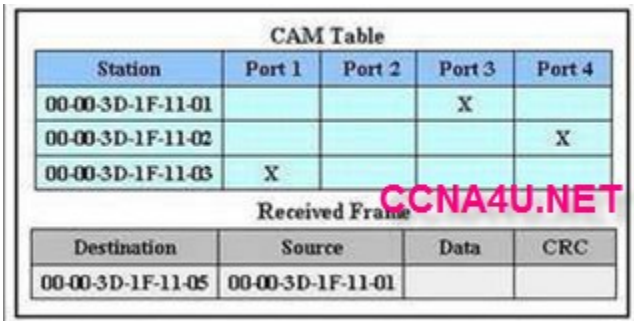
CCNA 3 FINAL – Version 4.0 – Updated April 07 2009

Welcome CCNA4U.NET and get lastest version CCNA Exploration 4.0
Email: quocvuong@ccna4u.net

www.ccna4u.net
www.ccna4u.tk
www.ccna4u.info

1. **Refer to the exhibit. An administrator documented the output of a CAM table from an Ethernet switch as shown. What action will the switch take when it receives the frame shown at the bottom of the exhibit?**



discard the frame
forward the frame out port 2
forward the frame out port 3
forward the frame out all ports
forward the frame out all ports except port 3
add station 00-00-3D-1F-11-05 to port 2 in the forwarding table

2. **Refer to the exhibit. What does the term DYNAMIC indicate in the output that is shown?**

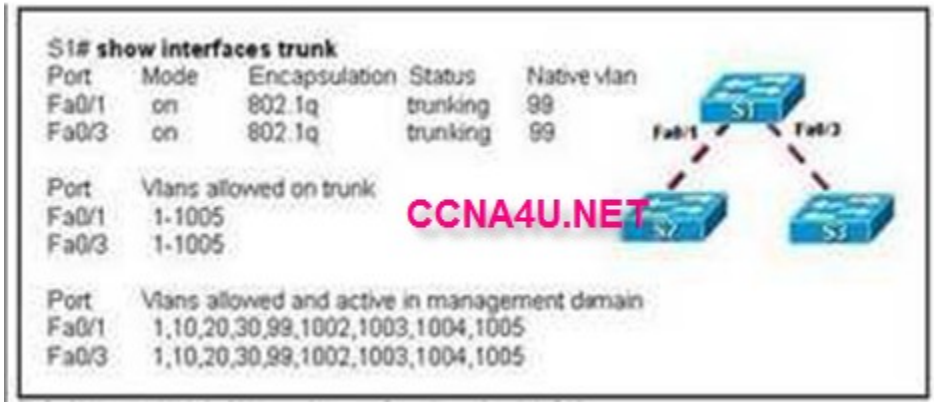
```
ST-1# show mac-address-table
          Mac Address Table
------------------------------------------

Vlan    Mac Address       Type        Ports
----    -----------       --------    -----
   1    0060.3edd.19a3    STATIC      Fa0/24
  99    0060.5c5b.cd23    DYNAMIC     Fa0/18
Total Mac Addresses for this criterion: 2

ST-1#
```


This entry can only be removed from the MAC address table by a network administrator.
When forwarding a frame to the device with address 0060.5c5b.cd23,the switch does not have to perform a lookup to determine
Only the device with MAC address 0060.5c5b.cd23 will be allowed to connect to port Fa0/18
The switch learned this MAC address from the source address in a frame received on Fa0/18

3. **A new switch is to be added to an existing network in a remote office. The network administrator does not want the technicians in the remote office to be able to add new VLANs to the switch,but the switch should receive VLAN updates from the VTP domain. Which two steps must be performed to configure VTP on the new switch to meet these conditions?(Choose two.)**

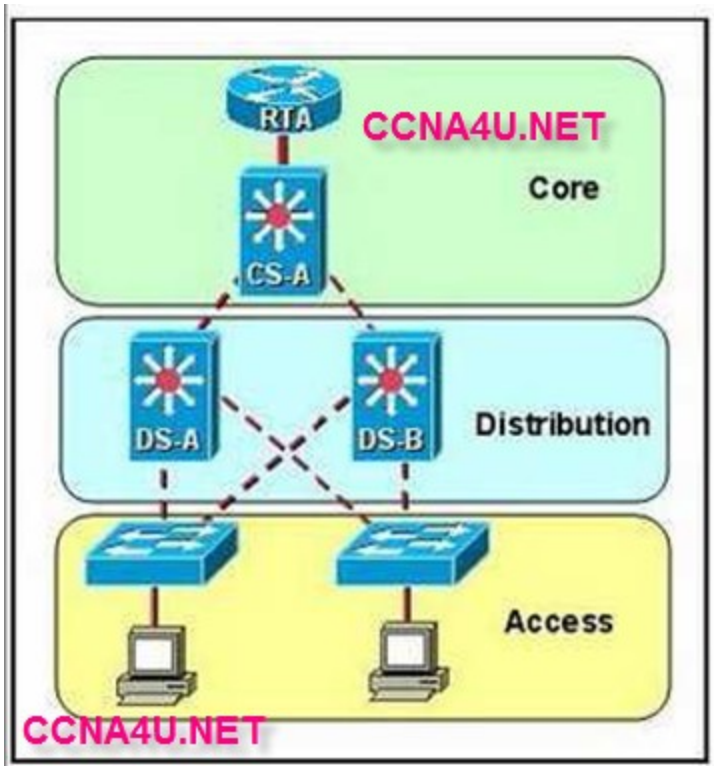
Configure an IP address on the new switch
Configure the existing VTP domain on the new switch
Configure all ports of both switches to access mode
Configure the new switch as a VTP client
Enable VTP pruning

4. **Refer to the exhibit. What is true of the configuration of switch S1?**



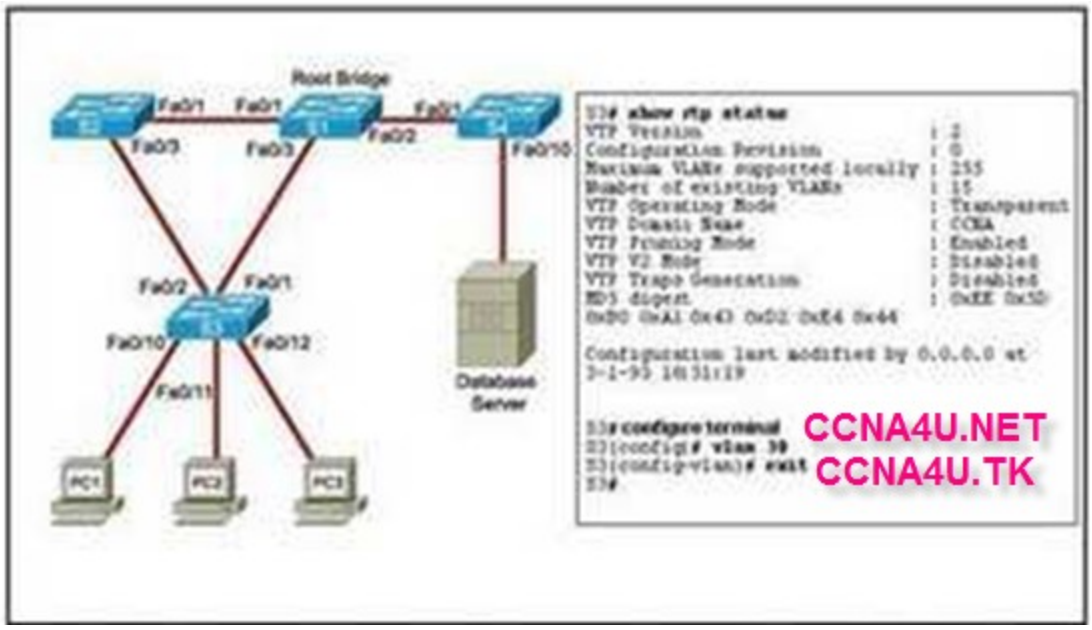
A Cisco proprietary protocol is in use for ports Fa0/1 and Fa0/3
Switch ports Fa0/1 and Fa0/3 have been configured with the switchport mode access command
Untagged frames received on ports Fa0/1 and Fa0/3 will be placed on VLAN 1
Switch ports Fa0/1 and Fa0/3 are configured to carry data from multiple VLANs

5. **Refer to the exhibit. On which of the devices in this network should routing between VLANs take place?**



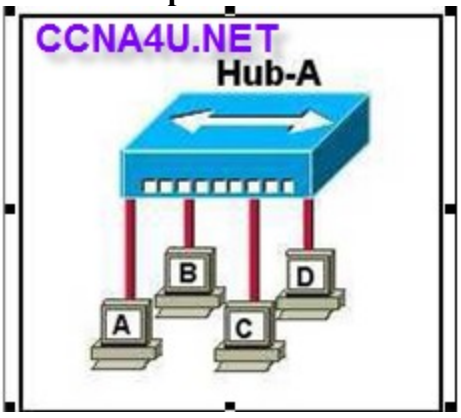
the core layer devices
the access layer devices
the distribution layer devices
the core and distribution layer devices

6. **Refer to the exhibit. A network administrator enters the displayed commands to configure VLAN 30. What is the result of running these commands?**



VLAN 30 will be added to S1,S2,and S3,but not to S4
VLAN 30 will be pruned from the VLAN database of S3
VLAN 30 will be added to the VLAN database of S3 but will not be propagated to S4,S2 or S1
VLAN 30 will not be added to the VLAN database of S3 and an error message will be displayed

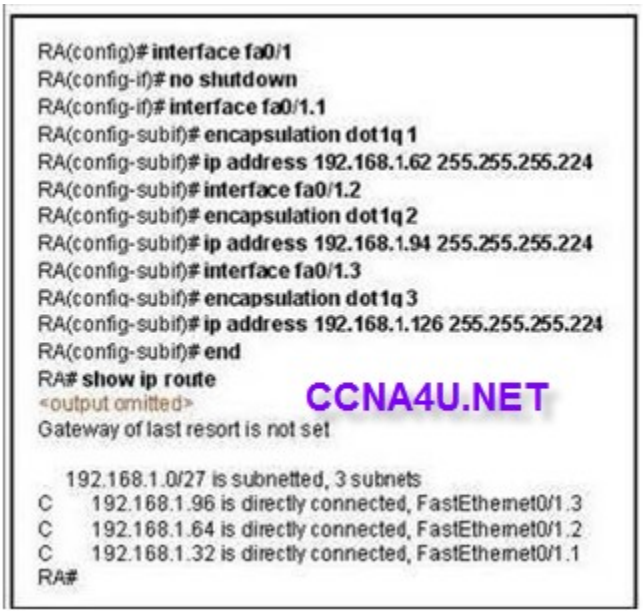
7. **After listening for the presence of a signal on the network media, host A and C transmit data at the same time. In what two ways do the hosts respond to this situation?(Choose two)**



The hosts transmit a jam signal to ensure that all hosts on the network are aware that a collision has occured
Because they are operating in full-duplex mode, the hosts resume listening for traffic in

preparation for sending future messages
Because the hub will temporarily block traffic from one of the hosts, that host will be allowed to transmit once the wire is clear
Hosts A and C are assigned shorter backoff values to provide them priority to access the media for retransmission
After the backoff eriod of a host, the host checks to determine if the line is idle before retransmitting

8. **Refer to the exhibit.Router RA receives a packet with a source address of 192.168.1.65 and destination address of 192.168.1.161.**
What will the router do with this packet?

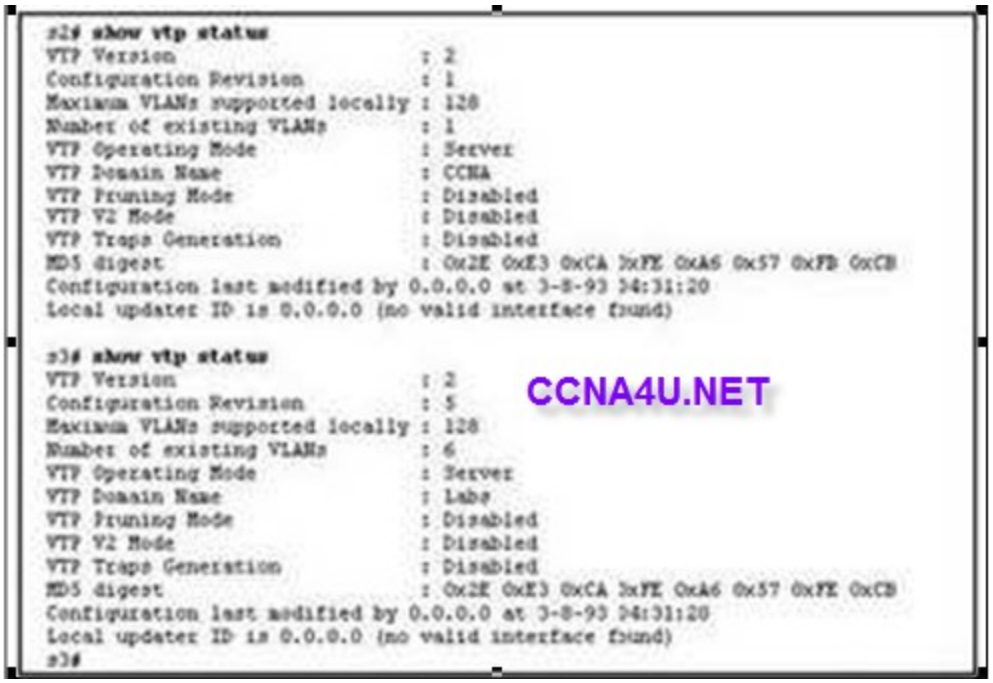


The router will drop the packet
The router will forward the packet out interface FastEthernet 0/1.1
The router will forward the packet out interface FastEthernet 0/1.2
The router will forward the packet out interface FastEthernet 0/1.3
The router will forward the packet out interface FastEthernet 0/1.2 and interface FastEthernet 0/1.3

9. **Which statement regarding the service password-encryption command is true?**

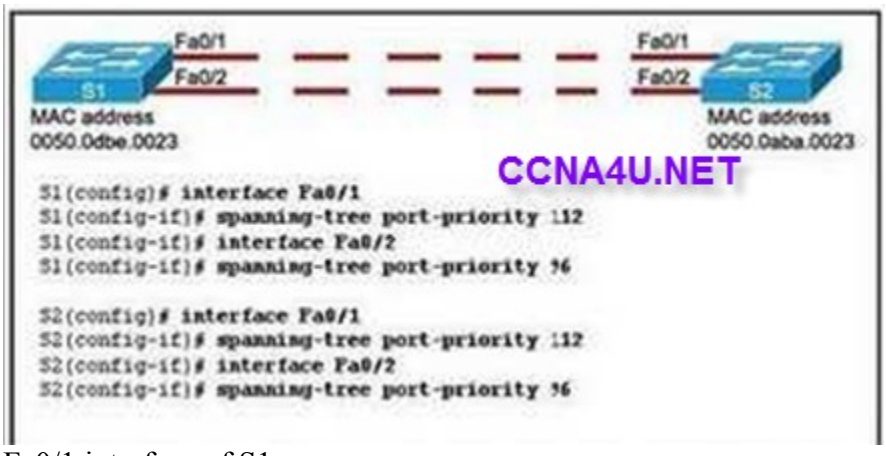
The service password-encryption command is entered at the privileged EXEC mode prompt
The service password-encryption command encrypts only passwords for the console and VTY ports
The service password-encryption command encrypts all previously unencrypted passwords in the running configuration
To see the passwords encrypted by the service password-encryption command, enter the no service password-encryption command

10. **Refer to the exhibit. Switches S2 and S3 are properly connected using an ethernet cable. A network administrator has configured both switches with VTP, but S3 is unable to propagate VLANs to S2. What could be the reason for this?**



The VTP configuration revision is different on both switches
The VTP domains are different on both switches
VTP pruning is disabled
VTP v2 is disabled

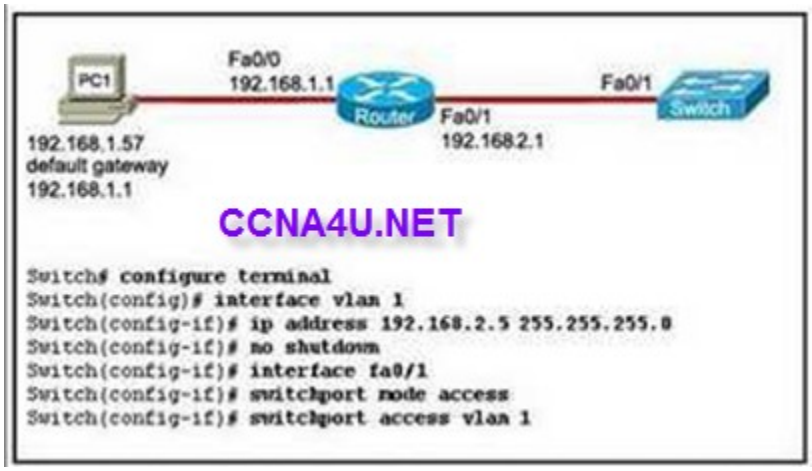
11. **Refer to the exhibit.Both switches are configured with default bridge priority. Which port will act as STP root port if all links are operating at the same bandwidth?**



Fa0/1 interface of S1
Fa0/2 interface of S1

Fa0/1 interface of S2
Fa0/2 interface of S2

12. **Refer to the exhibit. The switch VTY lines have been properly configured, but PC1 is unable to remotely manage the switch. How can this problem be resolved?**



Configure the Fa0/1 interface of the switch in trunk mode
Configure a default gateway on the switch
Configure the native VLAN on the switch
Configure the Fa0/1 interface of the switch to allow all VLANs

13. **What provides an authentication mechanism for 802.11-based wireless networks?**

DSSS
OFDM
SSID
WPA

14.**Refer to the exhibit. What three statements describe why Host1 and Host2 are unable to communicate?(Choose three)**

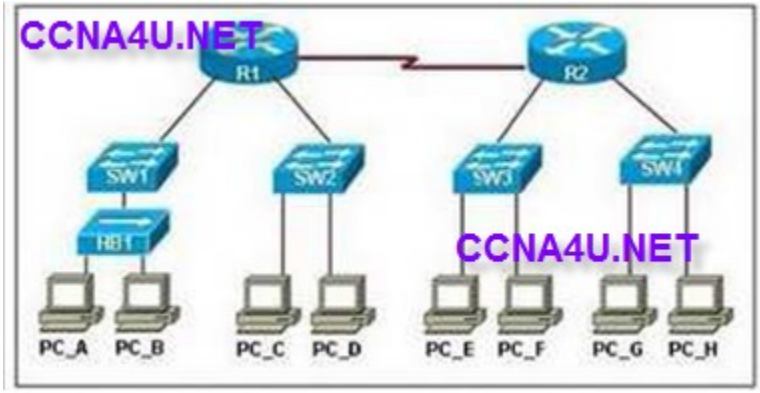
The switch ports are o different VLANs
The switch IP address is on the wrong subnet
The hosts are configured on different logical networks
A router is required to forward traffic between Host1 and Host2
The VLAN port assignments must be contiguous for each VLAN
The host default gateway addresses must be on the same logical network

15. **Refer to the exhibit. A new host needs to be connected to VLAN3. Which IP address should be assigned to this new host?**

```
RA(config)# interface fastethernet 0/1
RA(config-if)# no shutdown
RA(config-if)# interface fastethernet 0/1.1
RA(config-subif)# encapsulation dot1q 1
RA(config-subif)# ip address 192.168.1.17 255.255.255.240
RA(config-subif)# interface fastethernet 0/1.2
RA(config-subif)# encapsulation dot1q 2
RA(config-subif)# ip address 192.168.1.33 255.255.255.240
RA(config-subif)# interface fastethernet 0/1.3
RA(config-subif)# encapsulation dot1q 3
RA(config-subif)# ip address 192.168.1.49 255.255.255.240
RA(config-subif)# end
```

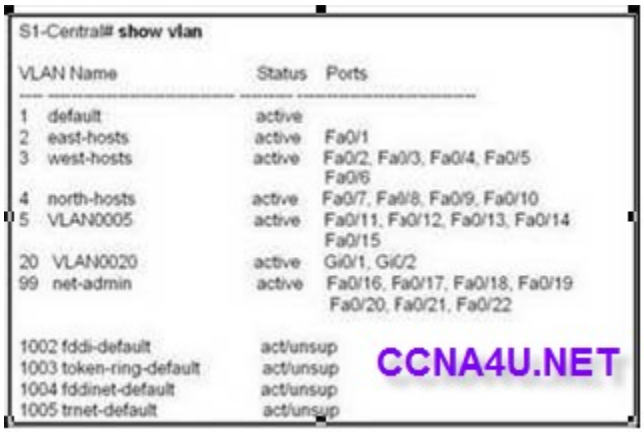

192.168.1.22/28
192.168.1.31/28
192.168.1.32/28
192.168.1.52/28
192.168.1.63/28

16. **Refer to the exhibit. Hosts PC_A and PC_B send traffic simultaneously, and the frames from the transmitting station collide. What is the last device to receive the collision?**



hub HB1
switch SW1
router R1
switch SW2
router R2
switch SW4

17. **Refer to the exhibit. The network administrator needs to remove the east-hosts VLAN and use the switch port from that VLAN in one of the existing VLANs. Which two sets of commands should be used when completely removing VLAN 2 from S1-Central ehile leaving the switch and all its interfaces operational?(Choose two)**



S1-Central>enable
S1-Central#reload

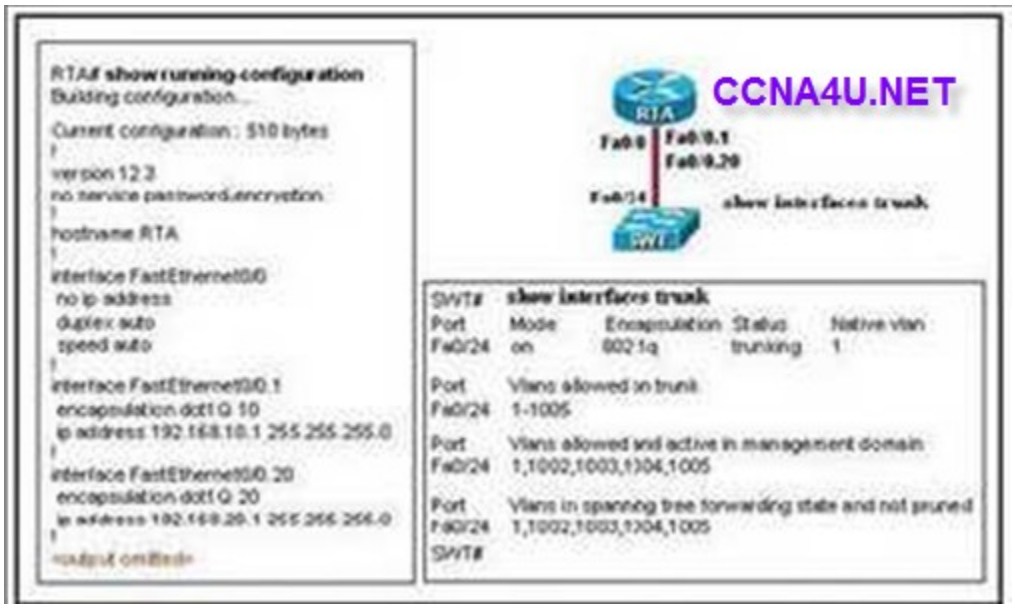
S1-Central>enable
S1-Central#erase flash:

S1-Central>enable
S1-Central#delete flash:vlan.dat

S1-Central>enable
S1-Central#configure terminal
S1-Central(config)#no vlan 2

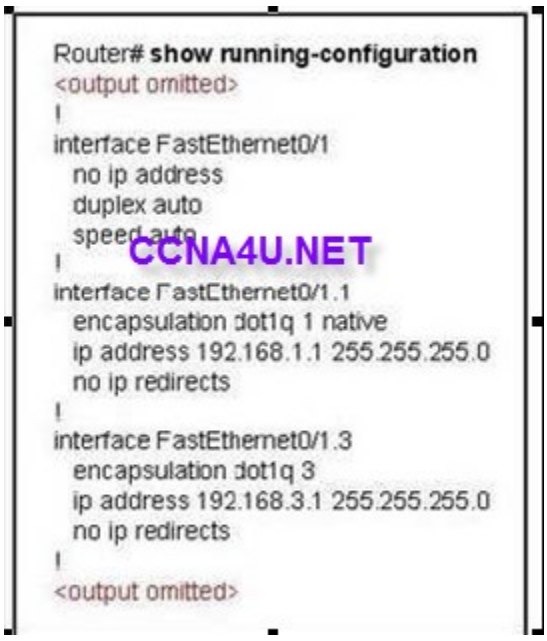
S1-Central>enable
S1-Central#configure terminal
S1-Central(config-if)#interface fastethernet 0/1
S1-Central(config-if)#switchport access vlan 3

18. **Refer to the exhibit. In what two ways will the router handle VLAN traffic that is received on the trunk?(Choose two)**



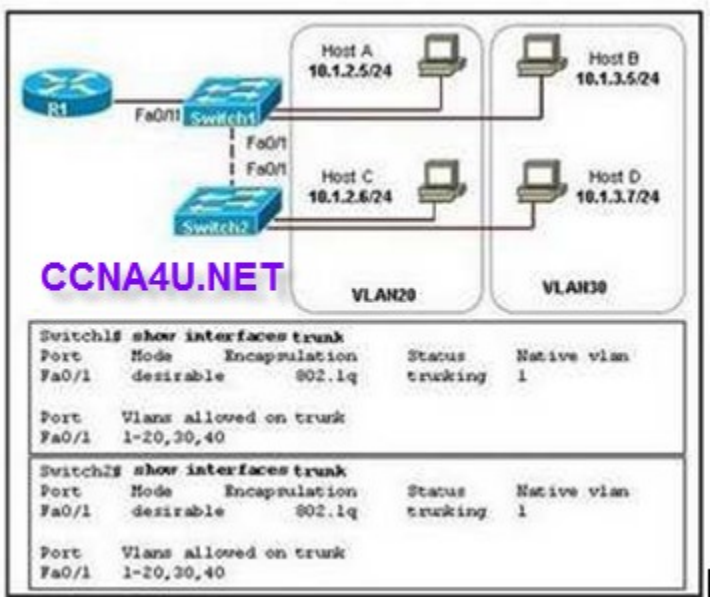
Traffic to VLAN 1 received by the router interface Fa0/0 will be dropped by the router
Because interface Fa0/0 requires an iP address, the router will not be able to route between the VLANs
Packets that are received from network 192.168.20.0/24 will be handled by subinterface Fa0/0.20
The router will use subinterface MAC addersses to identify the VLAN traffic that is received on the physical interface
The router will continue to process traffic from the attached VLANs even if the physical interface goes down

19. **Refer to the exhibit. Which two options correctly describe the router configuration that is shown?(Choose two)**



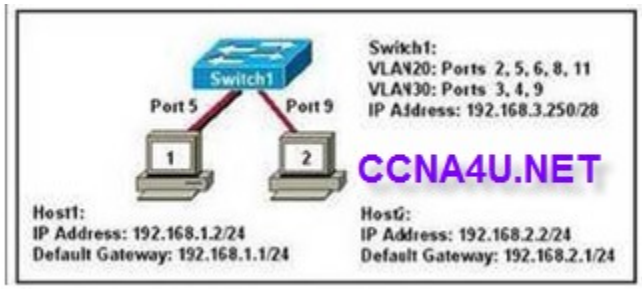
Routing between the 192.168.1.0 and 192.168.3.0 networks will not succeed until a routing protocol is configured on the router
VLANs have not been appropriately configured on the router subinterfaces
The configuration is appropriate for a router-on-a-stick network design
Trunking has been appropriately configured on the router subinterfaces
An IP address should be applied to interface Fa0/1 for routing to occur

20. **Refer to the exhibit. The devices in the network are operational and configured as indicated in the exhibit. However, hosts A and D cannot ping each other. What is the most likely cause of this problem?**



The link between the switches is up but not trunked
The Fa0/11 interface of Switch1 is not configured as a trunk
Hosts A and D are configured with IP addresses from different subnets
VLAN 20 and VLAN 30 are not allowed on the trunk between the switches

21. **Refer to the exhibit. What three statements describe why Host1 and Host2 are unable to communicate?(Choose three)**



The switch ports are is on different VLANs
The switch IP address is on the wrong subnet
The hosts are configured on different logical networks
A router is required to forward traffic between Host1 and Host2
The VLAN port assignments must be contiguous for each VLAN
The host default gateway addresses must be on the same logical network

22. **Which three statements are correct concerning the default configuration of a new switch?(Choose three)**

It is configured in VTP server mode
STP is automatically enabled
The first VTY line is automatically configured to allow remote connections
VLAN1 is configured with a management IP address
All switch ports are assigned to VLAN1
The enable password is configured as cisco

23. **When configuring a router to act as an SSH server, what should be configured before issuing the crypto key generate rsa command?**

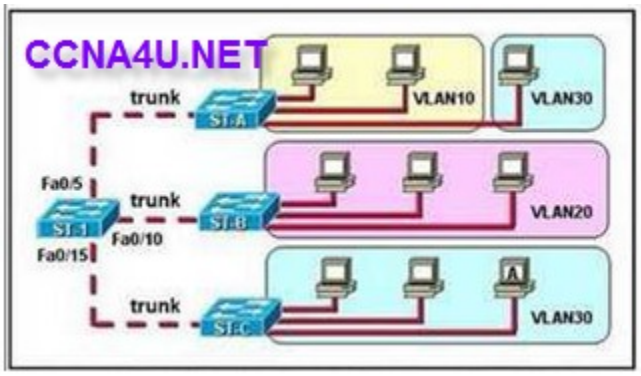
the security domain name
the VTP domain name
the IP domain name
the host name

24.**Refer to the exhibit. Which two facts about STP can be determined from the displayed output?(Choose two)**

```
S1# show spanning-tree
VLAN0001
  Spanning tree enabled protocol ieee
  Root ID     Priority    8192
              Address     000b.bfcf.b142
              Cost        7
              Port        21 (FastEthernet0/21)
              Hello Time   2 sec  Max Age 20 sec  Forward Delay 15 sec

  Bridge ID   Priority    8192  (priority 32768 sys-id-ext 2)
              Address     0013.1a66.6800
              Hello Time   2 sec  Max Age 20 sec  Forward Delay 15 sec
              Aging Time 300

Interface        Role Sts Cost      Prio.Nbr  Type
---------------- ---- --- --------- --------  --------------------------------
Fa0/21           Root FWD 4         128.21    P2p
Fa0/22           Altn BLK 4         128.22    Shr
Fa0/23           Desg FWD 4         128.23    P2p
Fa0/24           Desg FWD 4         128.24    P2p

<output omitted>
```

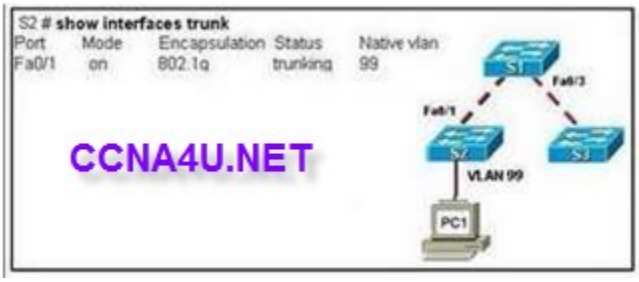

Switch S1 has the lowest configured STP priority in the network
Switch S1 is configured as the root bridge for VLAN1
Fa0/21 is the root port of switch S1
Fa0/22 is the redundant link
Fa0/24 is considered the best path to the root bridge

25. **Refer to the exhibit. VTP pruning is enabled in the VTP domain that is shown. How will switch ST-1 handle Layer 2 broadcast traffic originating from host A on switch ST-C?**



It will be dropped
It will be forwarded out port Fa0/5 only
It will be forwarded out ports Fa0/5 and Fa0/10
It will be forwarded out ports Fa0/5, Fa0/10, and Fa0/15

26. **Refer to the exhibit. How will switch S2 manage traffic coming from host PC1?**

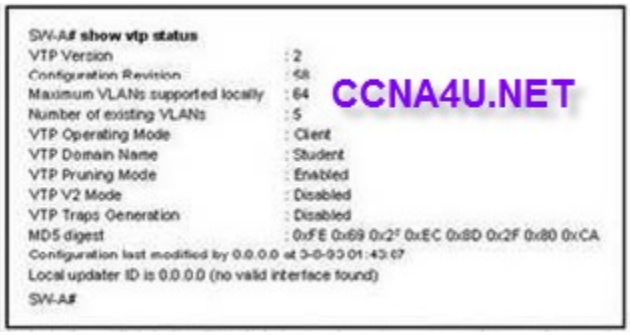


S2 will drop the traffic, unless it is management traffic
S2 will tag the frame with VLAN ID 99 when it forwards it over the trunk link
S2 will leave the traffic untagged when it forwards it over a trunk link
S2 will tag the traffic with the highest VLAN ID value when it forwards it over the trunk link

27. **Which two statements are corect about wireless infrastructure components?(Choose two)**

An AP converts the TCP/IP data packets from their 802.11 frame encapsulation format to the 802.3 Ethernet frame format on the
wired Ethernet network
A wireless AP does not require any physical connection to allow wireless clients to access the Internet
An AP is a layer 2 device, similar to a switch, that provides dediated bandwidth to each connected wireless host
Collisions do not occur between wireless NICs and APs
The wireless router performs the roles of AP and router

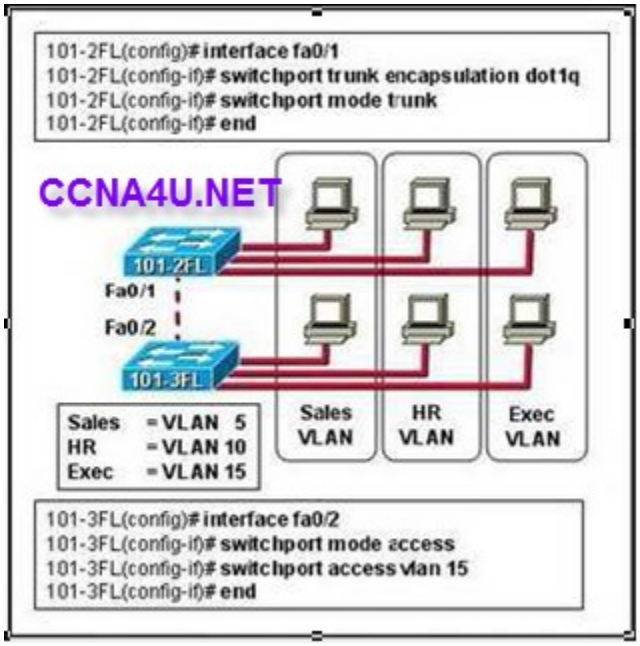
28. **Refer to the exhibit. Switch SW-A is to be used as temporary replacement for another switch in the VTP Student domain. What two pieces of information are indicated from the exhibited output?(Choose two)**



The other switches in the domain can be running either VTP versin 1 or 2
There is a risk that the switch may cause incorrect VLAN information to be sent through the domain
VTP will block frame forwarding on at least one redundant trunk port that is configured on this switch
VLAN configuration changes made on this switch will be sent to other devices in the

VTP domain
This switch will update its VLAN configuration when VLAN changes are made on a VTP server in the same domain

29. **Refer to the exhibit. The switches have been configured as shown. The hosts that are connected to switch 101-2FL are not able to communicate with the hosts in their corresponding VLANs that are connected to switch 101-3FL. What should be done to fix the problem?**



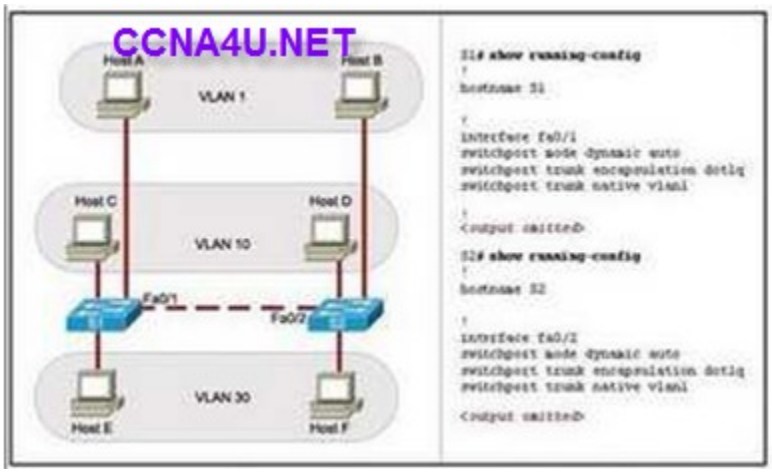
Configure port Fa0/2 on switch 101-3FL as a static trunk link
Introduce a Layer 3 device or a switch with Layer 3 capability into the topology
Utilize the switchport trunk allowed vlan all command on switch 101-3FL to permit the VLAN traffic
Apply IP addresses that are in the same subnet to the interfaces that are used to connect switches 101-2FL and 101-3FL

30. **What are three benefits of employing a hierarchical network design?(choose three)**

Hierarchically designed networks can more easily be expanded to suit future needs
Hierarchical design models enhance existing bandwidth through the use of link aggregation
The hierarchical model allows for specialized functionality at each layer, simplifying device management
Use of a hierarchical design allows replacement of redundant devices with high-capacity network equipment
A hierarchical design uses firewalls instead of complicated port-based and distribution layer security policies
The hierarchical model allows the use of high-performance switches at all design layers,

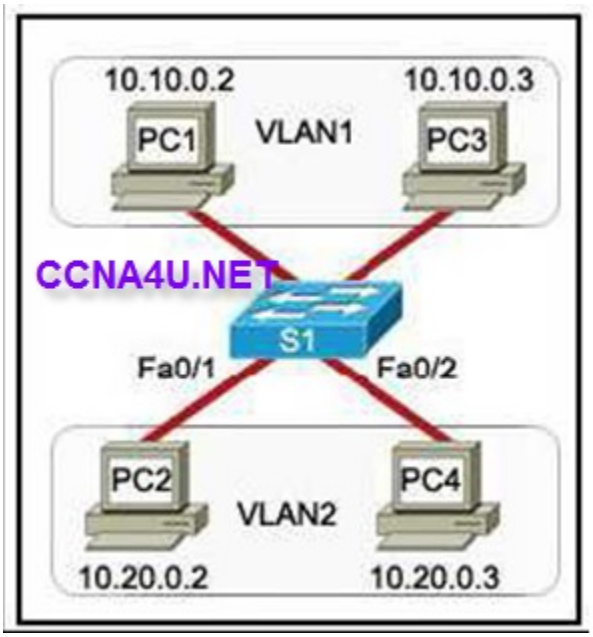
thus allowing for fully-meshed topology

31. **Refer to the exhibit. The network administrator configures both switches as displayed. Howerer, host C is unable to ping host D and host E is unable to ping host F. What ation should the administrator take to enable this communication?**



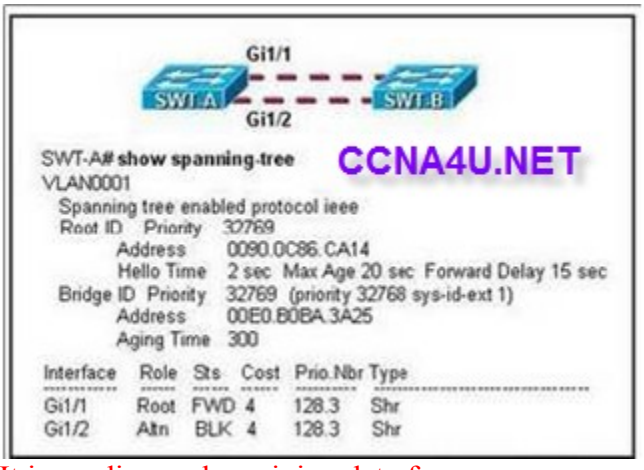
Include a router in the topology
Associate hosts A and B with VLAN 10 instead of VLAN 1
Remote the native VLAN from the trunk
Configure one trunk port in the dynamic desirable mode
Add the switchport nonegotiate command to the configuration of S2

32. **Refer to the exhibit. A network administrator has segmented the network into two VLANs. The connected hosts can only access resources in their own VLAN. What th most scalable and cost effective solution to allow inter-VLAN communication in this network?**



Replace S1 with a router that has one FastEthernet interface for each PC
Add a second switch and divide the PCs so that each VLAN is connected to is own switch
Configure a router with two subinterfaces on one of its FastEthernet ports and connect it to S1 using a trunk link
Connect a router to a port on S1 and assign the IP address of VLAN1 to the connecting router interface

33. **Refer to the exhibit. How is port Gi1/1 on SwT-A functioning in the spanning-tree topology?**

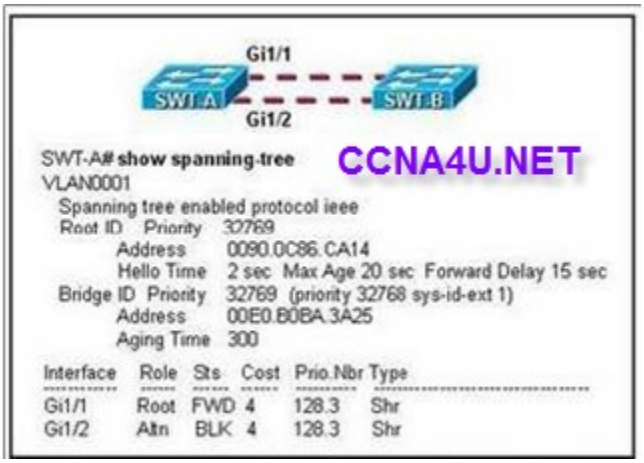


It is sending and receiving data frames
It is receiving BPDUs, but not sending data frames
It is participating in the election process by forwarding the BPDUs it receives
It is receiving BPDUs and populating the MAC address table, but not sending data

34. **What are two requirements for configuring inter-VLAN routing using the router-on-a-stick model?(Choose two)**

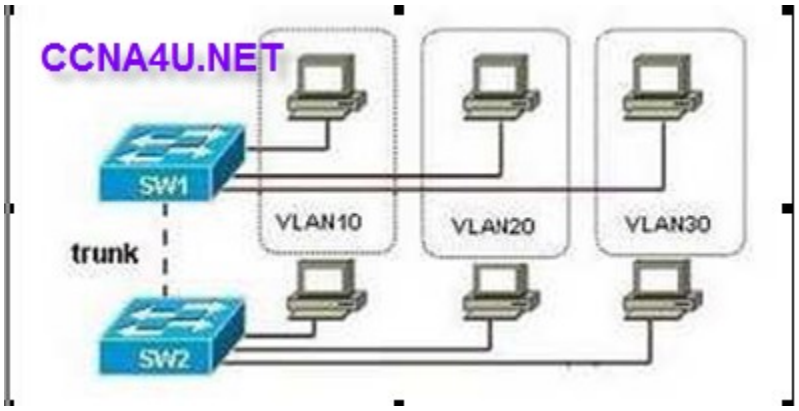
Each subinterface should be configured with its own Ip address, subnet mask, and unique VLAN assignment
The physical interface of the router must be connected to a trunk link on the adjacent switch
The number of physical interfaces on the router should match the number of VLANs
Different static VLANs should be assigned to different interfaces of the router
The router should be configured as the VTP server

35. **Refer to the exhibit. Sw-T has been configured with a single trunking interface. Which VLANs will be allowed across the trunk?**



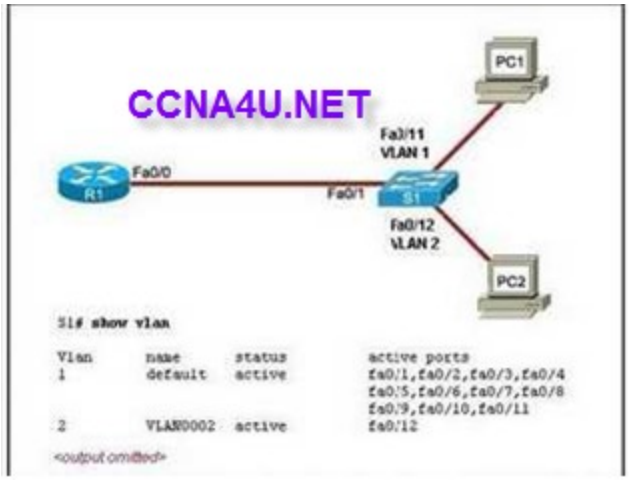
Only VLAN 1 will be allowed across the trunk
All configured VLANs will be allowed across the trunk
Only the native VLAN wil be allowed across the trunk
Only the the management and native VLANs will be allowed across the trunk
Only VLANs that are configured on the VTP server in the domain will be allowed across the trunk

36. **Refer to the exhibit. Switch SW2 has been newly urchased and added to the network. What configuration should be applied to SW2**
so that it participates in the same VTP domain as switch SW1, receives VLAN information from SW1, and synchronizes VLAN information?



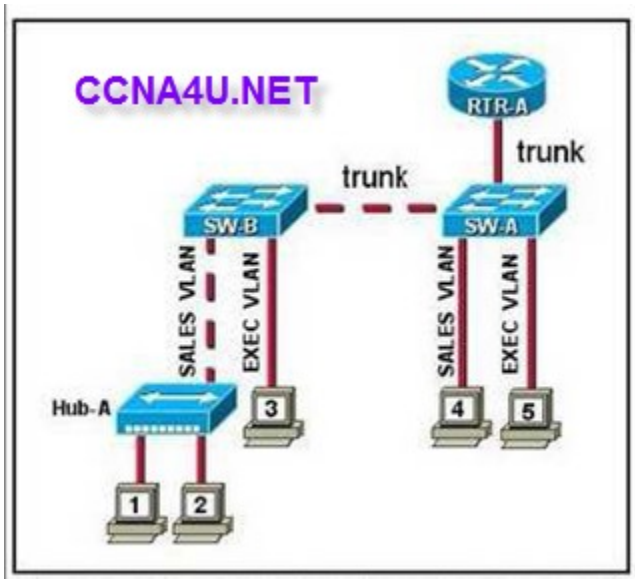
Disable VTP pruning on SW2
Configure SW2 in VTP transparent mode
Configure SW2 with the VTP domain password
Configure SW2 as a VTP server with a higher revision number

37. **Refer to the exhibit. Router R1 is properly configured for router on a stick inter-VLAN routing, but PC1 is unable to ping PC2. What needs to be one to resolve the problem?**



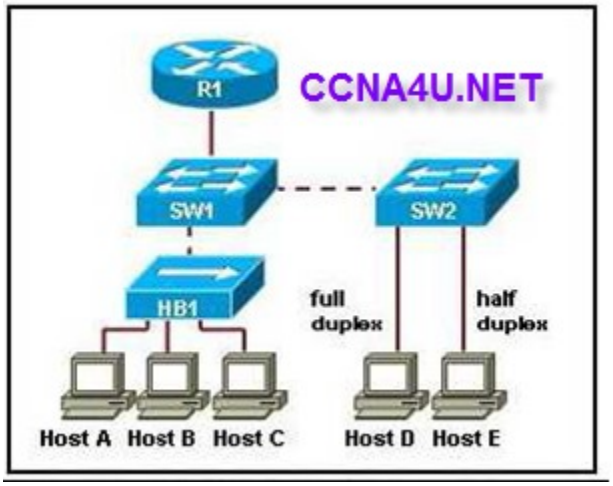
Rename VLAN1
Connect one more port of S1 to R1
Configure the Fa0/1 port of S1 as trunk port
Move the Fa0/0 interface of R1 to another VLAN

38. **Refer to the exhibit. All trunk links are operational and all VLANs are allowed on all trunk links. An ARP request it sent by computer 5.**
Which device or devices will receive this message?



only computer 4
computer 3 and RTR-A
computer 4 and RTR-A
computer 1, computer 2, computer 4, and RTR-A
computer 1, computer 2, computer 3, computer 4, and RTR-A
all of the computers and the router

39. **Refer to the exhibit. Hosts A and B attempt to transmit a frame at the same time and a collision occurs. When will host D be able to transmit?**



immediately
after sending its jam signal
after host A and host B have comleted transmission
after the jam signal clears and its backoff delay expires

40. **Refer to the exhibit. The network administrator wants to configure Switch1 to**

allow SSH connections and prohibit Telnet connections.
How should the network administrator change the displayed confoguration to satisfy the requirement?

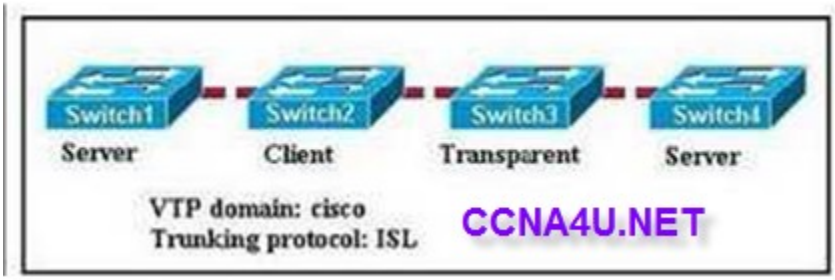
```
Switch1(config)# ip ssh version 2
Switch1(config)# ip domain-name cisco.com
Switch1(config)# crypto key generate rsa
Switch1(config)# line vty 0-15
Switch1(config-line)# transport input all
```

Use SSH version 1
Reconfigure the RSA key
Configure SSH on a different line
Modify the transport input command

41. **Refer to the exhibit. What is the effect of setting the security mode to WEP on the Linksys integrated router?**

WEP identifies the wireless LAN
WEP allows the access point to inform clients to its presence
WEP translates IP addresses into easy-to-remember domain names
WEP encrypt data between the wireless client and the access point
WEP ensures that only authenticated users are allowed acces to the WLAN
WEP translates an internal address or group of addresses into an outside, public address

42. **Refer to the exhibit. The switches are configured for VTP as shown. Which two statements correctly describe the operation of these switches?(Choose two)**



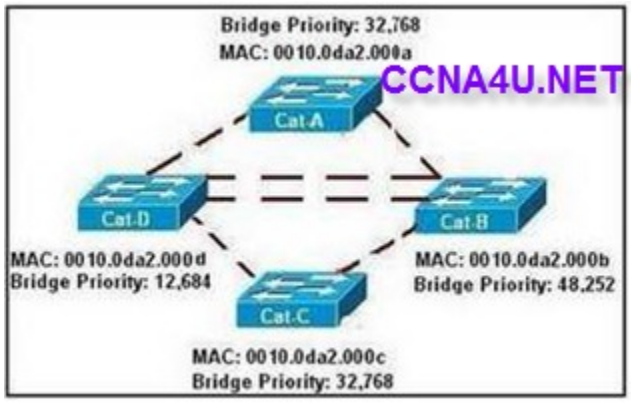
A new VLAN can be added to Switch1 and that information will be added only to Switch2
A new VLAN can be added to Switch1 and that information will be added to Switch2 and Switch4
An existing VLAN can be deleted from Switch4 and that VLAN will be deleted from

Switch1 and Switch2
An existing VLAN can be deleted from Switch2 and that VLAN will be deleted from Switch1 and Switch4
A new VLAN can be added to Switch4 and that information will be added to Switch1, Switch2, Switch3
A new VLAN can be added to Switch3 and that information will be added to Switch1, Switch2, Switch4

43. **After unpacking a new Linksys WRT300N wireless multifunction device, a user needs to change the default administrator password**
and make other configuration changes. What must the user doto access the device in order to make these changes?

Use a wireless client to associate with the WRT300N and then open a HyperTerminal sssion with the device
Establish a wired connection with the device and then reboot the attached computer to launch the configuration software
Establish a wired connection from a computer in the same IP subnet as the WRT300N and enter the default IP address of the
device into a web browser on the computer
Modify the TCP/IP properties of the computer that is connected to the WRT300N so that the computer and the WRT300N exist on
the same network. Then reboot computer to establish a connection

44. **Refer to the exhibit. Which switch will be elected as the root bridge of the spanning tree topology**?



Cat-A
Cat-B
Cat-C
Cat-D

45. Which statements correctly describes the function of a Layer 2 switch?

It performs switching and filtering based on the destination network layer address
It automatically uses STP to prevent switching loops in redundant topologies

It uses VTP to allow data from multiple VLANs to travel across a single link
It routes packets between different LAN segments

46. Which two statements describe Spanning Tree Protocol?(Choose two)

It only used at Layer 2
It is configured on routers
It eliminates Layer 2 loops in network topologies
It limits the number of valid MAC addresses allowed on a port
It allows VLAN information to propagate to other switches in the network

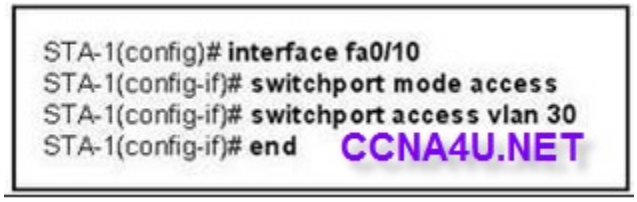
47. Which statement correctly describes the spanning-tree path cost?

It is calculated based on the total number of switches connected in a loop
It is calculated based on the utilization of all the switches along a given path
It is calculated based on the bridge priority of the switches along a given path
It is calculated based on the sum of the port cost value, determited by link speed, for each switch port along a given path

48. What is the purpose of VLAN trunking?

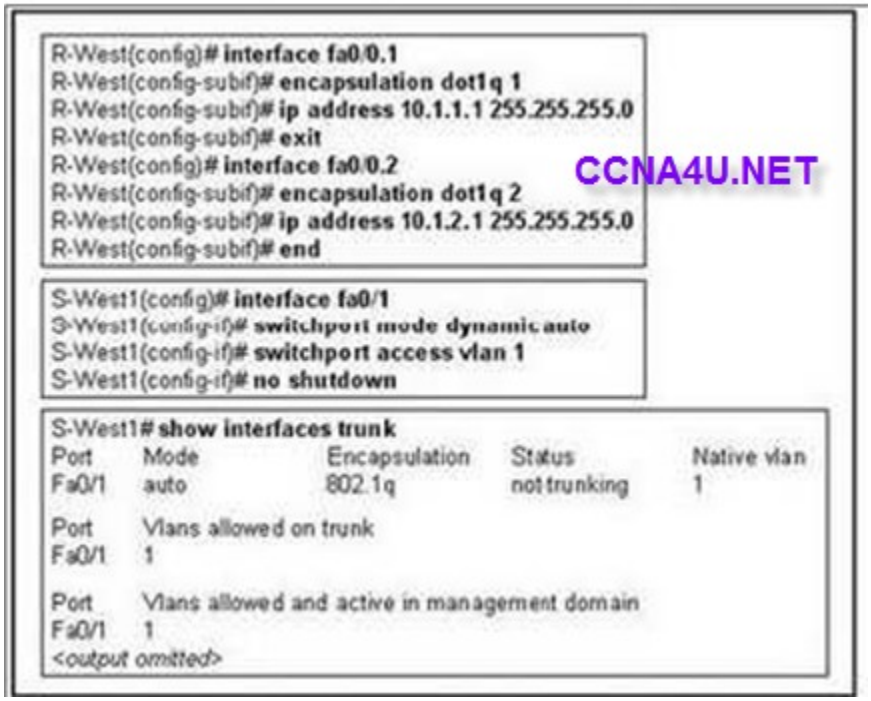
It improves network performance by reducing broadcast traffic
It select the best path to transmit data in a switched network
It carries the traffic of multiple VLANs through a single link
It avoids spanning tree loops in a switched network

49. Refer to the exhibit. What is the purpose of the configuration commands that are shown?



to activate port Fa0/10
to make the port a member of VLAN 30
to activate port security on port Fa0/10
to add VLAN 30 to the trunk that is connected to port Fa0/10

50. **Refer to the exhibit. Router R-West and switch S-West1 are connected via a single ethernet cable between the router interface fa0/0 and the switch interface fa0/1. The router and switch have been configured with the commands that are displayed in the exhibit. The network administrator enters the show interfaces trunk command and receives the output as shown. What is the cause of the "not-trunking" status for switch port Fa0/1?**



The trunk is established, but no VLANs have been configured to use it

The router is missing the dynamic trunking protocol statements necessary to form a trunk

Because the router does not support Dynamic Trunking Protocol, the trunk has not been established

The router, the switch, or both must be configured with the dynamic desirable option for Dynamic Trunking Protocol to establish a trunk