Part 7

QUESTION 601
WAN data link encapsulation types include which of the following? Choose two

A. T1
B. Frame Relay
C. DSL
D. PPP
E. ISDN

Answer: B, D
Frame relay and PPP is used with WAN encapsulation.
Frame Relay most closely compares to the OSI data link layer (Layer 2). If you remember that the word "frame" describes the data link layer protocol data unit (PDU), it will be easy to remember that Frame Relay relates to OSI Layer 2. Like other data-link protocols, Frame Relay can be used to deliver packets (Layer 3 PDUs) between routers.

QUESTION 602
What is the purpose of Inverse ARP?

A. To ma a known IP address to a MAC address
B. To map a known DLCI to a MAC address
C. To ma a known MAC address to an IP address
D. To ma a known DLCI address to a IP address
E. To ma a known IP address to a SPID address
F. To ma a known SPID address to a MAC address

Answer: D
Just as ARP resolves IP addresses to MAC addresses, Inverse ARP maps a known DLCI to an IP address.
Note: Do not mix up inverse ARP and reverse ARP. There is a Reverse ARP (RARP) for host machines that don't know their IP address. RARP enables them to request their IP address from the gateway's ARP cache.

QUESTION 603
Which WAN protocol is used for out-of-band signaling?

A. NCP
B. HDLC
C. LAPB
D. LAPD

Answer: D

Explanation:

The D channel remains up all the time so that new signaling messages can be sent and received. Because the signals are sent outside the channel used for data, this is calles outof-band signaling. LAPD protocol manages D channel.
Reference: Cisco CCNA ICND 640-811 p.330

QUESTION 604
Which ISDN device converts the four-wire BRI signals from an S/T interface into the two-wire signals of a U interface?

A. TE1
B. NT-2
C. TA
D. TE2
E. NT-1

Answer: E

Explanation:
When using a router BRI card with an S/T reference point, the router must be cabled to an external NT1, which in turn is plugged into the line from the telco (the U interface)
Reference: Cisco CCNA ICND p.331

QUESTION 605
Which statements are true regarding ISDN channels? Select three

A. Each B channel can transmit up to 64 kbps
B. The ISDN B channel carries voice or data
C. the ISDN B channel transmits control information.
D. The D channel transmission rate varies depending on the service used.
E. HDLC or PPP can be used to encapsulate D channel information.

Answer: A, B, C

QUESTION 606
You work as a network engineer at Certkiller .com. Certkiller users have noticed extremely slow network performance, intermittent connectivity, and loss of connection. After entering the show interfaces command, you notice that the Ethernet interface is configured as 100 Mbps full-duplex and that there is evidence of late collisions.
What could be the cause of this problem?

A. duplex mismatch
B. a routing loop
C. trunking mode mismatch
D. improperly configured root bridge
E. improperly configured static VLAN

Answer: A
This environment will produce collisions, so the Ethernet interface should be configured to use half duplex

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QUESTION 607
Exhibit

You work as a network administrator at Certkiller .com. You attempt to telnet from the console port on Router Certkiller 1 to 192.1.2.65. The Telnet connection is unsuccessful.
However, a ping to 192.1.2.65 is successful.
What could cause this problem? Select two.

A. PPP authentication configuration problem
B. IP address/subnet mask configuration error
C. access control list filtering
D. defective serial cable
E. no clock rate on interface s0 on Certkiller 2
F. missing VTY password

Answer: C, F

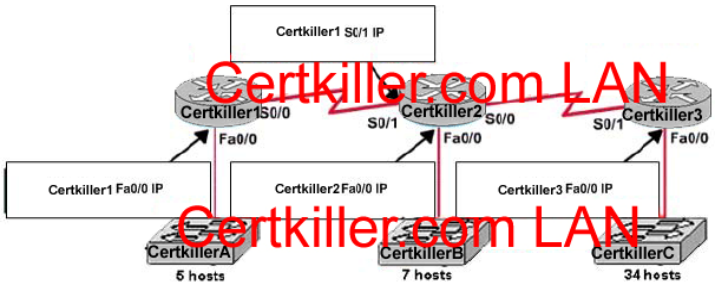
Explanation:
Since a ping to 192.1.2.65 is successful we can eliminate IP configuration been incorrect, however a telnet session is not successful that's because the vty password is not set or missing.
To be able to telnet to the router you need the set the telnet with line vty 0 4 command.
Also C is correct because an access list is emplaced on the router.

QUESTION 608
Which command displays EIGRP-related router activities as they occur?

A. Certkiller # show ip route *
B. Certkiller # debug eigrp route
C. Certkiller # debug ip eigrp
D. Certkiller # debug ip protocols eigrp
E. Certkiller # show ip route eigrp

Answer: C
The debug ip eigrp command helps you analyze the packets that are sent and received on an
interface. Because the debug ip eigrp command generates a substantial amount of output, only use it when traffic on the network is light.
Examples
The following is sample output from the debug ip eigrp command:
Certkiller # debug ip eigrp
IP-EIGRP: Processing incoming UPDATE packet
IP-EIGRP: Ext 192.168.3.0 255.255.255.0 M 386560 - 256000 130560 SM 360960 - 256000 104960
IP-EIGRP: Ext 192.168.0.0 255.255.255.0 M 386560 - 256000 130560 SM 360960 - 256000 104960
IP-EIGRP: Ext 192.168.3.0 255.255.255.0 M 386560 - 256000 130560 SM 360960 - 256000 104960
IP-EIGRP: 172.69.43.0 255.255.255.0, - do advertise out Ethernet0/1
IP-EIGRP: Ext 172.69.43.0 255.255.255.0 metric 371200 - 256000 115200
IP-EIGRP: 192.135.246.0 255.255.255.0, - do advertise out Ethernet0/1
IP-EIGRP: Ext 192.135.246.0 255.255.255.0 metric 46310656 - 45714176 596480
IP-EIGRP: 172.69.40.0 255.255.255.0, - do advertise out Ethernet0/1
IP-EIGRP: Ext 172.69.40.0 255.255.255.0 metric 2272256 - 1657856 614400
IP-EIGRP: 192.135.245.0 255.255.255.0, - do advertise out Ethernet0/1
IP-EIGRP: Ext 192.135.245.0 255.255.255.0 metric 40622080 - 40000000 622080
IP-EIGRP: 192.135.244.0 255.255.255.0, - do advertise out Ethernet0/1

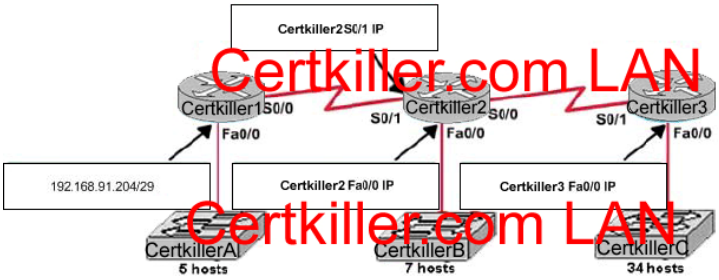
QUESTION 609
You work as a network engineer at Certkiller .com. Certkiller .com is redesigning the network that connects its three locations. You are give the 192.168.9.1 addressing to be used for the entire network. After the subnetting the address, you are ready to assign the addresses. You place to configure ip subnet-zero and use RIP v2 as the routing protocol. Now you must address the network and at the same time conserve unused addresses for future growth. You are required to place the host addresses to the correct interface. On of the routers is partially configured. You can view the configuration by placing the mouse over the router. Not all host addresses will be used.
Drag and Drop



Select from these

- 192.168.91.196/30
- 192.168.91.197/30
- 192.168.91.204/29
- 192.168.91.213/28
- 192.168.91.152/26
- 192.168.91.255/27

Answer:



Select from these

- 192.168.91.196/30
- 192.168.91.255/27

Explanation:
Reason for not selecting the other choices in drag and drop
192.168.91.196/30 = Network ID cannot be assigned to an interface
192.168.91.255/27 = Not a valid IP address as SNM = 255.255.255.224 (last octet >224)

QUESTION 610
When a new trunk link is configured on an IOS based switch, which VLANs are allowed over the link?

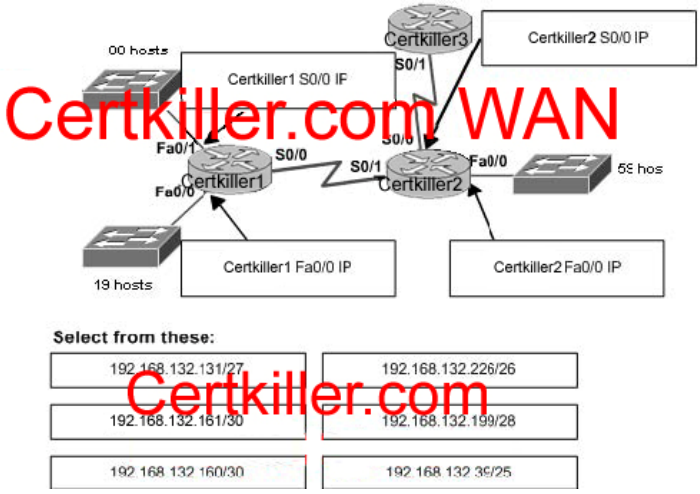
A. By default. all defined VLANs are allowed on the trunk by default.
B. Each VLAN, or VLAN range, that is specified with the switchport mode command.

C. Each VLAN, or VLAN range, that is specified with the vtp domain command.
D. Each VLAN, or VLAN range, that is specified with the vlan database command.

Answer: A

Explanation:
By default a trunk link carries all the VLANs that exist on the switch. This is because all VLANs are active on a trunk link; and as long as the VLAN is in the switch's local database, traffic for that VLAN is carried across the trunks. You can elect to selectively remove and add VLANs from a trunk link.

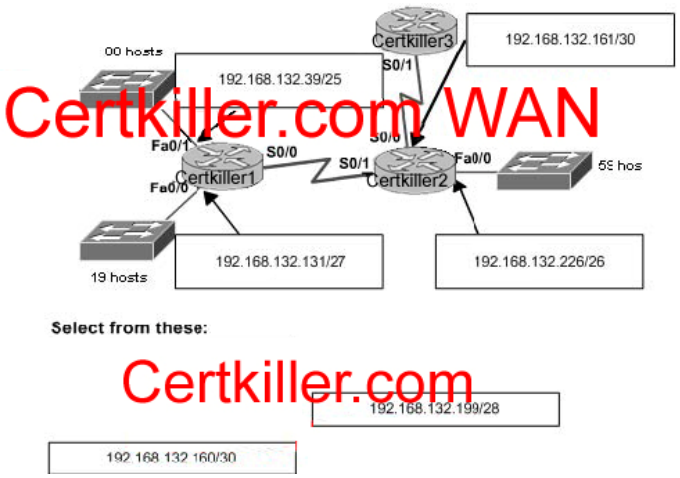
QUESTION 611
Certkiller has three locations and has plans to redesign the network accordingly. The networking team received 192.168.132.0 to use as the addressing for entire network from the administrator. After subnetting the address, the team is ready to assign the address.
The administrator plans to configure ip subnet-zero and use RIP v2 as the routing protocol. As a member of the networking team, you must address the network and at the same time converse unused addresses for future growth.
Being mindful of these goals, drag the host addresses on the left to the correct router interface. One of the routers is partially configured. Move the mouse over a router to view its configuration. Not all of the host addresses on the left will be used.



Select from these:

192.168.132.131/27	192.168.132.226/26
192.168.132.161/30	192.168.132.199/28
192.168.132.160/30	192.168.132.36/25

Answer:



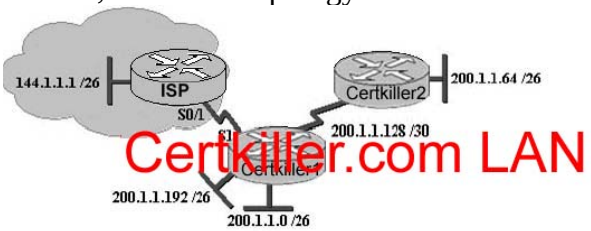
QUESTION 612
In network that support VLSM, which network mask should be used for point-topoint WAN links in order to reduce waste of IP addresses?

A. /24
B. /30
C. /27
D. /26
E. /32

Answer: B

Explanation:
A 30-bit mask is used to create subnets with two valid host addresses. This is the exact number needed for a point-to-point connection.

QUESTION 613
Exhibit, Network Topology



Exhibit, Certkiller 1 configuration

```
Gateway of last resort is 0.0.0.0 to network 0.0.0.0
     200.1.1.0/24 is variably subnetted, 5 subnets, 3 masks
C       200.1.1.192/26 is directly connected, Loopback0
C       200.1.1.128/30 is directly connected, Serial0
D       200.1.1.64/26 [90/2195456] via 200.1.1.130, 00:02:15, Serial0
D       200.1.1.0/24 is a summary, 00:00:41, Null0
C       200.1.1.0/26 is directly connected, Ethernet0
     200.1.2.0/30 is subnetted, 1 subnets
C       200.1.2.4 is directly connected, Serial1
S*   0.0.0.0/0 is directly connected, Serial1
Certkiller1#
```


You work as a network technician at Certkiller .com. Study the information displayed in the exhibits. Based on the output of the Certkiller 1#show ip route command and the information displayed in the network topology exhibit, which of the following is a potential routing problem?

A. The use of summarization for discontiguous networks
B. the use of CIDR with a routing protocol that does not support it
C. the use of VLSM with a routing protocol that does not support it
D. The use of the no auto-summary command with a protocol that does not support summarization
E. the use of the ip route 0.0.0.0 0.0.0.0 command with a routing protocol that does not support it

Answer: A

QUESTION 614
Exhibit, Network Topology

Exhibit, Configuration

```
Certkiller1#show frame-relay map
Serial3 (up): ip 172.31.31.126 dlci 205 (0xCD,0x30D0), static, broadcast,
        CISCO, status defined, active
Certkiller2#show frame-relay map
Serial3 (up): ip 172.31.31.126 dlci 605 (0x25D,0x94D0), static, broadcast,
        CISCO, status defined, active
Certkiller3#show frame-relay map
Serial3 (up): ip 172.31.31.62 dlci 509(0x1FD,0x7CD0), static, broadcast,
        CISCO, status deleted
Serial3 (up): ip 172.31.31.14 dlci 502(0x1F6,0x7C60), static, broadcast,
        CISCO, status defined, active
```


You work as network technician at Certkiller .com. The Certkiller .com Frame Relay network in the exhibit is not functioning OK.
What is the cause of the problem?

A. The Certkiller 1 router has the wrong LMI type configured.
B. Inverse ARP is providing the wrong PVC information to the Certkiller 1.
C. The S3 interface of the Certkiller 2 router has been configured with the

frame-relay encapsulation ietf command.
D. The frame-relay map statement in the Certkiller 3 router for the PVC to Certkiller 2 is not correct.
E. The IP address on the serial interface of the Certkiller 3 router is configured incorrectly.

Answer: D

QUESTION 615
Exhibit:

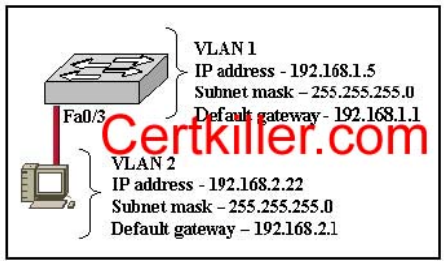
Refer to the exhibit. The network administrator wants to prevent computers on the 192.168.23.64/26 subnet from accessing the 192.168.23.128/26 subnet via FTP. All other hosts should be allowed to access. What commands should be entered on the router to accomplish this task?

A. Router(config)#access-list 101 deny tcp 192.168.23.64 0.0.0.63 192.168.23.128 0.0.063 eq ftp
Router(config)#access-list 101 permit ip any any
Router(config)#interface fa0/0
Router(config-if)#ip access-group 101 in
B. Router(config)#access-list 101 deny tcp 192.168.23.64 0.0.0255 192.168.23.128 0.0.0.255 eq ftp
Router(config)#access-list 101 permit ip any any
Router(config)#interface fa0/0
Router(config-if)#ip access-group 101 in
C. Router(config)#access-list 101 deny tcp 192.168.23.64 0.0.063 192.168.23.128 0.0.0.63 eq ftp
Router(config)#access-list 101 permit ip any any
Router(config)#interface fa0/0
Router(config-if)#access-list 101 out
D. Router(config)#access-list 101 deny tcp 192.168.23.64 0.0.0.255 192.168.23.128 0.0.0.255 eq ftp
Router(config)#access-list 101 permit ip any any
Router(config)#interface fa0/1
Router(config-if)#ip access-group 101 in
E. Router(config)#access-list 101 deny tcp 192.168.23.128 0.0.0.63 192.168.23.64 0.0.0.63 eq ftp
Router(config)#access-list 101 permit ip any any
Router(config)#interface fa0/1
Router(config-if)#ip access-group 101 in
F. Router(config)#access-list 101 deny tcp 192.168.23.128 0.0.0.255 192.168.23.128 0.0.0.255 eq ftp
Router(config)#access-list 101 permit ip any any

Router(config)#interface fa0/1
Router(config-if)#ip access-group 101 out

Answer: A

QUESTION 616
Exhibit:



Refer to the graphic. A host is connected to switch port Fa0/3 with a crossover cable. The host and switch have been fully configured for IP connectivity as shown. However, the port indicator on switch port Fa0/3 is not on, and the host can not communicate with any other hosts including those connected to VLAN 2 on the same switch. Based on the information given, what is the problem?

A. Switch port Fa0/3 is not configured as a trunk port.
B. The cable is the wrong type.
C. The switch has been assigned an incorrect subnet mask.
D. Switch port Fa0/3 has been blocked by STP.
E. The switch and the hosts must be in the same subnet.

Answer: B

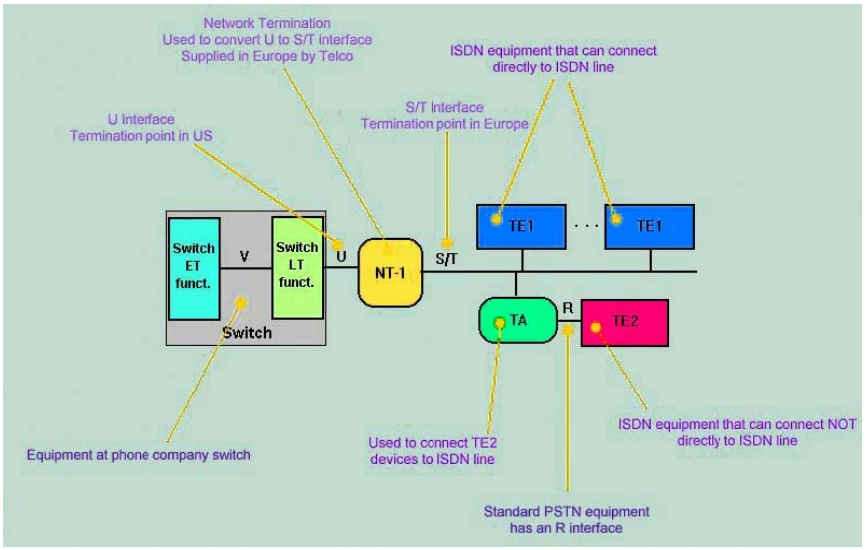
Explanation:
To connect two different devices, we use straight-through cables. In the scenario, a host is connected to a switch with a cross-over cable, so there will be no communication between them. Choice B is correct.

QUESTION 617
Which device enables a router serial interface to connect to the ISDN BRI?

A. NT2
B. NT1
C. TE
D. TA
E. TE1

Answer: D

Explanation:



TA: Terminal Adaptor. This lets old, TE2 stuff talk to the ISDN network. It also adapts other kinds of equipment, like ethernet interfaces , to ISDN.

QUESTION 618
Exhibit:

Refer to the exhibit. A small office with twenty-five employees has one connection to the Internet through the CK1 router. What routing configurations are recommended on the CK1 and ISP routers?

A. BGP on both the routers.
B. RIP on both the routers.
C. Default routes on both routers.
D. BGP on the ISP router and a static route on CK1 .
E. A default route on CK1 and a static route on the ISP router.

Answer: E

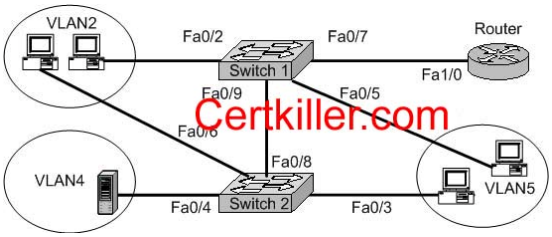
QUESTION 619
In which of the following scenarios would the show cdp neighbors detail command be an appropriate troubleshooting tool?

A. Two switches are connected via a trunk. Both switches have been assigned an IP address, subnet mask, and default gateway. A ping is successful between the two switches. However, VLAN information is not passed from one switch to the other switch.
B. A router and a switch have been assigned an IP address, a subnet mask,

and a default gateway. They are directly connected, but a ping between the two devices fails.
C. A router connects to another router through a serial interface. Both routers have been assigned an IP address, subnet mask, and default gateway. The routers are running RIP and the networks directly connected to the first router do not pass to the second router. However, a ping from one router to the serial interface of the directly connected neighboring router is successful.
D. A router connects to another router via a switch. Both routers and the switch have been assigned an IP address, subnet mask, and default gateway. Neither the routers nor the switch are able to ping one of the hosts that is directly to the switch.

Answer: B

QUESTION 620
Exhibit:



A network associate is trying to understand the operation of the Certkiller network by studying the graphic. All hosts are able to reach the enterprise server on VLAN4. The associate needs to determine which interfaces are functioning as a trunk ports. Which of the interfaces are trunks? (Choose two)

A. Switch1 - Fa0/2
B. Switch1 - Fa0/9
C. Switch2 - Fa0/3
D. Switch2 - Fa0/4
E. Switch2 - Fa0/6
F. Router - Fa1/0

Answer: B, F

QUESTION 621
Exhibit:

Refer to the exhibit. The network administrator has configured the switches in the school network to use VTP. The switches are not sharing VLAN information. Which sequence of commands should be issued to correct this problem?

A. Offices(config)# vtp mode client
Labs(config)# vtp mode client
B. Offices(config)# vtp domain School
Labs(config)# vtp domain School
C. Offices(config)# vtp pruning
Labs(config)# vtp pruning
D. Offices(config)# vtp version 2
Labs(config)# vtp version 2

Answer: B

Explanation:
For switched to share vlan information, there VTP domain names must be same. In the Output shown, VTP domain name of LABS router is Labs and VTP domain name of Offices router is Offices. As the domain names are different, they are unable to communicate with each other. In order to correct this problem, we have change their names to a single common name.

QUESTION 622
Exhibit

Refer to the graphic. It has been decided that Workstation 1 should be denied access to Server1. Which of the following commands are required to prevent only Workstation 1 from accessing Server1 while allowing all other traffic to flow normally? (Choose two)

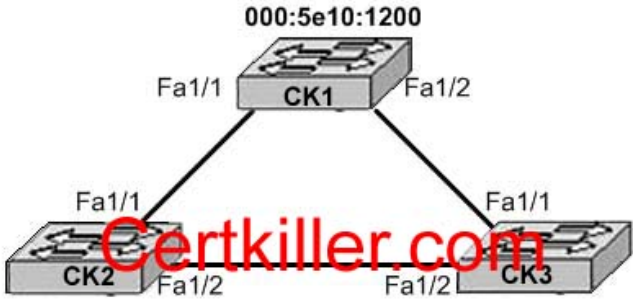
A. Router CK1 (config)# interface fa0/0

Router CK1 (config-if)# ip access-group 101 out
B. Router CK1 (config)# interface fa0/0
Router CK1 (config-if)# ip access-group 101 in
C. Router CK1 (config)# access-list 101 deny tcp ip host 182.16.161.150 host 172.16.162.163
Router CK1 (config)# access-list 101 permit ip any any
D. Router CK1 (config)# access-list 101 deny ip 172.16.161.150 0.0.0.255 172.16.162.163 0.0.0.0
Router CK1 (config)# access-list 101 permit ip any any

Answer: B, C

Explanation:
To block communication between Workstation A and Server 1, we have to configure Extended Access List.
To define an extended IP access list, use the extended version of the access-list command in global configuration mode. To remove the access lists, use the no form of this command.
access-list access-list-number [dynamic dynamic-name [timeout minutes]] {deny | permit} protocol source source-wildcard destination destination-wildcard
Source Address will be of the Workstation A i.e. 172.16.161.150 and destination address will be of the Server 1 i.e. 172.16.162.163.
Access list will be placed on the FA0/0 of Router CK1 .

QUESTION 623
Exhibit:



Refer to the exhibit. All switches have the default STP configuration and all links are Fast Ethernet. Which port on which switch will Spanning Tree place in blocking mode?
a. Switch CK1 - Port Fa1/1
b. Switch CK1 - Port Fa1/2
c. Switch CK2 - Port Fa1/2
d. Switch CK2 - Port Fa1/1
e. Switch CK3 - Port Fa1/1
f. Switch CK3 - Port Fa1/2

Answer: F

Explanation: Switch CK3 ---Port FA 1/2
Switch CK1 will become the ROOT BRIDGE because it has the lowest MAC address.
Its both ports will become Designated ports so choice A and B are wrong.
Next Election will be of ROOT PORTS. Port FA1/1 of both the switches CK2 and CK3 will become ROOT ports because they have minimum path cost to reach the root bridge.
So, choices D and E are also wrong.
Next Election will be of Designated Ports on the segment connecting CK2 and CK3 . CK2 has lower MAC address so, its port FA1/2 will become designated port and FA1/2 of CK3 will be placed in a BLOCKING state to avoid switching LOOPS.

QUESTION 624

Refer to the graphic. Two 2950 switches connect through ports Fa0/24 and a straight-through cable. Based on the output of the show cdp neighbor command from both switches and the information given, what can be concluded?
a. Port Fa/24 on each switch must be configured in VLAN 1 in order for the switches to see neighbor information.
b. Port Fa0/24 on each switch must be configured as a trunk port in order for neighbor information to be received.
c. The switches are not cabled properly.
d. An IP address needs to be assigned to both switches.
e. VTP is incorrectly configured on switch CK1 .

Answer: C

Explanation:
To connect 2 similar devices, we use cross-over cables. In the scenario, two switches are connected with a straight-through cable, so there will be no communication between the switches. Choice C is correct.

QUESTION 625
Exhibit

The network shown in the exhibit was designed to provide reliability through

redundancy. Both of the IDF switches, CK3 , and CK4 , are connected to both of the MDF switches, CK1 and CK2 . Which configuration scenario will provide a loop-free switching environment?
a. Spanning Tree Protocol should be running on all switches.
b. Spanning Tree Protocol should be running on only the MDF switches CK1 and CK2 .
c. Spanning Tree Protocol should be running on only the IDF switches CK3 and CK4 .
d. Spanning Tree Protocol should be run only on the root bridge.
e. Spanning Tree Protocol is not needed in this network.

Answer: A

Explanation:
Spanning-Tree Protocol (STP) prevents loops from being formed when switches or bridges are interconnected via multiple paths. Spanning-Tree Protocol implements the 802.1D IEEE algorithm by exchanging BPDU messages with other switches to detect loops, and then removes the loop by shutting down selected bridge interfaces. This algorithm guarantees that there is one and only one active path between two network devices.
Reference:
http://www.cisco.com/en/US/tech/ CK3 89/ CK6 21/tsd_technology_support_protocol_home.html

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QUESTION 626
Certkiller has five regional offices that are located in different cities. The IT staff is evaluating WAN technologies to interconnect the regional offices to corporate headquarters. Each of the regional offices should be connected to the corporate headquarters in a hub and spoke arrangement using a packet-switched technology. Which of the following WAN technologies will fulfill these requirements?

A. Frame Relay
B. ISDN
C. T1 leased lines
D. Wireless

Answer: A

Explanation:
There are three packet switching technologies which can be used :
1. Frame Relay
2. X.25
3. ATM
So, choice A is right.

QUESTION 627
Exhibit:

Refer to the exhibit. What is the purpose of the Spanning Tree Protocol that is operating in the exhibited switch topology?

A. To elect a particular switch as backup designated switch.
B. To have one active Layer 2 path through the switches network.
C. To select the best path to a remote destination that is on a different network.
D. To learn the MAC addresses of host attached to the switches network.
E. To distribute VLAN configuration information throughout the switched network.

Answer: B

Explanation:
Switches are connected in a way to provide full-mesh topology. So, a redundant path is provided in the case of a link or switch failure.

QUESTION 628
The network 172.25.0.0 has been divided into eight equal subnets. Which of the following IP addresses can be assigned to hosts in the third subnet if the ip subnetzero command is configured on the router? (Choose three)

A. 172.25.78.243
B. 172.25.98.16
C. 172.25.72.0
D. 172.25.94.255
E. 172.25.96.17
F. 172.25.100.16

Answer: A, C, D

Explanation:
If we divide the address 172.25.0.0 in 8 subnets, the resulting subnets will be
1. 172.25.0.0
2. 172.25.32.0
3. 172.25.64.0 This is the third subnet
4. 172.25.96.0
5. 172.25.128.0
6. 172.25.160.0
7. 172.25.192.0
8. 172.25.224.0

Addresses that fall in the 3rd subnet will be from 172.25.64.0 ---- 172.25.95.255
Choices A, C and D lie in the following category.

QUESTION 629
A network administrator has configured access list 172 to prevent Telnet and ICMP traffic from reaching a server with the address if 192.168.13.26. Which command can the administrator issue to verify that the access list is working properly? (Choose three)

A. Router# ping 192.168.13.26
B. Router# debug access-list 172
C. Router# show open ports 192.168.13.26
D. Router# show access-list
E. Router# show ip interface

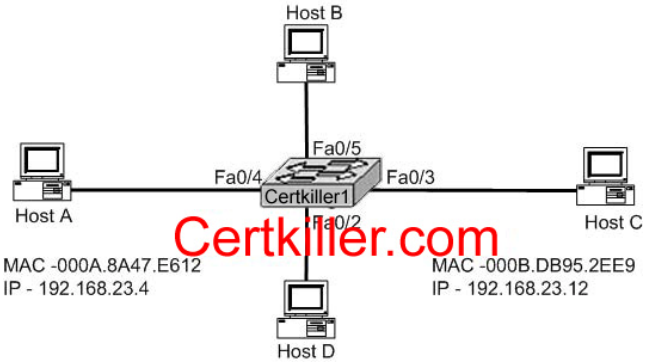
Answer: A, D, E

Explanation:
To display the contents of current access lists, use the show access-lists command in privileged EXEC mode.
show access-lists [access-list-number | access-list-name]

Syntax	**Description**
access-list number	(Optional) Number of the access list to display. The system displays all access lists by default.
access-list name	(Optional) Name of the IP access list to display.

The following is sample output from the show ip interface command:
Router# show ip interface
Ethernet0 is up, line protocol is up
Internet address is 192.195.78.24, subnet mask is 255.255.255.240
Broadcast address is 255.255.255.255
Address determined by non-volatile memory
MTU is 1500 bytes
Helper address is not set
Secondary address 131.192.115.2, subnet mask 255.255.255.0
Directed broadcast forwarding is enabled
Multicast groups joined: 224.0.0.1 224.0.0.2
Outgoing access list is not set
Inbound access list is not set
---output omitted---
Ping command is used to verify connectivity.
So choices A,D and E will be used to verify that the access-list is working correctly or not.

QUESTION 630
Exhibit:



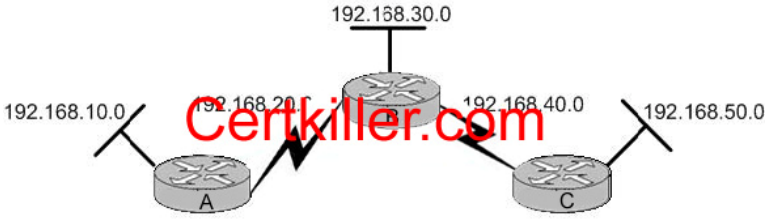
Refer to the exhibit. Certkiller 1 has just been restarted and has passed the POST routine. When Host A begins communicating with Host C, what will the switch do?

A. Certkiller 1 will add 192.168.23.4 to the CAM table.
B. Certkiller 1 will add 192.168.23.12 to the CAM table.
C. Certkiller 1 will add 000A.8A47.E612 to the CAM table.
D. Certkiller 1 will add 000B.DB95.2EE9 to the CAM table.

Answer: C

Explanation:
When the power of a switch is turned on, its MAC address table is empty. Switch starts building its CAM table on the base of source MAC addresses. When host A will start communication with host C, switch will enter the source MAC of Host A in its switching table and will flood the message.

QUESTION 631




```
<some output text omitted>
P  192.168.40.0/24, 1 successors, FD is 21026560
     via 192.168.20.2 (21026560/20514560),Serial 0/1
P  192.168.50.0/24, 1 successors, FD is 20514560
     via 192.168.20.2 (20514560/28160), Serial0/1
P  192.168.10.0/24, 1 successors, FD is 28160
     via Connected, FastEthernet0/0
P  192.168.30.0/24, 1 successors, FD is 21024000
     via 192.168.20.2 (21024000/20512000), Serial0/1
P  192.168.20.0/24, 1 successors, FD is 20512000
     via Connected, Serial 0/1
```

Refer to the graphic. Which of the following commands would create the output shown at the bottom of the graphic?

A. Router# show ip eigrp topology
B. Router# show ip route
C. Router# show ip eigrp neighbors

D. Router# show ip ospf route
E. Router# show ip ospf database

Answer: A

Explanation:
show ip eigrp topology
To display entries in the Enhanced IGRP (EIGRP) topology table, use the show ip eigrp topology command in EXEC mode.
show ip eigrp topology [as-number | [[ip-address] mask]] [active | all-links | pending | summary | zerosuccessors]
Syntax Description

as-number	(Optional) Autonomous system number.
ip-address	(Optional) IP address. When specified with a mask, a detailed description of the entry is provided.
mask	(Optional) Subnet mask.
active	(Optional) Displays only active entries in the EIGRP topology table.
all-links	(Optional) Displays all entries in the EIGRP topology table.
pending	(Optional) Displays all entries in the EIGRP topology table that are waiting for an update from a neighbor or are waiting to reply to a neighbor.
summary	(Optional) Displays a summary of the EIGRP topology table.
zero successors	(Optional) Displays available routes in the EIGRP topology table.

Example
The following is sample output from the show ip eigrp topology command:
Router# show ip eigrp topology
IP-EIGRP Topology Table for process 77
Codes: P - Passive, A - Active, U - Update, Q - Query, R - Reply,
r - Reply status
P 172.16.90.0 255.255.255.0, 2 successors, FD is 0
via 172.16.80.28 (46251776/46226176), Ethernet0
via 172.16.81.28 (46251776/46226176), Ethernet1
via 172.16.80.31 (46277376/46251776), Serial0
P 172.16.81.0 255.255.255.0, 1 successors, FD is 307200
via Connected, Ethernet1
via 172.16.81.28 (307200/281600), Ethernet1
via 172.16.80.28 (307200/281600), Ethernet0
via 172.16.80.31 (332800/307200), Serial0
Table 33 describes the significant fields shown in the display.

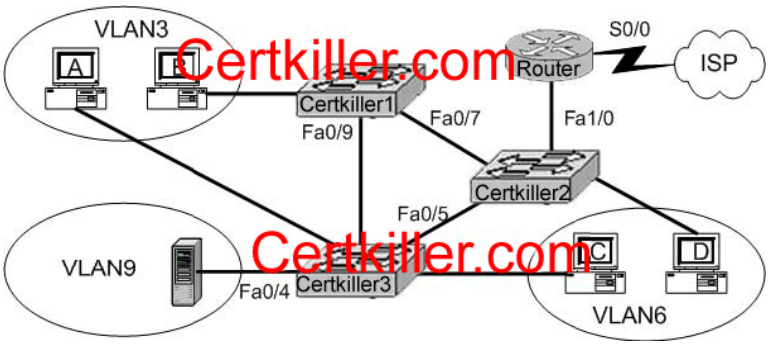
Table 33 show ip eigrp topology Field Descriptions

Field	Description
Codes	State of this topology table entry. Passive and Active refer to the EIGRP state with respect to this destination; Update, Query, and Reply refer to the type of packet that is being sent.

P - Passive	No EIGRP computations are being performed for this destination.
A - Active	EIGRP computations are being performed for this destination.
U - Update	Indicates that an update packet was sent to this destination.
Q - Query	Indicates that a query packet was sent to this destination.
R - Reply	Indicates that a reply packet was sent to this destination.
r - Reply status	Flag that is set after the software has sent a query and is waiting for a reply.
172.16.90.0	Destination IP network number.
255.255.255.0	Destination subnet mask.
successors	Number of successors. This number corresponds to the number of next hops in the IP routing table. If "successors" is capitalized, then the route or next hop is in a transition state.
FD	Feasible distance. The feasible distance is the best metric to reach the destination or the best metric that was known when the route went active. This value is used in the feasibility condition check. If the reported distance of the router (the metric after the slash) is less than the feasible distance, the feasibility condition is met and that path is a feasible successor. Once the software determines it has a feasible successor, it need not send a query for that destination.
replies	Number of replies that are still outstanding (have not been received) with respect to this destination. This information appears only when the destination is in Active state.
state	Exact EIGRP state that this destination is in. It can be the number 0, 1, 2, or 3. This information appears only when the destination is in the Active state.
via	IP address of the peer that told the software about this destination. The first N of these entries, where *n*is the number of successors, are the current successors. The remaining entries on the list are feasible successors.
(46251776/46226176)	The first number is the EIGRP metric that represents the cost to the destination. The second number is the EIGRP metric that this peer advertised.
Ethernet0	Interface from which this information was learned.
Serial0	Interface from which this information was learned.

Reference:
http://www.cisco.com/en/US/products/sw/iosswrel/ps1828/products_command_reference_chapter09186a00800ca5a9.html#wp1021269

QUESTION 632
Exhibit:



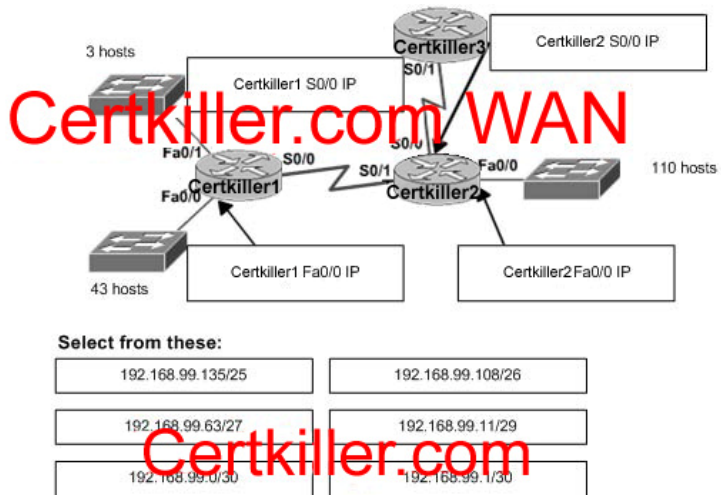
A technician is investigating a problem with the exhibited network. These symptoms have been observed:
• None of the user hosts can access the Internet.
• None of the user hosts can access the server in VLAN 9.
• Host A can ping Host B.
• Host A CANNOT ping Host C or Host D.
• Host C can ping Host D.
What could cause these symptoms?

A. Interface S0/0 on the router is down.
B. Interface Fa1/0 on the router is down.
C. Interface Fa0/5 on Certkiller 3 is down.
D. Certkiller 1 is turned off.
E. Certkiller 3 is turned off.

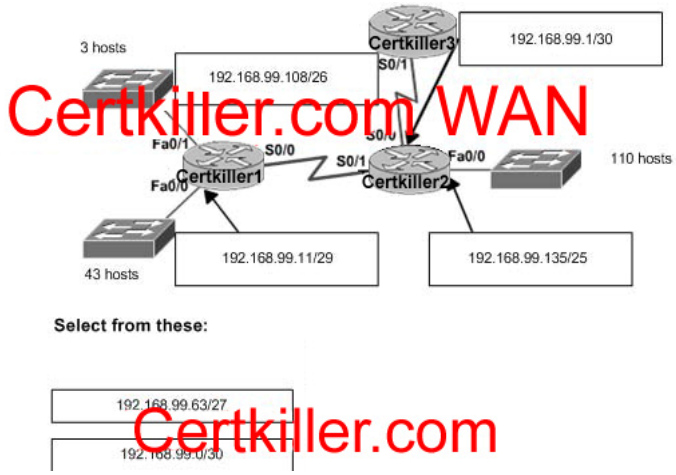
Answer: B

Explanation:
Choice B is correct because a Router is used for communication between different VLANs and it is stated that none of the hosts can access the server in VLAN 9 it means that there is no connection of the network with router so FA1/0 is down.
Choice C is wrong because Host C can ping Host D so FA0/5 cannot be down.
Choice D and E are wrong because Host A can Ping Host B it means that the switch Certkiller 1 and switch Certkiller 3 are both on.

QUESTION 633
Certkiller has three locations and has plans to redesign the network accordingly. The networking team received 192.168.199.0 to use as the addressing for entire network from the administrator. After subnetting the address, the team is ready to assign the address.
The administrator plans to configure ip subnet-zero and use RIP v2 as the routing protocol. As a member of the networking team, you must address the network and at the same time converse unused addresses for future growth.
Being mindful of these goals, drag the host addresses on the left to the correct router interface. One of the routers is partially configured. Move the mouse over a router to view its configuration. Not all of the host addresses on the left will be used.



Answer:

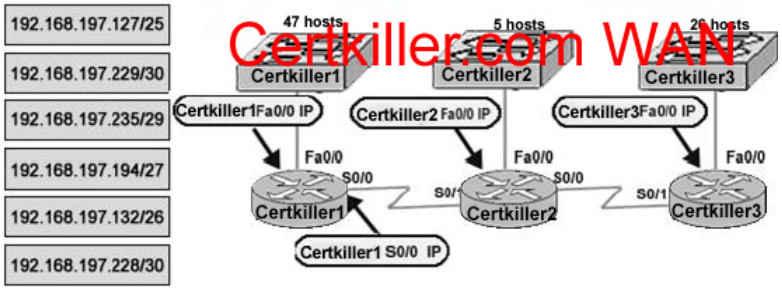


QUESTION 634

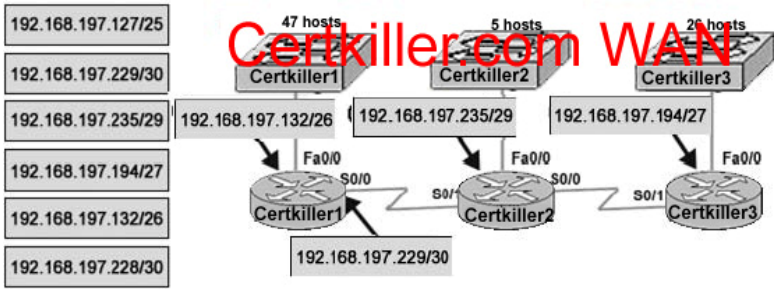
Certkiller has three locations and has plans to redesign the network accordingly. The networking team received 192.168.197.0 to use as the addressing for entire network from the administrator. After subnetting the address, the team is ready to assign the address.

The administrator plans to configure ip subnet-zero and use RIP v2 as the routing protocol. As a member of the networking team, you must address the network and at the same time converse unused addresses for future growth.

Being mindful of these goals, drag the host addresses on the left to the correct router interface. One of the routers is partially configured. Move the mouse over a router to view its configuration. Not all of the host addresses on the left will be used.



Answer:

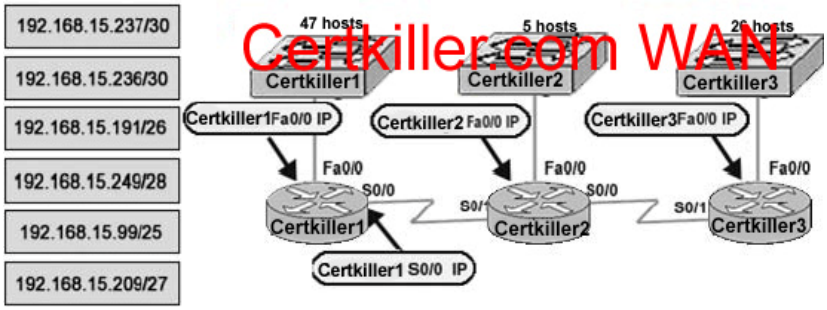


QUESTION 635

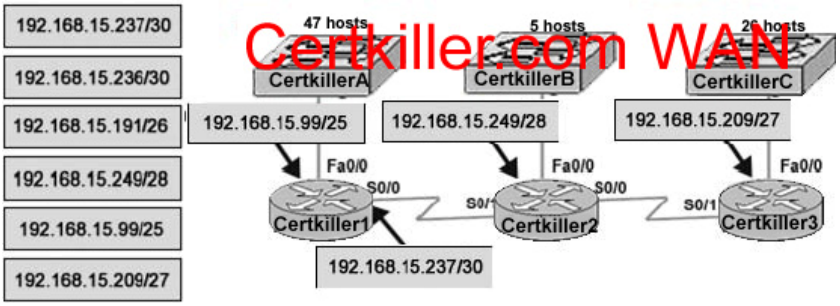
Certkiller has three locations and has plans to redesign the network accordingly. The networking team received 192.168.15.0 to use as the addressing for entire network from the administrator. After subnetting the address, the team is ready to assign the address.

The administrator plans to configure ip subnet-zero and use RIP v2 as the routing protocol. As a member of the networking team, you must address the network and at the same time converse unused addresses for future growth.

Being mindful of these goals, drag the host addresses on the left to the correct router interface. One of the routers is partially configured. Move the mouse over a router to view its configuration. Not all of the host addresses on the left will be used.



Answer:



QUESTION 636

Exhibit:


```
CK1#show vtp status
   VTP Version                     : 2
   Configuration Revision          : 5
   Maximum VLANs supported locally : 68
   Number of existing VLANs        : 8
   VTP Operating Mode              : Server
   VTP Domain Name                 : JAX
   VTP Pruning Mode                : Disabled
   VTP V2 Mode                     : Disabled
   VTP Traps Generation            : Disabled
   MD5 digest                      : 0x2D 0x88 0xA9 0x2A 0xC4 0xF8 0x77 0xEF
   Configuration last modified by 0.0.0.0 at 0-0-00 00:00:00

CK2#show vtp status
   VTP Version                     : 2
   Configuration Revision          : 3
   Maximum VLANs supported locally : 68
   Number of existing VLANs        : 8
   VTP Operating Mode              : Server
   VTP Domain Name                 : JAK
   VTP Pruning Mode                : Disabled
   VTP V2 Mode                     : Disabled
   VTP Traps Generation            : Disabled
   MD5 digest                      : 0xA8 0x67 0xF9 0xA8 0x92 0xE9 0x30 0x6B
   Configuration last modified by 0.0.0.0 at 0-0-00 00:00:00
```


Refer to the exhibit. Switches CK1 and CK2 have been configured with a trunked line that has been verified as working correctly. However, VTP is not propagating VLANs from one switch to the other. Based on the command output shown, what is the problem?

A. The revision number is not the same on both switches.
B. Only one switch can be in server mode.
C. The VTP domain name is not correctly configured.
D. VLANs have not been configured on the VTP server.
E. The VTP pruning mode is not correctly configured.

Answer: C

QUESTION 637

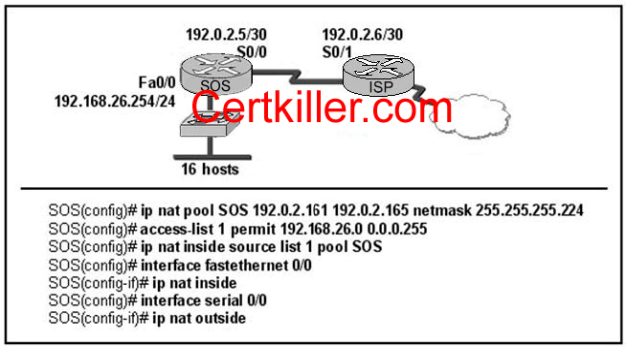
Which of the following describe the process identifier that is used to run OSPF on a router? (Choose two)

A. It is logically significant.
B. It is globally significant.
C. It is needed to identify a unique instance of an OSPF database.

D. It is an optional parameter required only if multiple OSPF processes are running on the router.
E. All routers in the same OSPF area must have the same process ID if they are to exchange routing information.

Answer: A, C

QUESTION 638
Exhibit:

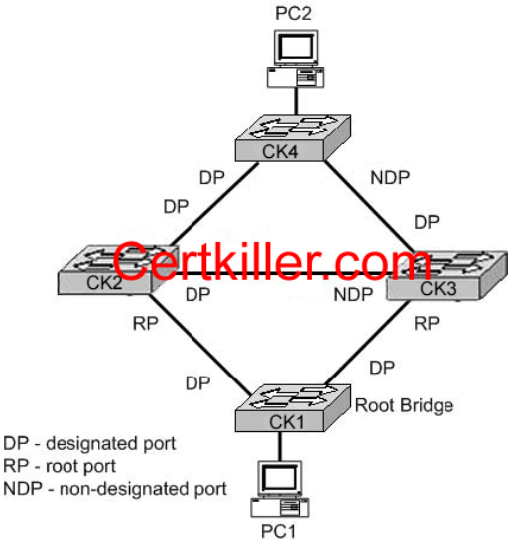


Refer to the network diagram and configuration shown in the graphic exhibit. The network at the SOS Company has just been configured for NAT a shown. Initial tests indicate that everything is functioning as intended. However, it is found that a numbered of hosts cannot access the Internet. What is the problem?

A. The access list is not correct.
B. There are not enough IP addresses available in the NAT address pool.
C. The wrong interface has been configured with the ip nat inside command.
D. The IP address of the Fa0/0 interface is not usable.
E. The S0/1 interface of the ISP router is in the wrong subnet.

Answer: B

QUESTION 639
Exhibit:



Refer to the exhibit. Based on the Spanning Tree Protocol port states shown, over which path will frames flow when set from PC1 to PC2?

A. CK1 - CK3 - CK4
B. CK1 - CK2 - CK4
C. CK1 - CK2 - CK3 - CK4
D. CK1 - CK3 - CK2 - CK4

Answer: B

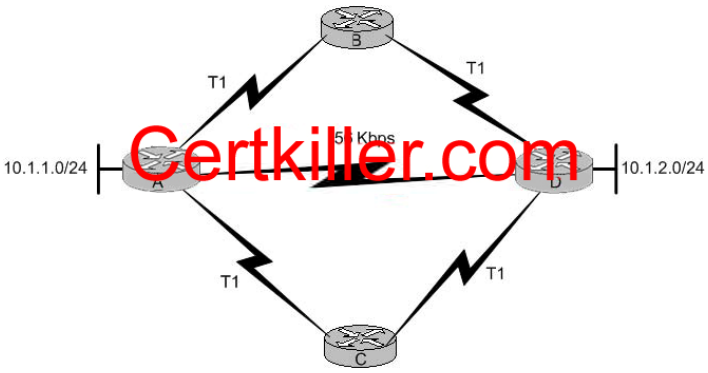
QUESTION 640
Exhibit:

Refer to the exhibit. Which ports could safely be configured with PortPast? (Choose two)

A. Switch CK1 - port Fa1/2
B. Switch CK2 - port Fa1/2
C. Switch CK1 - port Fa1/3
D. Switch CK2 - port Fa1/3
E. Switch CK1 - port Fa1/1

Answer: C, D

QUESTION 641
Exhibit:



Refer to the exhibit. How will router A choose a path to the 10.1.2.0/24 network when different routing protocols are configured? (Choose three)

A. If RIPv2 is the routing protocol, only the path AD will be installed in the routing table by defaults.
B. If RIPv2 is the routing protocol, the equal cost paths ABD and ACD will be installed in the routing table by default.
C. If EIGRP is the routing protocol, only path AD will be installed in the routing table by default.
D. If EIGRP is the routing protocol, the equal cost paths ABD and ACD will be installed in the routing table by default.
E. If EIGRP and OSPF are both running on the network, the EIGRP paths will be installed in the routing table.
F. If EIGRP and OSPF are both running on the network, the OSPF paths will be installed in the routing table.

Answer: A, D, E

QUESTION 642
What does a router do if it has no EIGRP feasible successor route to a destination network and the successor route to that destination network is in active status?

A. It routes all traffic that is addresses to the destination network to the interface indicates in the routing table.
B. It sends a copy of its neighbor table to all adjacent routers.
C. It sends a multicast query packet to all adjacent neighbors requesting available routing paths to the destination network.
D. It broadcasts Hello packets to all routers in the network to re-establish neighbor adjacencies.

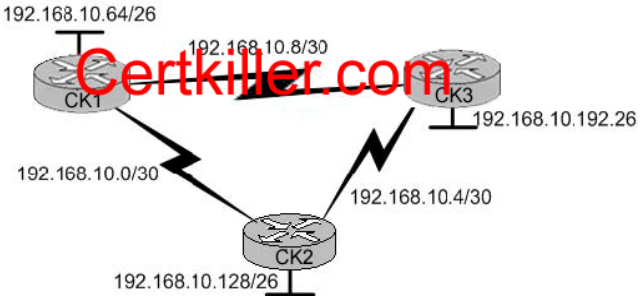
Answer: C

QUESTION 643
An administrator is configuring a Catalyst switch with VLAN information that must be automatically distributed to other Catalyst switches in the network. What conditions must be met in order for the VLANs configured on this switch to be automatically configured on the other switches? (Choose three)

A. The switch that will share its VLAN configuration must be in VTP server mode.
B. The switches must be in the same VTP domain.
C. The switch that will share the VLAN information must be configured as root bridge.
D. The switches must be connected over VLAN trunks.
E. The switches must be configured to use the same STP version.
F. The switches must have VTP pruning activated.

Answer: A, B, D

QUESTION 644
Exhibit:



CK3 #show ip route
Gateway of last resort is not set
192.168.10.0/24 is variably subnetted, 6 subnets, 2 subnets, 2 masks
D 192.168.10/64/26 [90/2195456] via 192.168.10.9, 00:03:31, Serial0/0
D 192.168.10.0/30 [90/2681856] via 192.168.10.9, 00:03:31, Serial0/0
C 192.168.10.4/30 is directly connected, Serial 0/1
C 192.168.10.8/30 is directly connected, Serial 0/0
C 192.168.10.192/26 is directly connected, FastEthernet0/0
D 192.168.10.128/26 [90/2195456] via 192.168.10.5, 00:03:31, Serial 0/1
Refer to the exhibit. Certkiller uses EIGRP as the routing protocol. What path will packets take from a host on the 192.168.10.192/26 network to a host on the LAN attached to router CK1 ?

A. The path of the packets will be CK3 to CK2 to CK1 .
B. The path of the packets will be CK3 to CK1 to CK2 .
C. The path of the packets will be both CK3 to CK2 to CK1 and CK3 and CK1 .
D. The path of the packets will be CK3 to CK1 .

Answer: D