local updater ID is 172.16.0.22 on interface Vl1 (lowest numbered VLAN interface found)
Dist-2# show vtp password
VTP Password: ITrustYou
Dist-2#
```

Access1(config)# vtp mode client
 Access1(config)# vtp domain MYCORP
 Access1(config)# vtp version 2
 Access1(config)# vtp password ITrustYou

Access1(config)# vtp mode client
 Access1(config)# vtp domain mycorp
 Access1(config)# vtp password ITrustYou

Access1(config)# vtp mode client
 Access1(config)# vtp domain mycorp
 Access1(config)# vtp password ITrustYou

Access1(config)# vtp mode client
 Access1(config)# vtp domain Mycorp
 Access1(config)# vtp version 2
 Access1(config)# vtp password ITrustYou

Explanation: VTP domain names are case sensitive.

45. Which LACP technology is used for designating which member interfaces will be active in a port-channel configuration where there are more member interfaces than the maximum allowed?

- LACP min-links
- LACP system priority
- LACP port priority
- LACP fast

Explanation: LACP fast advertises an LACP packet every second and after three seconds of not receiving an LACP packet, removes the link from the EtherChannel bundle. LACP port priority allows an LACP enabled switch to select which member interfaces are

active within a port-channel that has more member interfaces than the maximum allowed. LACP system priority allows an LACP enabled switch to be designated as the master switch for a port-channel.

LACP min-links feature is used to configure a required minimum number of physical connections that must be active in order for the EtherChannel to stay active.

46. Which statement describes the term root guard in the operation of STP?

- It is a feature that prevents any alternative or root ports from becoming designated ports because of a loss of BPDUs on the root port.
- It is a feature that prevents a configured port from becoming a root port.
- It is a value that decides which switch can become the root bridge.
- It is a safety mechanism that shuts down ports configured with STP portfast upon receipt of a BPDU.

47. Which statement describes the term forwarding in the operation of STP?

- It is a port state that can modify the MAC address table with any network traffic that it receives, but only forwards BPDUs and not any other network traffic.
- It is a port state that can forward all network traffic and can update the MAC address table.
- It is a port state that is enabled but does not forward any traffic to ensure that a loop does not occur.
- It indicates that the port has transitioned from a blocking state and can send or receive BPDUs, but cannot forward any other network traffic.