



Exam : Cisco 642-812

Title : Building Cisco Multilayer Switched

Update : Demo

1. Which switch command enables a trunking protocol that appends a four byte CRC to the packet?

- A. Switch(config-if)#switchport trunk encapsulation dot1q
- B. Switch(config-if)#switchport trunk encapsulation itef
- C. Switch(config-if)#switchport trunk encapsulation fddi
- D. Switch(config-if)#switchport trunk encapsulation isl

Answer: D

2. What action should a network administrator take to enable VTP pruning on an entire management domain?

- A. enable VTP pruning on any client switch in the domain
- B. enable VTP pruning on every switch in the domain
- C. enable VTP pruning on any switch in the management domain
- D. enable VTP pruning on a VTP server in the management domain

Answer: D

3. Which statement describes Dynamic Trunking Protocol (DTP) mode 'desirable'?

- A. The interface is put into permanent trunking mode and negotiates to convert the link into a trunk link.
- B. The interface actively attempts to convert the link to a trunk link.
- C. The interface is put into permanent trunking mode but prevented from generating DTP frames.
- D. The interface is put into a passive mode, waiting to convert the link to a trunk link. Answer: B

4. Which three statements are correct with regard to the IEEE 802.1Q standard? (Choose three.)

- A. the packet is encapsulated with a 26 byte header and a 4 byte FCS
- B. the IEEE 802.1Q frame format adds a 4 byte field to a Ethernet frame
- C. the IEEE 802.1Q frame retains the original MAC destination address
- D. the IEEE 802.1Q frame uses multicast destination of 0x01-00-0c-00-00
- E. protocol uses point-to-point connectivity
- F. protocol uses point-to-multipoint connectivity

Answer: BCE

5. In a customer's network, VLAN Trunking Protocol (VTP) is running with a domain named main1. VLANs 1,2,3,4,5,10,20 are active on the network. Suddenly the whole network goes down. No traffic is being passed on VLANs 2,3,4,5,10,20, however traffic passes on VLAN 1 and indicates all switches are operational. Right before the network problem occurred, a switch named TEST1 was added to the network. What three configuration issues on TEST1 could be causing the network outage? (Choose three.)

- A. TEST1 is configured as a VTP server with a different domain name.
- B. TEST1 is not configured to participate in VTP.
- C. TEST1 is configured as a VTP server with the domain name main1.
- D. TEST1 has a lower VTP configuration revision than the current VTP revision.
- E. TEST1 has a higher VTP configuration revision than the current VTP revision.
- F. TEST1 is configured with only VLAN1.

Answer: CEF

6. Which DTP switchport mode parameter sets the switch port to actively send and respond to DTP negotiation frames?

- A. access
- B. trunk
- C. no negotiate
- D. dynamic desirable
- E. dynamic auto

Answer: D

7. Which method of Layer 3 switching uses a forwarding information base (FIB)?

- A. route caching
- B. flow-based switching
- C. demand-based switching
- D. topology-based switching

Answer: D

8. Which protocol specified by RFC 2281 provides network redundancy for IP networks, ensuring that user traffic immediately and transparently recovers from first-hop failures in network edge devices or access circuits?

- A. STP
- B. IRDP
- C. ICMP
- D. HSRP

Answer: D

9. In which three HSRP states do routers send hello messages? (Choose three.)

- A. standby
- B. learn
- C. listen
- D. speak
- E. active

Answer: ADE

10. Which protocol enables a group of routers to form a single virtual router and use the real IP address of a router as the gateway address?

- A. Proxy ARP
- B. HSRP
- C. IRDP
- D. VRRP
- E. GLBP

Answer: D

11. Which protocol inserts a four byte tag into the Ethernet frame and recalculates CRC value?

- A. VTP
- B. 802.1Q
- C. DTP
- D. ISL

Answer: B

12. What is the cause of jitter?

- A. variable queue delays
- B. packet drops
- C. transmitting too many small packets
- D. compression

Answer: A

13. The original frame is encapsulated and an additional header is added before the frame is carried over a trunk link. At the receiving end, the header is removed and the frame is forwarded to the assigned VLAN. This describes which technology?

- A. DISL
- B. DTP
- C. IEEE 802.1Q
- D. ISL
- E. MPLS

Answer: D

14. Which statement is true regarding the configuration of ISL trunks?

- A. All Catalyst switches support ISL trunking.
- B. A Catalyst switch will report giants if one side is configured for ISL while the other side is not.
- C. ISL trunking requires that native VLANs match.
- D. A Catalyst switch cannot have ISL and IEEE 802.1q trunks enabled.

Answer: B

15. On a multilayer Catalyst switch, which interface command is used to convert a Layer 3 interface to a Layer 2 interface?

- A. switchport
- B. no switchport
- C. switchport mode access
- D. swithport access vlan vlan-id

Answer: A

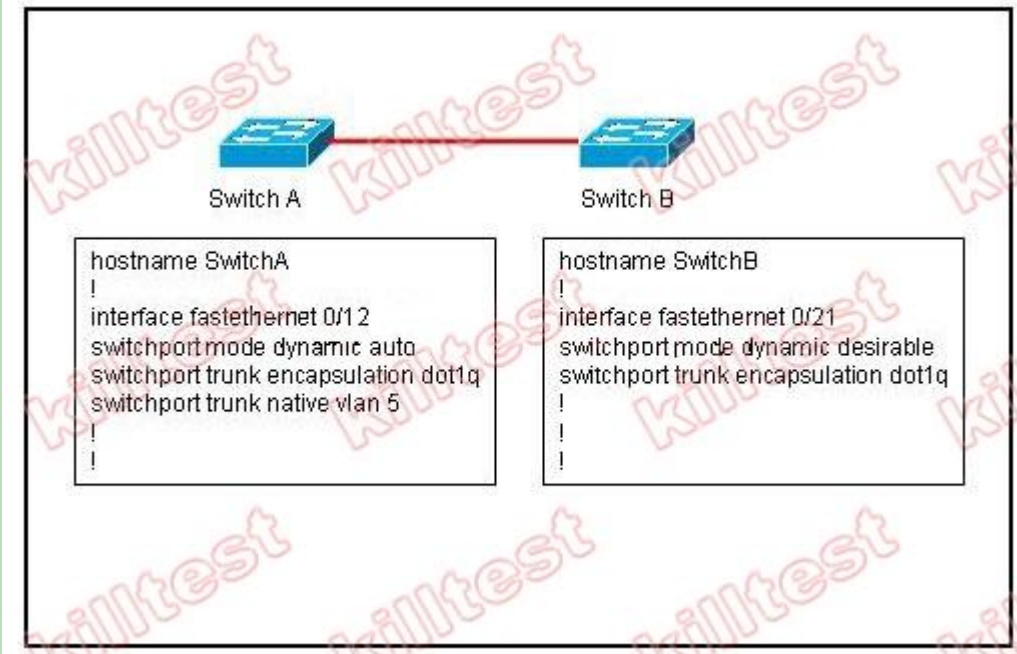
16. Which two statements concerning STP state changes are true? (Choose two.)

- A. Upon bootup, a port transitions from blocking to forwarding because it assumes itself as root.
- B. Upon bootup, a port transitions from blocking to listening because it assumes itself as root.
- C. Upon bootup, a port transitions from listening to forwarding because it assumes itself as root.

- D. If a forwarding port receives no BPDUs by the max_age time limit, it will transition to listening.
- E. If a forwarding port receives an inferior BPDU, it will transition to listening.
- F. If a blocked port receives no BPDUs by the max_age time limit, it will transition to listening.

Answer: BF

17. Which three statements are true regarding the above diagram? (Choose three.)



- A. A trunk link will be formed.
- B. Only VLANs 1-1001 will travel across the trunk link.
- C. The native VLAN for Switch B is vlan 1.
- D. DTP is not running on Switch A.
- E. DTP packets are sent from Switch B.

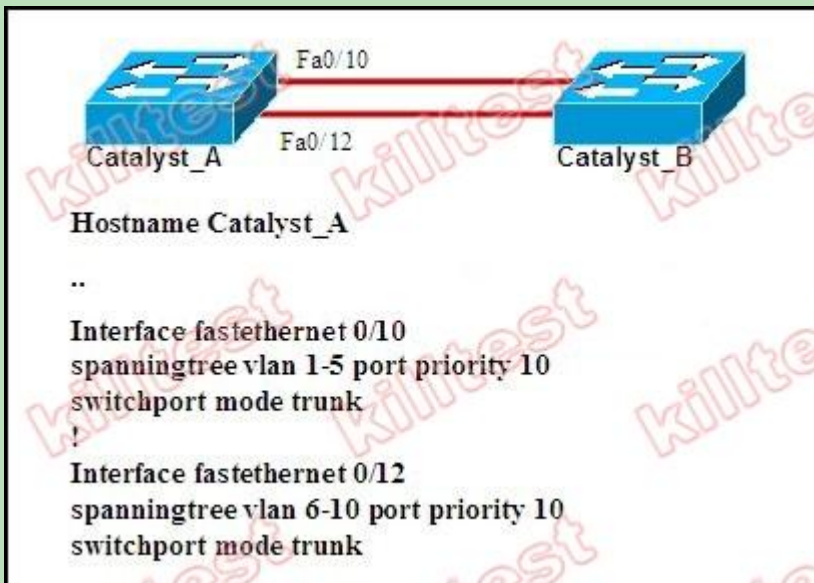
Answer: ACE

18. How does 802.1q trunking keep track of multiple VLAN's?

- A. modifies the port index of a data frame to indicate the VLAN
- B. adds a new header containing the VLAN ID to the data frame
- C. encapsulates the data frame with a new header and frame check sequence
- D. tags the data frame with VLAN information and recalculates the CRC value

Answer: D

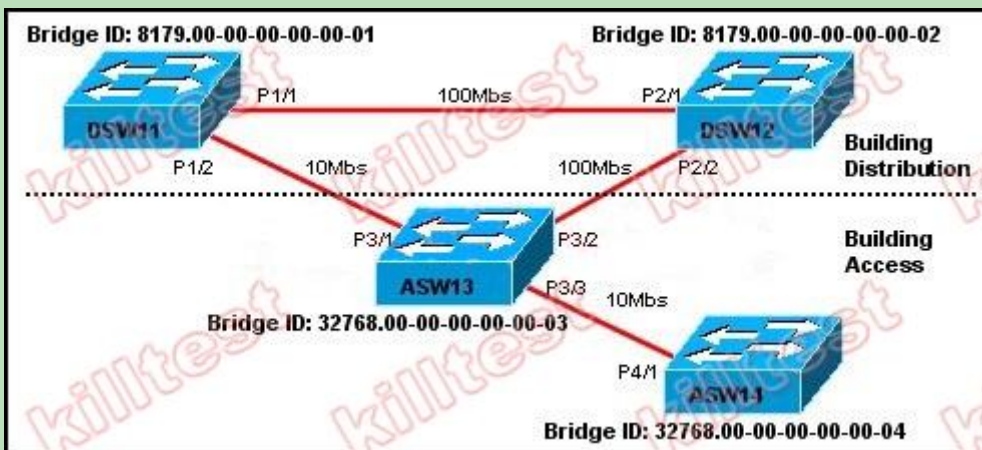
19. Given the above partial configuration, which two statements are true about VLAN traffic? (Choose two.)



- A. VLANs 1-5 will be blocked if fa0/10 goes down.
- B. VLANs 1-5 will use fa0/10 as a backup only.
- C. VLANs 6-10 will use fa0/10 as a backup only.
- D. VLANs 6-10 have a port priority of 128 on fa0/10.
- E. VLANs 1-10 are configured to load share between fa0/10 and fa0/12.

Answer: CE

20. Given the above diagram and assuming that STP is enabled on all switch devices, which two statements are true? (Choose two.)

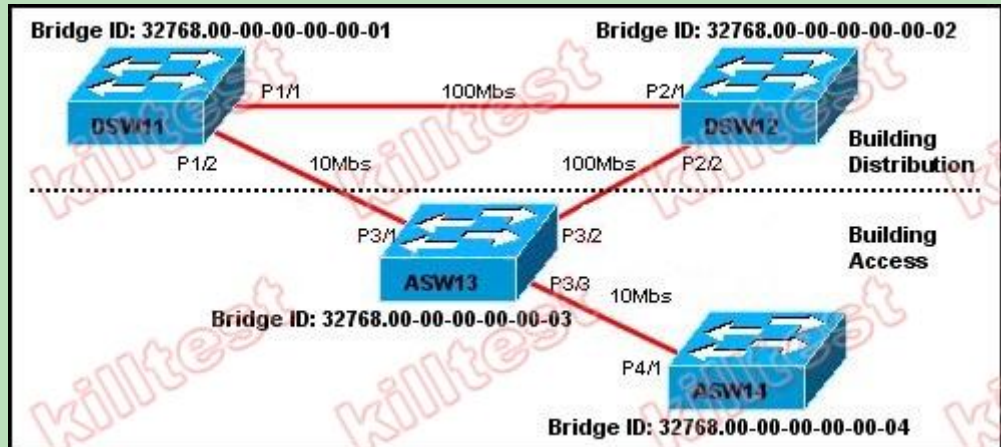


- A. DSW11 will be elected the root bridge.
- B. DSW12 will be elected the root bridge.
- C. ASW13 will be elected the root bridge.
- D. P3/1 will be elected the nondesignated port.
- E. P2/2 will be elected the nondesignated port.
- F. P3/2 will be elected the nondesignated port.

Answer: AD

21. Examine the diagram. A network administrator has recently installed the above switched network

using 3550s and would like to control the selection of the root bridge. Which switch should the administrator configure as the root bridge and which configuration command must the administrator enter



to accomplish this?

- A. DSW11(config)# spanning-tree vlan 1 priority 4096
- B. DSW12(config)# set spanning-tree priority 4096
- C. ASW13(config)# spanning-tree vlan 1 priority 4096
- D. DSW11(config)# set spanning-tree priority 4096
- E. DSW12(config)# spanning-tree vlan 1 priority 4096
- F. ASW13(config)# set spanning-tree priority 4096

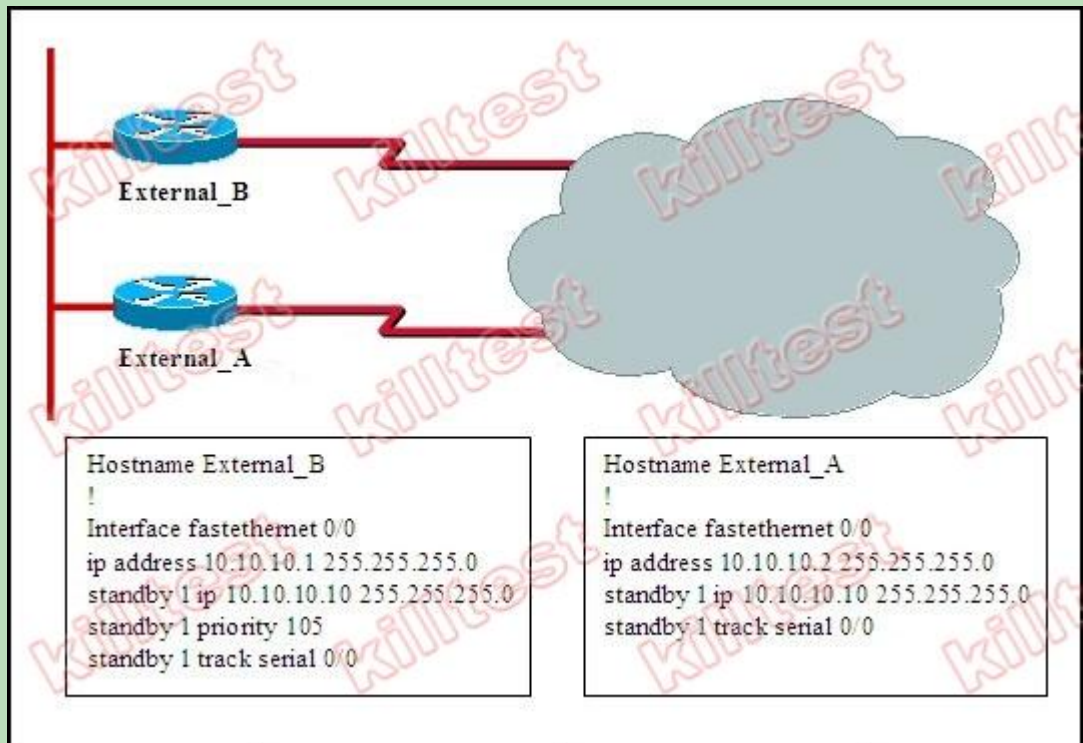
Answer: E

22. On a 3550 EMI switch, which three types of interfaces can be used to configure HSRP? (Choose three.)

- A. loopback interface
- B. SVI interface
- C. routed port
- D. access port
- E. EtherChannel port channel
- F. BVI interface

Answer: BCE

23. Which command will need to be added to External_A to ensure that it will take over if serial 0/0 on



External_B fails?

- A. standby 1 preempt
- B. standby 1 track 10.10.10.1
- C. standby 1 priority 130
- D. standby 1 track fastethernet 0/0

Answer: A

24. Which three statements about STP timers are true? (Choose three.)

- A. STP timers values (hello, forward delay, max age) are included in each BPDU.
- B. A switch is not concerned about its local configuration of the STP timers values. It will only consider the value of the STP timers contained in the BPDU it is receiving.
- C. To successfully exchange BPDUs between two switches, their STP timers value (hello, forward delay, max age) must be the same.
- D. If any STP timer value (hello, forward delay, max age) needs to be changed, it should at least be changed on the root bridge and backup root bridge.
- E. On a switched network with a small network diameter, the STP hello timer can be tuned to a lower value to decrease the load on the switch CPU.
- F. The root bridge passes the timer information in BPDUs to all routers in the Layer 3 configuration.

Answer: ABD

25. Examine the router output above. Which two items are correct? (Choose two.)


```
RouterA# show standby
Ethernet0/1 - Group 1
  State is Active
  2 state changes, last state change 00:30:59
  Virtual IP address is 10.1.0.20
  Secondary virtual IP address 10.1.0.21
  Active virtual MAC address is 0004.4d82.7981
  Local virtual MAC address is 0004.4d82.7981 (bia)
  Hello time 4 sec, hold time 12 sec
  Next hello sent in 1.412 secs
  Preemption enabled, min delay 50 sec, sync delay 40 sec
  Active router is local
  Standby router is 10.1.0.6, priority 75 (expires in 9.184 sec)
  Priority 95 (configured 120)
  Tracking 2 objects, 0 up
    Down Interface Ethernet0/2, pri 15
    Down Interface Ethernet0/3
  IP redundancy name is "HSRP1", advertisement interval is 34 sec
```

- A. Router A will assume the active state if its priority is the highest.
- B. If Ethernet 0/2 goes down, the standby router will take over.
- C. When Ethernet 0/3 of RouterA comes back up, the priority will become 105.
- D. The local IP address of Router A is 10.1.0.6.
- E. The local IP address of Router A is 10.1.0.20.

Answer: AC

26. Which router redundancy protocol cannot be configured for interface tracking?

- A. HSRP
- B. GLBP
- C. VRRP
- D. SLB
- E. RPR
- F. RPR+

Answer: C

27. Based on the show spanning-tree vlan 200 output shown in the exhibit, which two statements about the STP process for VLAN 200 are true? (Choose two.)

```
Switch#show spanning-tree vlan 200
VLAN0200
Spanning tree enabled protocol ieee
Root ID    Priority    32968
           Address    000c.ce29.ef00
           Cost        19
           Port        2 (FastEthernet0/2)
           Hello Time 10 sec  Max Age 20 sec  Forward Delay 30 sec

Bridge ID   Priority    32968 (priority 32768 sys-id-ext 200)
           Address    000c.ce2a.4180
           Hello Time 2 sec   Max Age 20 sec  Forward Delay 15 sec
           Aging Time 300

Interface Role Sts Cost Prio.Nbr Type
-----
Fa0/2    Root FWD 19   128.2  P2p
Fa0/3    Altn BLK 19   128.3  P2p
```

- A. BPDUs will be sent out every two seconds.
- B. The time spent in the listening state will be 30 seconds.
- C. The time spent in the learning state will be 15 seconds.
- D. The maximum length of time that the BPDU information will be saved is 30 seconds.
- E. This switch is the root bridge for VLAN 200.
- F. BPDUs will be sent out every 10 seconds.

Answer: BF

28. Which two statements are true when the extended system ID feature is enabled? (Choose two.)

- A. The BID is made up of the bridge priority value(two bytes) and bridge MAC address (six bytes).
- B. The BID is made up of the bridge priority (four bits), the system ID (12 bits), and a bridge MAC address (48 bits).
- C. The BID is made up of the system ID (six bytes) and bridge priority value (two bytes).
- D. The system ID value is the VLAN ID (VID).
- E. The system ID value is a unique MAC address allocated from a pool of MAC addresses assigned to the switch or module.
- F. The system ID value is a hex number used to measure the preference of a bridge in the spanning-tree algorithm.

Answer: BD

29. What can be determined about the HSRP relationship from the displayed debug output?

```
*Mar 1 00:12:16.871: SB11: V111 Hello in 172.16.11.112 Active pri 50 ip 172.16.11.115
*Mar 1 00:12:16.871: SB11: V111 Active router is 172.16.11.112
*Mar 1 00:12:18.619: %LINK-3-UPDOWN: Interface Vlan11, changed state to up
*Mar 1 00:12:18.623: SB: V111 Interface up
*Mar 1 00:12:18.623: SB11: V111 Init: a/HSRP enabled
*Mar 1 00:12:18.623: SB11: V111 Init -> Listen
*Mar 1 00:12:19.619: %LINEPROTO-5-UPDOWN: Line protocol on Interface Vlan11, changed state to up
*Mar 1 00:12:19.819: SB11: V111 Hello in 172.16.11.112 Active pri 50 ip 172.16.11.115
*Mar 1 00:12:19.819: SB11: V111 Listen: h/Hello rcvd from lower pri Active router (50/172.16.11.112)
*Mar 1 00:12:22.815: SB11: V111 Hello in 172.16.11.112 Active pri 50 ip 172.16.11.115
*Mar 1 00:12:22.815: SB11: V111 Listen: h/Hello rcvd from lower pri Active router
*Mar 1 00:12:25.683: SB11: V111 Hello in 172.16.11.112 Active pri 50 ip 172.16.11.115
*Mar 1 00:12:25.683: SB11: V111 Listen: h/Hello rcvd from lower pri Active router (50/172.16.11.112)
*Mar 1 00:12:28.623: SB11: V111 Listen: d/Standby timer expired (unknown)
*Mar 1 00:12:28.623: SB11: V111 Listen -> Speak
*Mar 1 00:12:28.623: SB11: V111 Hello out 172.16.11.111 Speak pri 100 ip 172.16.11.115
*Mar 1 00:12:28.659: SB11: V111 Hello in 172.16.11.112 Active pri 50 ip 172.16.11.115
*Mar 1 00:12:28.659: SB11: V111 Speak: h/Hello rcvd from lower pri Active router (50/172.16.11.112)
*Mar 1 00:12:31.539: SB11: V111 Hello in 172.16.11.112 Active pri 50 ip 172.16.11.115
*Mar 1 00:12:31.539: SB11: V111 Speak: h/Hello rcvd from lower pri Active router (50/172.16.11.112)
*Mar 1 00:12:31.575: SB11: V111 Hello out 172.16.11.111 Speak pri 100 ip 172.16.11.115
*Mar 1 00:12:34.491: SB11: V111 Hello in 172.16.11.112 Active pri 50 ip 172.16.11.115
```

- A. The preempt feature is not enabled on the 172.16.11.111 router.
- B. The nonpreempt feature is enabled on the 172.16.11.112 router.
- C. Router 172.16.11.111 will be the active router because its HSRP priority is preferred over router 172.16.11.112.
- D. Router 172.16.11.112 will be the active router because its HSRP priority is preferred over router 172.16.11.111.
- E. The IP address 172.16.11.111 is the virtual HSRP router IP address.

F. The IP address 172.16.11.112 is the virtual HSRP router IP address.

Answer: A

30. Given the following 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 port will shut down.
- B. The host will be allowed to connect.
- C. The host will be refused access.
- D. The host can only connect through a hub/switch where 0002.0002.0002 is already connected.

Answer: B



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