ICND1 – Basic Questions

http://www.9tut.net/icnd1-100-101/new-icnd1-basic-questions

Question 1

Which two statements describe the operation of the CSMA/CD access method? (Choose two)

A. In a CSMA/CD collision domain, multiple stations can successfully transmit data simultaneously.
B. In a CSMA/CD collision domain, stations must wait until the media is not in use before transmitting.
C. The use of hubs to enlarge the size of collision domains is one way to improve the operation of the CSMA/CD access method.
D. After a collision, the station that detected the collision has first priority to resend the lost data.
E. After a collision, all stations run a random backoff algorithm. When the backoff delay period has expired, all stations have equal priority to transmit data.
F. After a collision, all stations involved run an identical backoff algorithm and then synchronize with each other prior to transmitting data.

Answer: B E

Question 2

On a live network, which commands will verify the operational status of router interfaces? (Choose two)

A. Router#show interfacess
B. Router#show ip protocols
C. Router#debug interface
D. Router#show ip interface brief
E. Router#show start

Answer: A D

Question 3

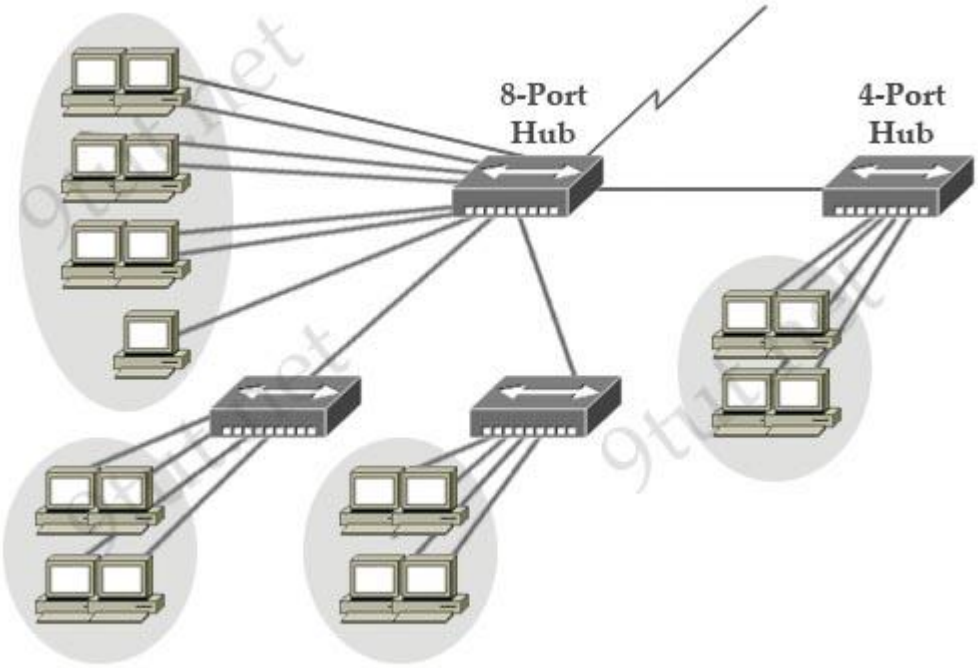
What must occur before a workstation can exchange HTTP packets with a web server?

A. A UDP connection must be established between the workstation and its default gateway.
B. A UDP connection must be established between the workstation and the web server.
C. A TCP connection must be established between the workstation and its default gateway.
D. A TCP connection must be established between the workstation and the web server.
E. An ICMP connection must be established between the workstation and its default gateway.
F. An ICMP connection must be established between the workstation and the web sewer.

Answer: D

Question 4

Refer to the exhibit. If the hubs in the graphic were replaced by switches, what would be virtually eliminated?



A. broadcast domains
B. repeater domains
C. Ethernet collisions
D. signal amplification
E. Ethernet broadcasts

Answer: C

Question 5

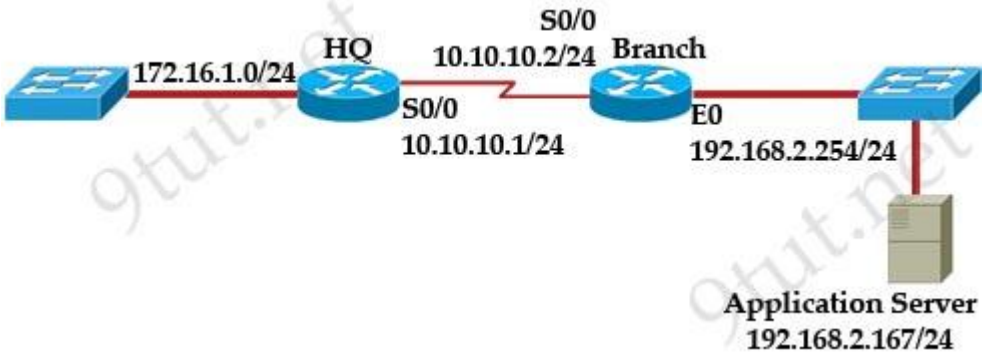
If a host experiences intermittent issues that relate to congestion within a network while remaining connected, what could cause congestion on this LAN?

A. half-duplex operation
B. broadcast storms
C. network segmentation
D. multicasting

Answer: B

Question 6

Refer to the exhibit. The network administrator is testing connectivity from the branch router to the newly installed application server. What is the most likely reason for the first ping having a success rate of only 60 percent?




```
Branch# ping 192.168.2.167
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 192.168.2.167, timeout is 2 seconds:
..!!!
Success rate is 60 percent (3/5), round-trip min/avg/max = 1/2/4 ms

Branch# ping 192.168.2.167
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 192.168.2.167, timeout is 2 seconds:
!!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 1/1/1 ms
Branch#
```

A. The network is likely to be congested, with the result that packets are being intermittently dropped.
B. The branch router had to resolve the application server MAC address.
C. There is a short delay while NAT translates the server IP address.
D. A routing table lookup delayed forwarding on the first two ping packets.
E. The branch router LAN interface should be upgraded to FastEthernet.

Answer: B

Question 7

An administrator is in the process of changing the configuration of a router. What command will allow the administrator to check the changes that have been made prior to saving the new configuration?

A. Router# show startup-config
B. Router# show current-config
C. Router# show running-config

D. Router# show memory
E. Router# show flash
F. Router# show processes

Answer: C

Question 8

What does a host on an Ethernet network do when it is creating a frame and it does not have the destination address?

A. drops the frame
B. sends out a Layer 3 broadcast message
C. sends a message to the router requesting the address
D. sends out an ARP request with the destination IP address

Answer: D

Question 9

Which IOS command is used to initiate a login into a VTY port on a remote router?

A. router# login
B. router# telnet
C. router# trace
D. router# ping
E. router(config)# line vty 0 5
F. router(config-line)# login

Answer: B

Question 10

Which three statements are true about the operation of a full-duplex Ethernet network? (Choose three)

A. There are no collisions in full-duplex mode.
B. A dedicated switch port is required for each full-duplex node.
C. Ethernet hub ports are preconfigured for full-duplex mode.
D. In a full-duplex environment, the host network card must check for the availability of the network media before transmitting.
E. The host network card and the switch port must be capable of operating in full-duplex mode.

Answer: A B E

ICND1 – Basic Questions 2

http://www.9tut.net/icnd1-100-101/new-icnd1-basic-questions-2

Question 1

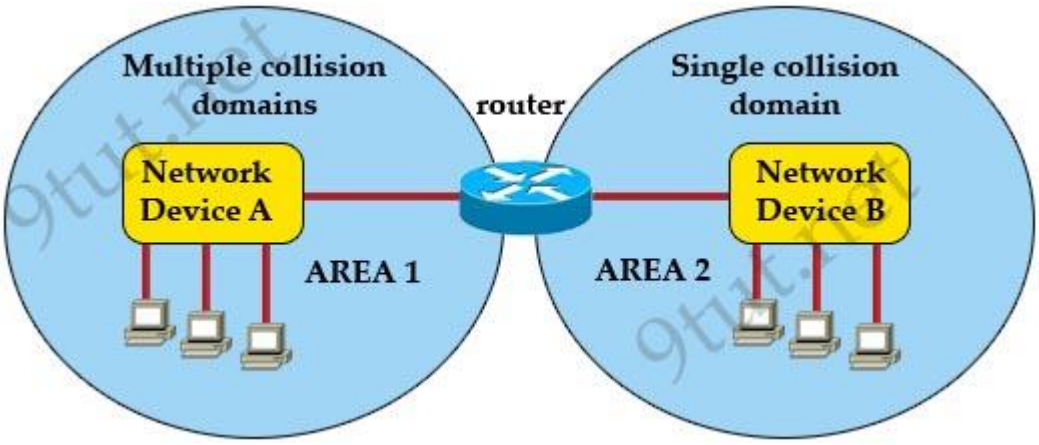
Which two options will help to solve the problem of a network that is suffering a broadcast storm? (Choose two)

A. a bridge
B. a router
C. a hub
D. a Layer 3 switch
E. an access point

Answer: B D

Question 2

Refer to the exhibit. A network has been planned as shown. Which three statements accurately describe the areas and devices in the network plan? (Choose three)

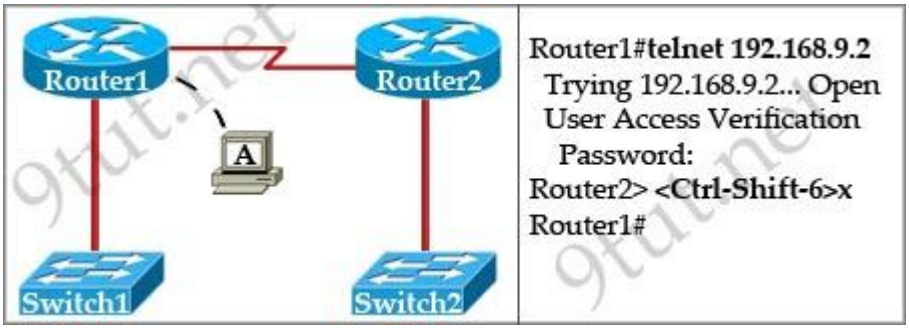


A. Network Device A is a switch.
B. Network Device B is a switch.
C. Network Device A is a hub.
D. Network Device B is a hub.
E. Area 1 contains a Layer 2 device.
F. Area 2 contains a Layer 2 device.

Answer: A D E

Question 3

Refer to the exhibit. If the resume command is entered after the sequence that is shown in the exhibit, which router prompt will be displayed?

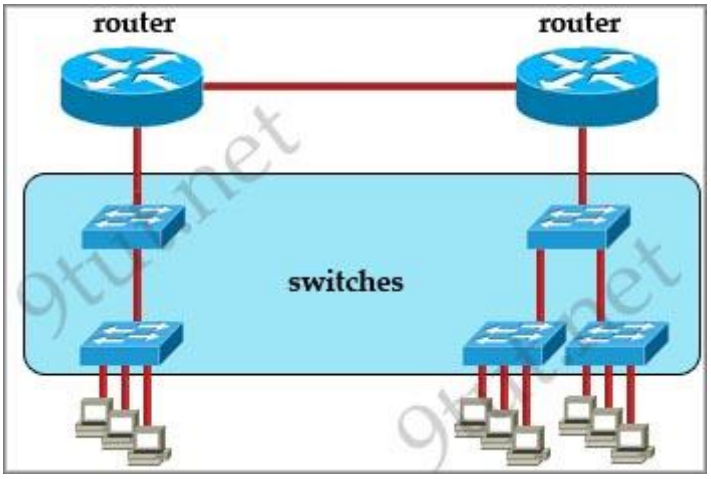


A. Router1>
B. Router1#
C. Router2>
D. Router2#

Answer: C

Question 4

Refer to the exhibit. All devices attached to the network are shown. How many collision domains are present in this network?



A. 2
B. 3
C. 6
D. 9
E. 15

Answer: E

ICND1 – OSI Model

http://www.9tut.net/icnd1-100-101/new-icnd1-osi-model

Question 1

Which OSI layer header contains the address of a destination host that is on another network?

A. application
B. session
C. transport
D. network
E. data link
F. physical

Answer: D

Question 2

At which layer of the OSI model does the protocol that provides the information that is displayed by the **show cdp neighbors** command operate?

A. application
B. transport
C. network
D. physical
E. data link

Answer: E

Question 3

What are two common TCP applications? (Choose two)

A. TFTP
B. SMTP
C. SNMP
D. FTP
E. DNS

Answer: B D

Question 4

Which two characteristics describe the access layer of the hierarchical network design model? (Choose two)

A. layer 3 support
B. port security
C. redundant components
D. VLANs
E. PoE

Answer: B D

Question 5

Which layer of the TCP/IP stack combines the OSI model physical and data link layers?

A. Internet layer
B. transport layer
C. application layer
D. network access layer

Answer: D

Question 6

Which layer of the OSI model controls the reliability of communications between network devices using flow control, sequencing and acknowledgments?

A. Physical
B. Data-link
C. Transport
D. Network

Answer: C

Question 7

Which network device functions only at Layer 1 of the OSI model?

A.  bridge

B.  hub

C.  NIC

D.  router

E.  switch

Answer: B

ICND1 – Protocols & Services

http://www.9tut.net/icnd1-100-101/new-icnd1-protocols-services

Question 1

Which protocol uses a connection-oriented service to deliver files between end systems?

A. TFTP
B. DNS
C. FTP
D. SNMP
E. RIP

Answer: C

Question 2

On a Cisco switch, which protocol determines if an attached VoIP phone is from Cisco or from another vendor?

A. RTP
B. TCP
C. CDP
D. UDP

Answer: C

Question 3

Which transport layer protocol provides best-effort delivery service with no acknowledgment receipt required?

A. HTTP
B. IP
C. TCP
D. Telnet
E. UDP

Answer: E

Question 4

Which statements accurately describe CDP? (Choose three)

A. CDP is an IEEE standard protocol.
B. CDP is a Cisco proprietary protocol.
C. CDP is a datalink layer protocol.
D. CDP is a network layer protocol.
E. CDP can discover directly connected neighboring Cisco devices.
F. CDP can discover Cisco devices that are not directly connected.

Answer: B C E

Question 5

A workstation has just resolved a browser URL to the IP address of a server. What protocol will the workstation now use to determine the destination MAC address to be placed into frames directed toward the server?

A. HTTP
B. DNS
C. DHCP
D. RARP
E. ARP

Answer: E

Question 6

How does TCP differ from UDP? (Choose two)

A. TCP provides best effort delivery.
B. TCP provides synchronized communication.
C. TCP segments are essentially datagrams.
D. TCP provides sequence numbering of packets.
E. TCP uses broadcast delivery.

Answer: B D

Question 7

Refer to the exhibit. The two routers have had their startup configurations cleared and have been restarted. At a minimum, what must the administrator do to enable CDP to exchange information between R1 and R2?

A. Configure the router with the cdp enable command.
B. Enter no shutdown commands on the R1 and R2 fa0/1 interfaces.
C. Configure IP addressing and no shutdown commands on both the R1 and R2 fa0/1 interfaces.
D. Configure IP addressing and no shutdown commands on either of the R1 or R2 fa0/1 interfaces.

Answer: B

Question 8

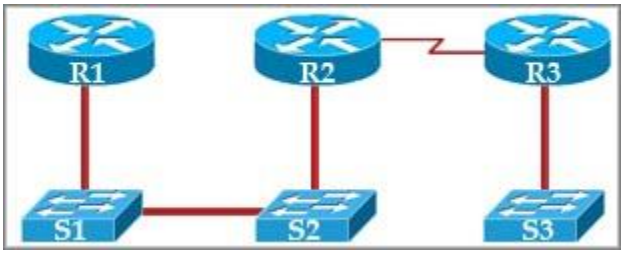
Which statements are true regarding ICMP packets? (Choose two)

A. They acknowledge receipt of TCP segments.
B. They guarantee datagram delivery
C. TRACERT uses ICMP packets.
D. They are encapsulated within IP datagrams.
E. They are encapsulated within UDP datagrams

Answer: C D

Question 9

Refer to the exhibit. If CDP is enabled on all devices and interfaces, which devices will appear in the output of a **show cdp neighbors** command issued from R2?



A. R2 and R3
B. R1 and R3
C. R3 and S2

D. R1, S1, S2, and R3
E. R1, S1, S2, R3, and S3

Answer: C

ICND1 – Router Questions

http://www.9tut.net/icnd1-100-101/new-icnd1-router-questions

Question 1

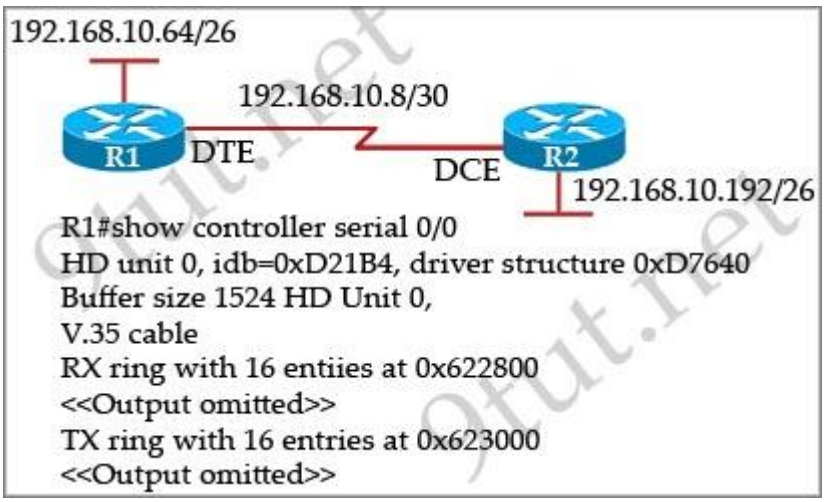
Which two of these functions do routers perform on packets? (Choose two)

A. examine the Layer 2 headers of inbound packets and use that information to determine the next hops for the packets
B. update the Layer 2 headers of outbound packets with the MAC addresses of the next hops
C. examine the Layer 3 headers of inbound packets and use that information to determine the next hops for the packets
D. examine the Layer 3 headers of inbound packets and use that information to determine the complete paths along which the packets will be routed to their ultimate destinations
E. update the Layer 3 headers of outbound packets so that the packets are properly directed to valid next hops
F. update the Layer 3 headers of outbound packets so that the packets are properly directed to their ultimate destinations

Answer: B C

Question 2

Refer to the exhibit. An administrator cannot connect from R1 to R2. To troubleshoot this problem, the administrator has entered the command shown in the exhibit. Based on the output shown, what could be the problem?



A. The serial interface is configured for half duplex.
B. The serial interface does not have a cable attached.
C. The serial interface has the wrong type of cable attached.
D. The serial interface is configured for the wrong frame size.
E. The serial interface has a full buffer.

Answer: C

Question 3

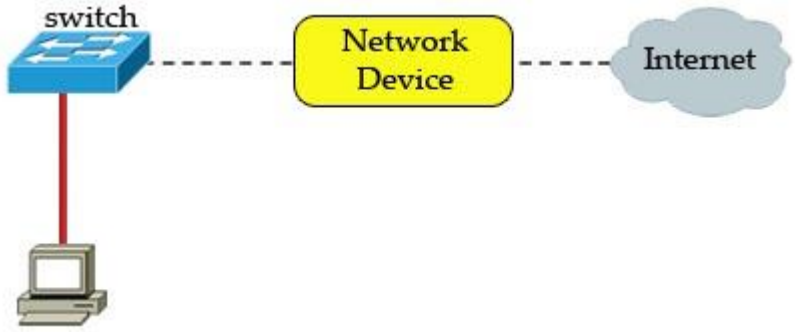
What two things does a router do when it forwards a packet? (Choose two)

A. switches the packet to the appropriate outgoing interfaces
B. computes the destination host address
C. determines the next hop on the path
D. updates the destination IP address
E. forwards ARP requests

Answer: A C

Question 4

Refer to the exhibit. A network device needs to be installed in the place of the icon labeled Network Device to accommodate a leased line attachment to the Internet. Which network device and interface configuration meets the minimum requirements for this installation?



A. a router with two Ethernet interfaces
B. a switch with two Ethernet interfaces
C. a router with one Ethernet and one serial interface
D. a switch with one Ethernet and one serial interface
E. a router with one Ethernet and one modem interface

Answer: C

Question 5

Which two commands will display the current IP address and basic Layer 1 and 2 status of an interface? (Choose two)

A. Router#show version
B. Router#show ip interface
C. router#show protocols
D. router#show controllers
E. Router#show running-config

Answer: B C

ICND1 – Switch Questions

http://www.9tut.net/icnd1-100-101/new-icnd1-switch-questions

Question 1

A switch has 48 ports and 4 VLANs. How many collision and broadcast domains exist on the switch?

A. 4, 48
B. 48, 4
C. 48, 1
D. 1, 48
E. 4, 1

Answer: B

Question 2

A switch receives a frame on one of its ports. There is no entry in the MAC address table for the destination MAC address. What will the switch do with the frame?

A. drop the frame
B. forward it out of all ports except the one that received it
C. forward it out of all ports
D. store it until it learns the correct port

Answer: B

Question 3

Which address type does a switch use to make selective forwarding decisions?

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

Answer: E

Question 4

Which two characteristics apply to Layer 2 switches? (Choose two)

A. increases the number of collision domains
B. decreases the number of collision domains
C. implements VLAN
D decreases the number of broadcast domains
E. uses the IP address to make decisions for forwarding data packets

Answer: A C

Question 5

What is the purpose of assigning an IP address to a switch?

A. provides local hosts with a default gateway address
B. allows remote management of the switch
C. allows the switch to respond to ARP requests between two hosts
D. ensures that hosts on the same LAN can communicate with each other

Answer: B

Question 6

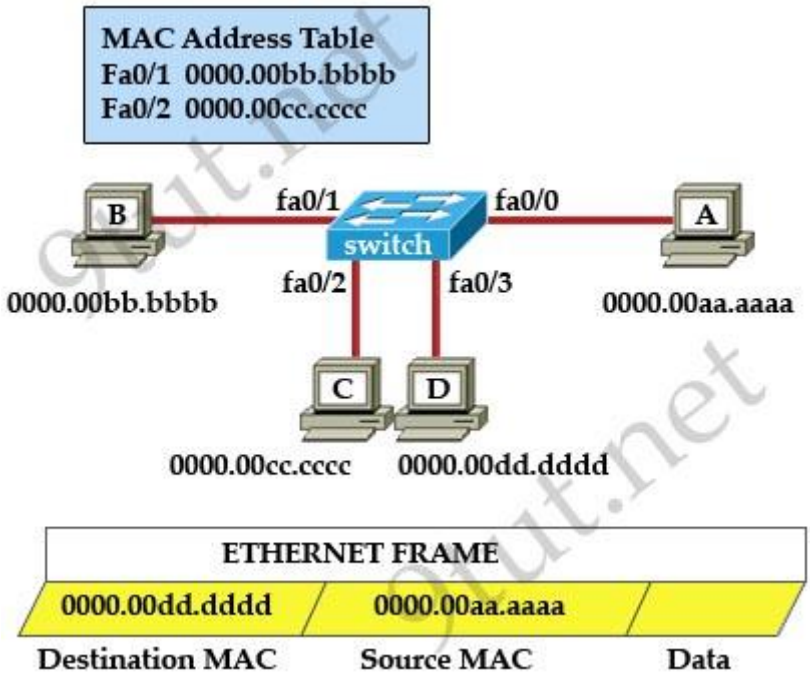
How does a switch differ from a hub?

A. A switch does not induce any latency into the frame transfer time.
B. A switch tracks MAC addresses of directly-connected devices.
C. A switch operates at a lower, more efficient layer of the OSI model.
D. A switch decreases the number of broadcast domains.
E. A switch decreases the number of collision domains.

Answer: B

Question 7

Refer to the exhibit. The ports that are shown are the only active ports on the switch. The MAC address table is shown in its entirety. The Ethernet frame that is shown arrives at the switch. What two operations will the switch perform when it receives this frame? (Choose two)

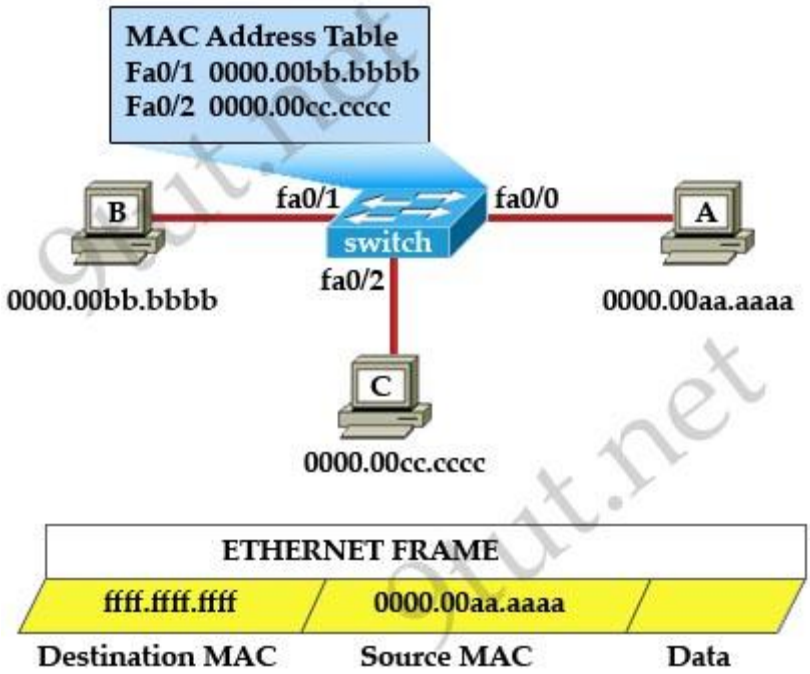


A. The MAC address of 0000.00aa.aaaa will be added to the MAC address table.
B. The MAC address of 0000.00dd.dddd will be added to the MAC address table.
C. The frame will be forwarded out port fa0/3 only.
D. The frame will be forwarded out fa0/1, fa0/2, and fa0/3.
E. The frame will be forwarded out all the active ports.

Answer: A D

Question 8

Refer to the exhibit. The MAC address table is shown in its entirety. The Ethernet frame that is shown arrives at the switch. What two operations will the switch perform when it receives this frame? (Choose two)

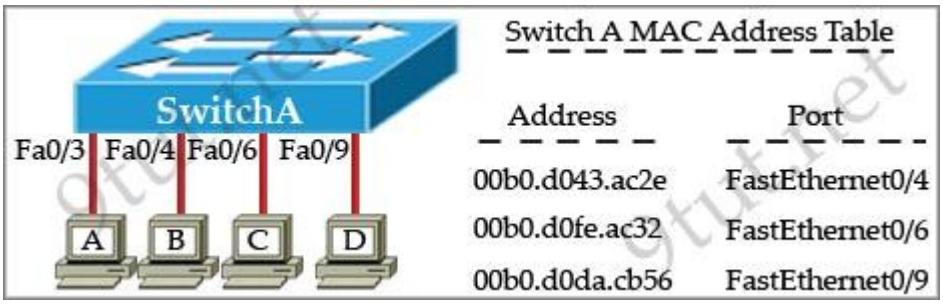


A. The switch will not forward a frame with this destination MAC address.
B. The MAC address of 0000.00aa.aaaa will be added to the MAC Address Table.
C. The MAC address of ffff.ffff.ffff will be added to the MAC address table.
D. The frame will be forwarded out all active switch ports except for port fa0/0.
E. The frame will be forwarded out fa0/0 and fa0/1 only.
F. The frame will be forwarded out all the ports on the switch.

Answer: B D

Question 9

Refer to the exhibit. The exhibit is showing the topology and the MAC address table. Host A sends a data frame to host D. What will the switch do when it receives the frame from host A?

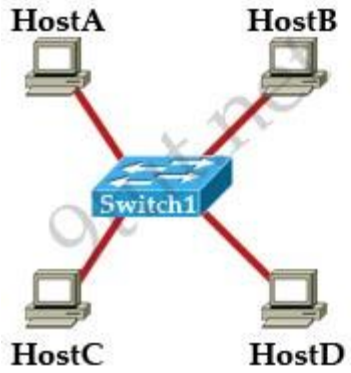


A. The switch will add the source address and port to the MAC address table and forward the frame to host D.
B. The switch will discard the frame and send an error message back to host A.
C. The switch will flood the frame out of all ports except for port Fa0/3.
D. The switch will add the destination address of the frame to the MAC address table and forward the frame to host D.

Answer: A

Question 10

Refer to the topology and switching table shown in the graphic. Host B sends a frame to Host C. What will the switch do with the frame?



Switch1 switch table

Host	MAC Address	Port
A	00-0A-8A-47-E6-12	0/5
D	01-00-CD-22-03-14	0/9
B	01-00-CD-22-03-14	0/2

A. drop the frame
B. send the frame out all ports except port 0/2
C. return the frame to Host B
D. send an ARP request for Host C
E. send an ICMP Host Unreachable message to Host B
F. record the destination MAC address in the switching table and send the frame directly to Host C

Answer: B

Question 11

Refer to the exhibit. SwitchA receives the frame with the addressing shown in the exhibit. According to the command output also shown in the exhibit, how will SwitchA handle this frame?

SwitchA# **show mac-address-table**
< non-essential output omitted >

Destination Address	Address Type	VLAN	Destination Port
00b0.d056.fe4d	Dynamic	1	FastEthernet0/3
00b0.d043.ac2e	Dynamic	1	FastEthernet0/4
00b0.d0fe.ac32	Dynamic	1	FastEthernet0/5
00b0.d0da.cb56	Dynamic	1	FastEthernet0/6

Frame received by SwitchA:

Source MAC	Destination MAC	Source IP	Destination IP
00b0.d056.fe4d	00b0.d0da.cb56	192.168.40.5	192.168.40.6

A. It will drop the frame.
B. It will forward the frame out port Fa0/6 only.
C. It will forward the frame out port Fa0/3 only.
D. It will flood the frame out all ports.
E. It will flood the frame out all ports except Fa0/3.

Answer: B

ICND1 – OSPF Questions

http://www.9tut.net/icnd1-100-101/new-icnd1-ospf-questions

Question 1

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

A. It is locally 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 2

Open Shortest Path First (OSPF) is a routing protocol developed for Internet Protocol (IP) networks by the Interior Gateway Protocol (IGP) working group of the Internet Engineering Task Force (IETF). What is the default administrative distance of the OSPF routing protocol?

A. 90
B. 100
C. 110
D. 20
E. 130
F. 170

Answer: C

Question 3

Which statements describe the routing protocol OSPF? (Choose three)

A. It supports VLSM.
B. It is used to route between autonomous systems.
C. It confines network instability to one area of the network.
D. It increases routing overhead on the network.
E. It allows extensive control of routing updates.
F. It is simpler to configure than RIPv2.

Answer: A C E

Question 4

R1 is unable to establish an OSPF neighbor relationship with R3. What are possible reasons for this problem? (Choose two)

A. All of the routers need to be configured for backbone Area 1.
B. R1 and R2 are the DR and BDR, so OSPF will not establish neighbor adjacency with R3.
C. A static route has been configured from R1 to R3 and prevents the neighbor adjacency from being established.
D. The hello and dead interval timers are not set to the same values on R1 and R3.
E. EIGRP is also configured on these routers with a lower administrative distance.
F. R1 and R3 are configured in different areas.

Answer: D F

Question 5

Which address are OSPF hello packets addressed to on point-to-point networks?

A. 224.0.0.5
B. 172.16.0.1
C. 192.168.0.5
D. 223.0.0.1
E. 254.255.255.255

Answer: A

Question 6

RouterD# show ip interface brief

Interface	IP-Address	OK?	Method	Status	Protocol
FastEthernet0/0	192.160.5.3	YES	manual	up	up
FastEthernet0/1	10.1.1.2	YES	manual	up	up
Loopback0	172.16.5.1	YES	NVRAM	up	up
Loopback1	10.154.154.1	YES	NVRAM	up	up

Given the output for this command, if the router ID has not been manually set, what router ID will OSPF use for this router?

A. 10.1.1.2
B. 10.154.154.1
C. 172.16.5.1
D. 192.168.5.3

Answer: C

Question 7

ROUTER# show ip route

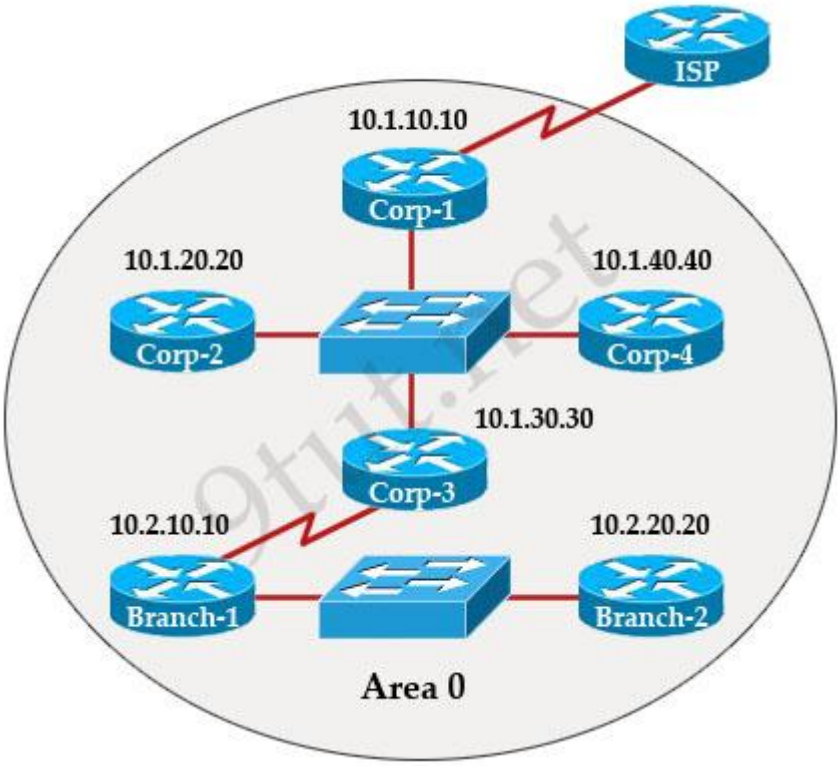
192.168.12.0/24 is variably subnetted, 9 subnets, 3 masks C 192.168.12.64 /28 is directly connected, Loopback1
C 192.168.12.32 /28 is directly connected, Ethernet0
C 192.168.12.48 /28 is directly connected, Loopback0
O 192.168.12.236 /30 [110/128] via 192.168.12.233, 00:35:36, Serial0
C 192.168.12.232 /30 is directly connected, Serial0
O 192.168.12.245 /30 [110/782] via 192.168.12.233, 00:35:36, Serial0
O 192.168.12.240 /30 [110/128] via 192.168.12.233, 00:35:36, Serial0
O 192.168.12.253 /30 [110/782] via 192.168.12.233, 00:35:37, Serial0
O 192.168.12.249/30 [110/782] via 192.168.12.233, 00:35:37, Serial0
O 192.168.12.240/30 [110/128] via 192.168.12.233, 00:35:36, Serial0

To what does the 128 refer to in the router output above?

A. OSPF cost
B. OSPF priority
C. OSPF hop count 5
D. OSPF ID number
E. OSPF administrative distance

Answer: A

Question 8



The internetwork infrastructure of company XYZ consists of a single OSPF area as shown in the graphic. There is concern that a lack of router resources is impeding internetwork performance.

As part of examining the router resources the OSPF DRs need to be known.

All the router OSPF priorities are at the default and the router IDs are shown with each router.

Which routers are likely to have been elected as DR? (Choose two)

A. Corp-1
B. Corp-2
C. Corp-3
D. Corp4
E. Branch-1
F. Branch-2

Answer: D F

Question 9

What information does a router running a link-state protocol use to build and maintain its topological database? (Choose two)

A. hello packets
B. SAP messages sent by other routers
C. LSAs from other routers
D. beacons received on point-to-point links
E. routing tables received from other link-state routers
F. TTL packets from designated routers

Answer: A C

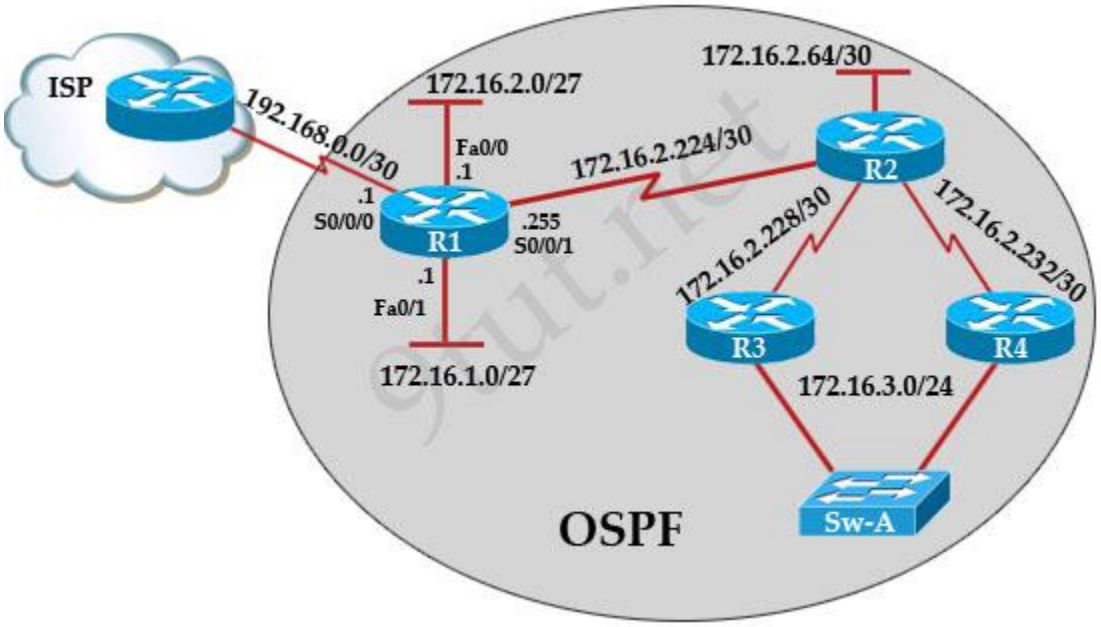
ICND1 – OSPF Hotspot

http://www.9tut.net/icnd1-100-101/new-icnd1-ospf-hotspot

Question

This item contains several questions that you must answer. You can view these questions by clicking on the corresponding button to the left. Changing questions can be accomplished by clicking the numbers to the left of each question. In order to complete the questions, you will need to refer to the topology.
To gain access to the topology, click on the topology button at the bottom of the screen. When you have finished viewing the topology, you can return to your questions by clicking on the Questions button to the left.

Each of the windows can be minimized by clicking on the [-]. You can also reposition a window by dragging it by the title bar.



Question 1

R1 is configured with the default configuration of OSPF.

From the following list of IP addresses configured on R1, which address will the OSPF process select as the router ID?

A. 192.168.0.1
B. 172.16.1.1
C. 172.16.2.1
D. 172.16.2.225

Answer: A

Question 2

After the network has converged, what type of messaging, if any, occurs between R3 and R4?

A. No messages are exchanged.
B. Hellos are sent every 10 seconds.
C. The full database from each router is sent every 30 seconds.
D. The routing table from each router is sent every 60 seconds.

Answer: B

Question 3

To allow or prevent load balancing to network 172.16.3.0/24, which of the following commands could be used in R2? (Choose two)

A. R2(config-if)#clock rate
B. R2(config-if)#bandwidth
C. R2(config-if)#ip ospf cost
D. R2(config-if)#ip ospf priority
E. R2(config-router)#distance ospf

Answer: B C

Question 4

R1 is unable to establish an OSPF neighbor relationship with R3. What are possible reasons for this problem? (Choose two)

A. All of the routers need to be configured for backbone Area 1
B. R1 and R2 are the DR and BDR, so OSPF will not establish neighbor adjacency with R3
C. A static route has been configured from R1 to R3 and prevents the neighbor adjacency from being established.
D. The hello and dead interval timers are not set to the same values on R1 and R3
E. EIGRP is also configured on these routers with a lower administrative distance
F. R1 and R3 are configured in different areas

Answer: D F

Question 5

OSPF is configured using default classful addressing. With all routers and interfaces operational, how many networks will be in the routing table of R1 that are indicated to be learned by OSPF?

A. 2
B. 3
C. 4
D. 5
E. 6
F. 7

Answer: C

ICND1 – Security Questions

http://www.9tut.net/icnd1-100-101/new-icnd1-security-questions

Question 1

An administrator has connected devices to a switch and, for security reasons, wants the dynamically learned MAC addresses from the address table added to the running configuration. What must be done to accomplish this?

A. Enable port security and use the keyword sticky.
B. Set the switchport mode to trunk and save the running configuration.
C. Use the switchport protected command to have the MAC addresses added to the configuration.
D. Use the no switchport port-security command to allow MAC addresses to be added to the configuration.

Answer: A

Question 2

The following commands are entered on the router:

Burbank(config)# enable secret fortress
Burbank(config)# line con 0
Burbank(config-line)# login
Burbank(config-line)# password n0way1n

Burbank(config-line)# exit
Burbank(config)# service password-encryption

What is the purpose of the last command entered?

A. to require the user to enter an encrypted password during the login process
B. to prevent the vty, console, and enable passwords from being displayed in plain text in the configuration files
C. to encrypt the enable secret password
D. to provide login encryption services between hosts attached to the router

Answer: B

Question 3

Why would a network administrator configure port security on a switch?

A. to prevent unauthorized Telnet access to a switch port
B. to prevent unauthorized hosts from accessing the LAN
C. to limit the number of Layer 2 broadcasts on a particular switch port
D. block unauthorized access to the switch management interfaces

Answer: B

Question 4

A company has placed a networked PC in a lobby so guests can have access to the corporate directory. A security concern is that someone will disconnect the directory PC and re-connect their laptop computer and have access to the corporate network. For the port servicing the lobby, which three configuration steps should be performed on the switch to prevent this? (Choose three)

A. Enable port security.
B. Create the port as a trunk port.
C. Create the port as an access port.
D Create the port as a protected port.
E. Set the port security aging time to 0.
F. Statically assign the MAC address to the address table.
G. Configure the switch to discover new MAC addresses after a set time of inactivity.

Answer: A C F

Question 5

What is the effect of using the service password-encryption command?

A. Only the enable password will be encrypted.
B. Only the enable secret password will be encrypted.
C. Only passwords configured after the command has been entered will be encrypted.
D. It will encrypt the secret password and remove the enable secret password from the configuration.
E. It will encrypt all current and future passwords.

Answer: E

Question 6

How can you ensure that only the MAC address of a server is allowed by switch port Fa0/1?

A. Configure port Fa0/1 to accept connections only from the static IP address of the server.
B. Configure the server MAC address as a static entry of port security.
C. Use a proprietary connector type on Fa0/1 that is incomputable with other host connectors.
D. Bind the IP address of the server to its MAC address on the switch to prevent other hosts from spoofing the server IP address.

Answer: B

Question 7

Refer to the exhibit. The network administrator made the entries that are shown and then saved the configuration. From a console connection, what password or password sequence is required for the administrator to access privileged mode on Router1?

```
Router# configure terminal
Router(config)# hostname Router1
Router1(config)# enable secret sanfran
Router1(config)# enable password cisco
Router1(config)# line vty 0 4
Router1(config-line)# password sanjose
Route r1(config-line)#
```

A. cisco
B. sanfran
C. sanjose
D. either cisco or sanfran
E. either cisco or sanjose
F. sanjose and sanfran

Answer: B

ICND1 – Subnetting

http://www.9tut.net/icnd1-100-101/new-icnd1-subnetting

Question 1

What is the subnet address for the IP address 172.19.20.23/28?

A. 172.19.20.0
B. 172.19.20.15
C. 172.19.20.16
D. 172.19.20.20
E. 172.19.20.32

Answer: C

Question 2

What is the network address for the host with IP address 192.168.23.61/28?

A. 192.168.23.0
B. 192.168.23.32
C. 192.168.23.48
D. 192.168.23.56
E. 192.168.23.60

Answer: C

Question 3

Given an IP address of 192.168.1.42 255.255.255.248, what is the subnet address?

A. 192.168.1.8/29
B. 192.168.1.32/27
C. 192.168.1.40/29
D. 192.168.1.16/28
E. 192.168.1.48/29

Answer: C

Question 4

Which IP addresses are valid for hosts belonging to the 10.1.160.0/20 subnet? (Choose three)

A. 10.1.168.0
B. 10.1.176.1
C. 10.1.174.255
D. 10.1.160.255
E. 10.1.160.0
F. 10.1.175.255

Answer: A C D

Question 5

Which one of the following IP addresses is the last valid host in the subnet using mask 255.255.255.224?

A. 192.168.2.63
B. 192.168.2.62
C. 192.168.2.61
D. 192.168.2.60
E. 192.168.2.32

Answer: B

Question 6

An administrator is working with the 192.168.4.0 network, which has been subnetted with a /26 mask. Which two addresses can be assigned to hosts within the same subnet? (Choose two)

A. 192.168.4.61
B. 192.168.4.63
C. 192.168.4.67
D. 192.168.4.125
E. 192.168.4.128
F. 192.168.4.132

Answer: C D

Question 7

An administrator must assign static IP addresses to the servers in a network. For network 192.168.20.24/29, the router is assigned the first usable host address while the sales server is given the last usable host address. Which of the following should be entered into the IP properties box for the sales server?

A. IP address: 192.168.20.14
Subnet Mask: 255.255.255.248
Default Gateway. 192.168.20.9

B. IP address: 192.168.20.254
Subnet Mask: 255.255.255.0
Default Gateway: 192.168.20.1

C. IP address: 192.168.20.30
Subnet Mask: 255.255.255.248
Default Gateway: 192.168.20.25

D. IP address: 192.168.20.30
Subnet Mask: 255.255.255.240
Default Gateway: 192.168.20.17

E. IP address: 192.168.20.30
Subnet Mask: 255.255.255.240
Default Gateway. 192.168.20.25

Answer: C

Question 8

Given a Class C IP address subnetted with a /30 subnet mask, how many valid host IP addresses are available on each of the subnets?

A. 1
B. 2
C. 4
D. 8
E. 252
F. 254

Question 9

Which two statements describe the IP address 10.16.3.65/23? (Choose two)

A. The subnet address is 10.16.3.0 255.255.254.0.
B. The lowest host address in the subnet is 10.16.2.1 255.255.254.0.
C. The last valid host address in the subnet is 10.16.2.254 255.255.254.0
D. The broadcast address of the subnet is 10.16.3.255 255.255.254.0.
E. The network is not subnetted.

Answer: B D

Question 10

What is the subnet address of 172.16.159.159/22?

A. 172.16.0.0
B. 172.16.128.0
C. 172.16.156.0
D. 172.16.159.0
E. 172.16.159.128
F. 172.16.192.0

Answer: C

ICND1 – Subnetting 2

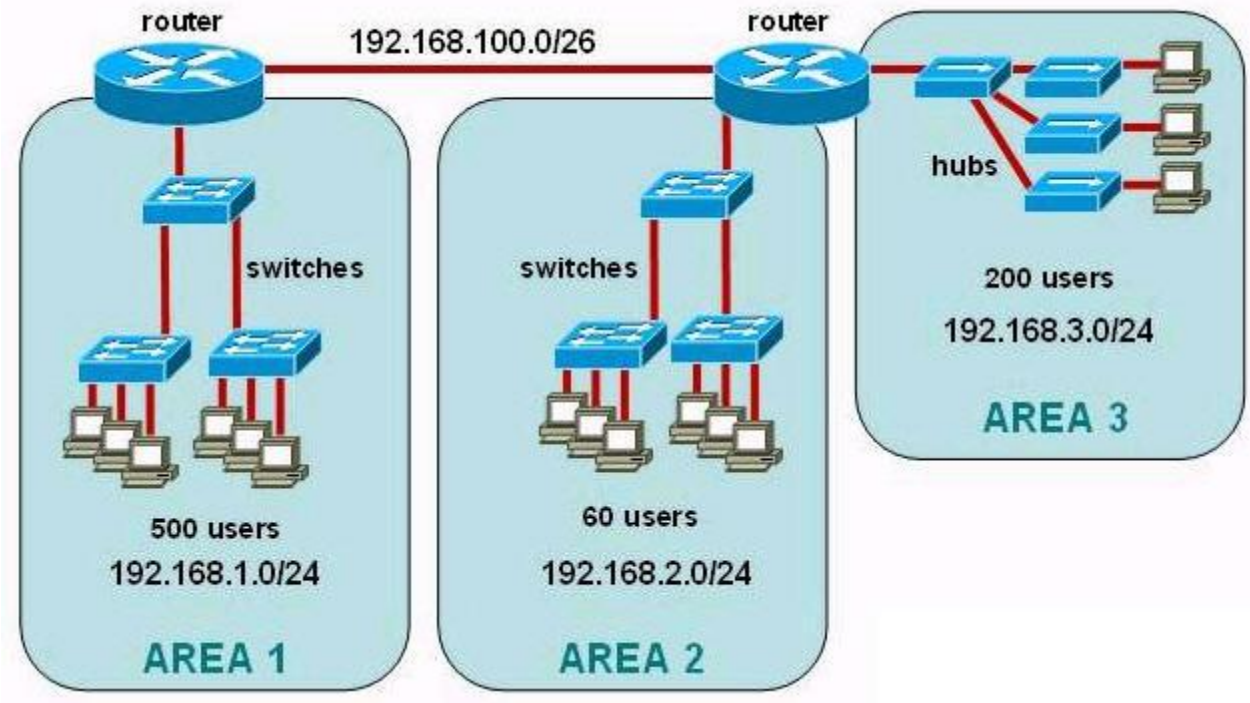
http://www.9tut.net/icnd1-100-101/new-icnd1-subnetting-2

Question 1

Refer to the exhibit. The junior network support staff provided the diagram as a recommended configuration for the first phase of a four-phase network expansion project. The entire network expansion will have over 1000 users on 14 network segments and has been allocated this IP address space:

192.168.1.1 through 192.168.5.255
192.168.100.1 through 198.168.100.255

What are three problems with this design? (Choose three)



A – The AREA 1 IP address space is inadequate for the number of users.
B – The AREA 3 IP address space is inadequate for the number of users.
C – AREA 2 could use a mask of /25 to conserve IP address space.
D – The network address space that is provided requires a single network-wide mask.
E – The router-to-router connection is wasting address space.
F – The broadcast domain in AREA 1 is too large for IP to function.

Answer: A C E

Question 2

Refer to the exhibit. The enterprise has decided to use the network address 172.16.0.0. The network administrator needs to design a classful addressing scheme to accommodate the three subnets, with 30, 40, and 50 hosts, as shown. What subnet mask would accommodate this network?

Net bits	Subnet mask	total-addresses per subnet
/20	255.255.240.0	4096
/21	255.255.248.0	2048
/22	255.255.252.0	1024
/23	255.255.254.0	512
/24	255.255.255.0	256
/25	255.255.255.128	128
/26	255.255.255.192	64
/27	255.255.255.224	32
/28	255.255.255.240	16
/29	255.255.255.248	8
/30	255.255.255.252	4

A. 255.255.255.192
B. 255.255.255.224
C. 255.255.255.240
D. 255.255.255.248

Answer: A

Question 3

The network manager has requested a 300-workstation expansion of the network. The workstations are to be installed in a single broadcast domain, but each workstation must have its own collision domain. The expansion is to be as cost-effective as possible while still

meeting the requirements. Which three items will adequately fulfill the request? (Choose three)

A. one IP subnet with a mask of 255.255.254.0
B. two IP subnets with a mask of 255.255.255.0
C. seven 48-port hubs
D. seven 48-port switches
E. one router interface
F. seven router interfaces

Answer: A D E

Question 4

Which router command will configure an interface with the IP address 10.10.80.1/19?

A. router(config-if)# ip address 10.10.80.1/19
B. router(config-if)# ip address 10.10.80.1 255.255.0.0
C. router(config-if)# ip address 10.10.80.1 255.255.255.0
D. router(config-if)# ip address 10.10.80.1 255.255.224.0
E. router(config-if)# ip address 10.10.80.1 255.255.240.0
F. router(config-if)# ip address 10.10.80.1 255.255.255.240

Answer: D

ICND1 – IP Routing

http://www.9tut.net/icnd1-100-101/new-icnd1-ip-routing

Question 1

What is the best practice when assigning IP addresses in a small office of six hosts?

A. Use a DHCP server that is located at the headquarters.
B. Use a DHCP server that is located at the branch office.
C. Assign the addresses by using the local CDP protocol.
D. Assign the addresses statically on each node.

Answer: D

Question 2

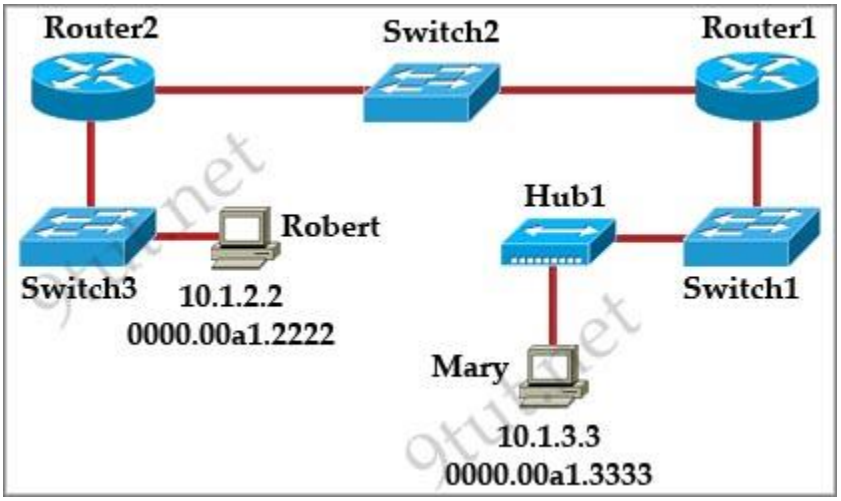
The ip helper-address command does what?

A. assigns an IP address to a host
B. resolves an IP address from a DNS server
C. relays a DHCP request across networks
D. resolves an IP address overlapping issue

Answer: C

3

Refer to the exhibit. As packets travel from Mary to Robert, which three devices will use the destination MAC address of the packet to determine a forwarding path? (Choose three)

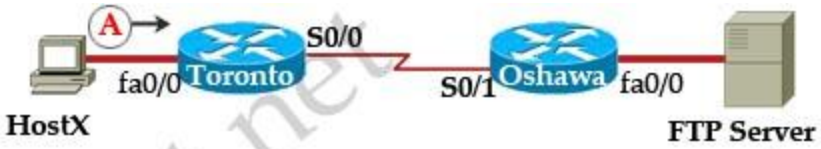


A. Hub1
B. Switch1
C. Router1
D. Switch2
E. Router2
F. Switch3

Answer: B D F

Question 4

Refer to the exhibit. HostX is transferring a file to the FTP server. Point A represents the frame as it goes toward the Toronto router. What will the Layer 2 destination address be at this point?



	IP Address	MAC Address
HostA	192.168.1.5	abcd.1123.0045
fa0/0 (Toronto)	192.168.1.1	abcd.2246.0035
	192.168.7.1	aabb.7777.3333
FTP Server	192.168.7.17	aabb.5555.2222

A. abcd. 1123.0045
B. 192.168.7.17
C. aabb.5555.2222
D. 192.168.1.1
E. abcd.2246.0035

Answer: E

Question 5

The command **ip route 192.168.100.160 255.255.255.224 192.168.10.2** was issued on a router. No routing protocols or other static routes are configured on the router. Which statement is true about this command?

A. The interface with IP address 192.168.10.2 is on this router.
B. The command sets a gateway of last resort for the router.
C. Packets that are destined for host 192.168.100.160 will be sent to 192.168.10.2.
D. The command creates a static route for all IP traffic with the source address 192.168.100.160.

Answer: C

Question 6

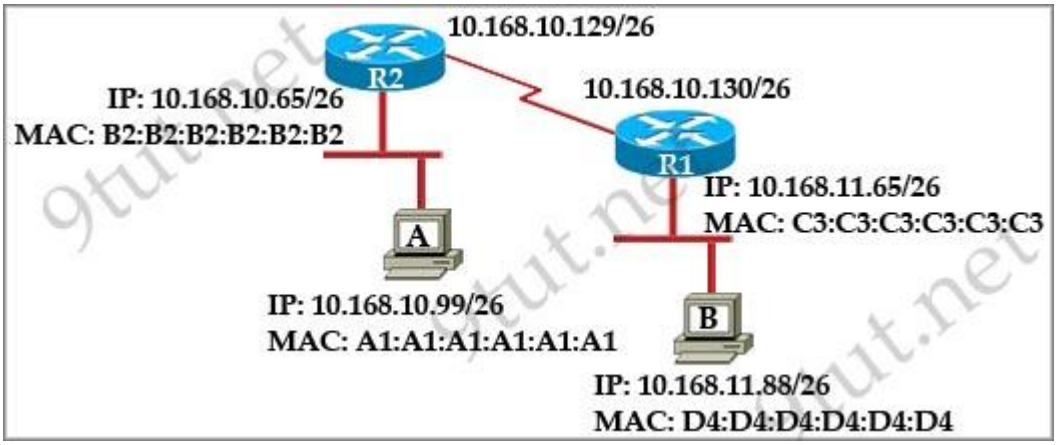
What does administrative distance refer to?

A. the cost of a link between two neighboring routers
B. the advertised cost to reach a network
C. the cost to reach a network that is administratively set
D. a measure of the trustworthiness of a routing information source

Answer: D

Question 7

Refer to the exhibit. If host A sends an IP packet to host B, what will the source physical address be in the frame when it reaches host B?

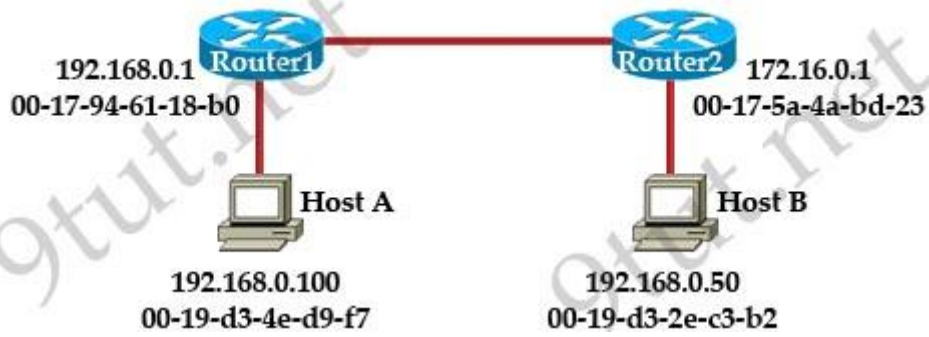


A. 10.168.10.99
B. 10.168.11.88
C. A1:A1:A1:A1:A1:A1
D. B2:B2:B2:B2:B2:B2
E. C3:C3:C3:C3:C3:C3
F. D4:D4:D4:D4:D4:D4

Answer: E

Question 8

Refer to the exhibit. Host A is sending a packet to Host B for the first time. What destination MAC address will Host A use in the ARP request?

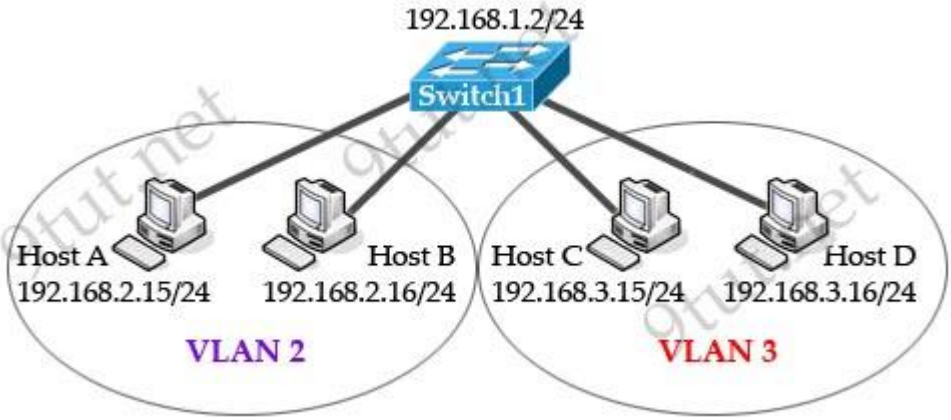


A. 192.168.0.1
B. 172.16.0.50
C. 00-17-94-61-18-b0
D. 00-19-d3-2d-c3-b2
E. ff-ff-ff-ff-ff-ff
F. 255.255.255.255

Answer: E

Question 9

Refer to the exhibit. Host A can communicate with Host B but not with Host C or D. How can the network administrator solve this problem?

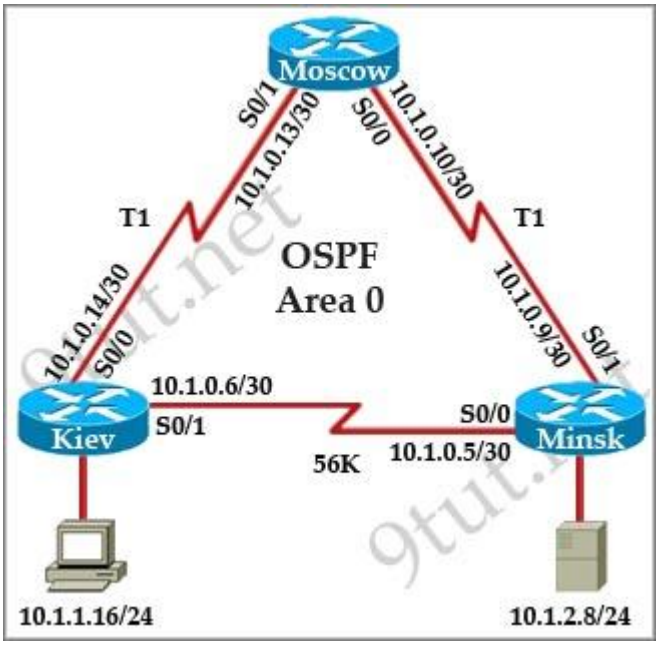


A. Configure Hosts C and D with IP addresses in the 192.168.2.0 network.
B. Install a router and configure a route to route between VLANs 2 and 3.
C. Install a second switch and put Hosts C and D on that switch while Hosts A and B remain on the original switch.
D. Enable the VLAN trunking protocol on the switch.

Answer: B

Question 10

Refer to the exhibit. The host in Kiev sends a request for an HTML document to the server in Minsk. What will be the source IP address of the packet as it leaves the Kiev router?



A. 10.1.0.1
B. 10.1.0.5
C. 10.1.0.6
D. 10.1.0.14
E. 10.1.1.16
F. 10.1.2.8

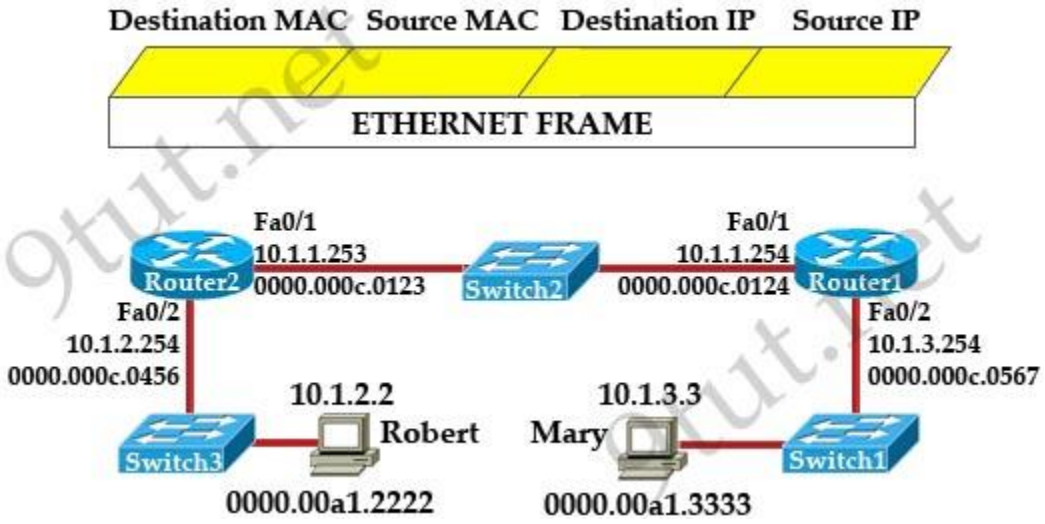
Answer: E

ICND1 – IP Routing 2

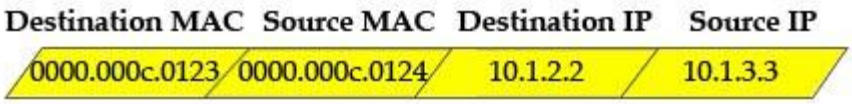
http://www.9tut.net/icnd1-100-101/new-icnd1-ip-routing-2

Question 1

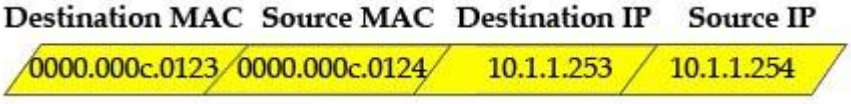
Refer to the exhibit. Mary is sending an instant message to Robert. The message will be broken into a series of packets that will traverse all network devices. What addresses will populate these packets as they are forwarded from Router1 to Router2?



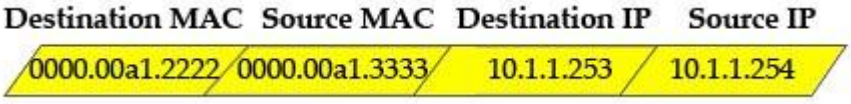
A.



B.



C.



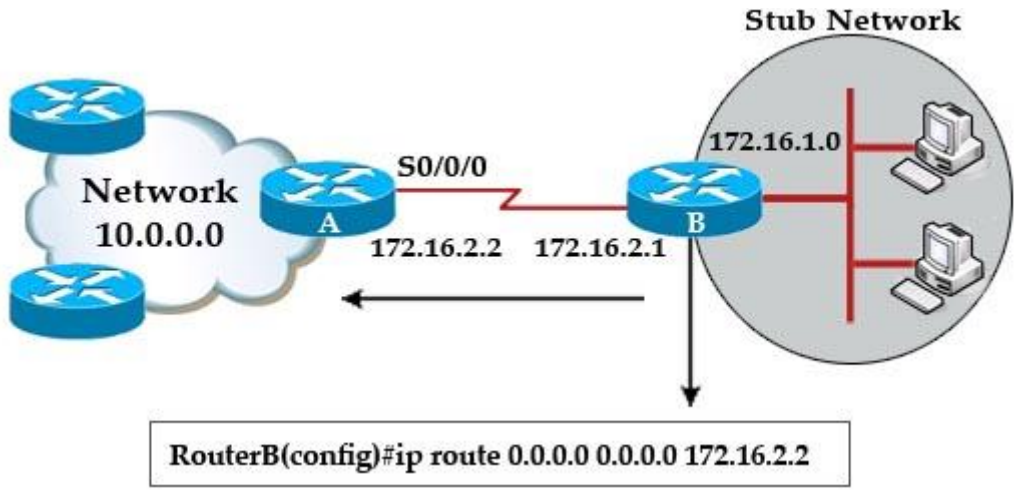
D.

Destination MAC	Source MAC	Destination IP	Source IP
0000.000c.0456	0000.000c.0567	10.1.2.2	10.1.3.3

Answer: A

Question 2

Refer to the exhibit. Which two statements are correct? (Choose two)

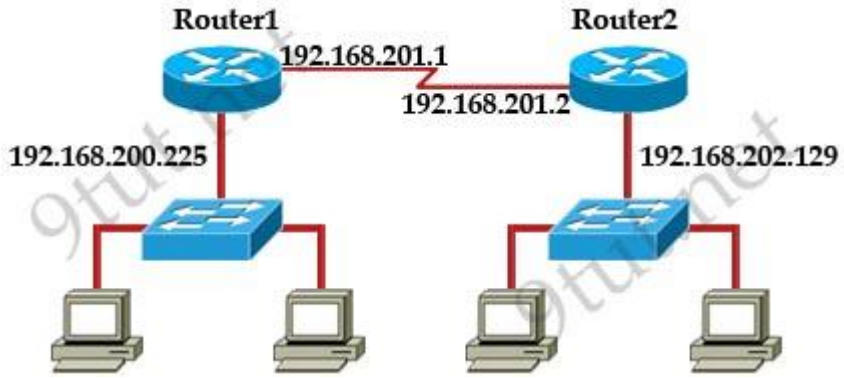


A. This is a default route.
B. Adding the subnet mask is optional for the ip route command.
C. This will allow any host on the 172.16.1.0 network to reach all known destinations beyond RouterA.
D. This command is incorrect, it needs to specify the interface, such as s0/0/0 rather than an IP address.
E. The same command needs to be entered on RouterA so that hosts on the 172.16.1.0 network can reach network 10.0.0.0.

Answer: A C

Question 3

Refer to the exhibit. Which command would you use to configure a static route on Router1 to network 192.168.202.0/24 with a nondefault administrative distance?



A. router1(config)#ip route 1 192.168.201.1 255.255.255.0 192.168.201.2
B. router1(config)#ip route 192.168.202.0 255.255.255.0 192.168.201.2 1
C. router1(config)#ip route 5 192.168.202.0 255.255.255.0 192.168.201.2
D. router1(config)#ip route 192.168.202.0 255.255.255.0 192.168.201.2 5

Answer: D

Question 4

Refer to the exhibit. The output is from a router in a large enterprise. From the output, determine the role of the router.

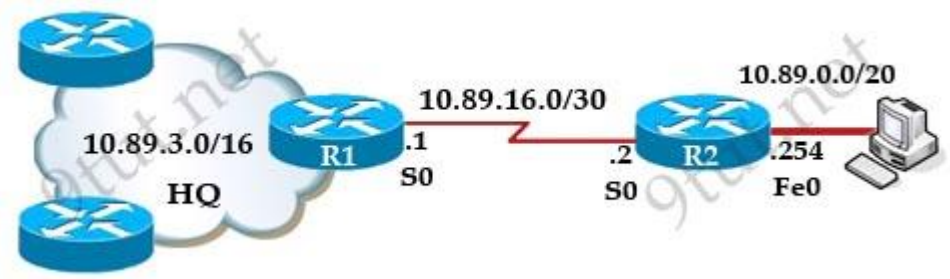
```
RouterA# show ip route
Codes: C - connected, S - static, R - RIP, M - mobile, B - BGP
       D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
       N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
       E1 - OSPF external type 1, E2 - OSPF external type 2
       i - IS-IS, su - IS-IS summary, L1 - IS-IS level-1, L2 - IS-IS level-2
       ia - IS-IS inter area, * - candidate default, U - per-user static route
       o - ODR, P - periodic downloaded static route

Gateway of last resort is 0.0.0.0 to network 0.0.0.0

      172.16.0.0/24 is subnetted, 1 subnets
C        172.16.1.0 is directly connected, Ethernet0/1
      10.0.0.0/30 is subnetted, 1 subnets
C        10.255.255.200 is directly connected, Serial0/0
S*    0.0.0.0/0 is directly connected, Serial0/0
RouterA#
```

A. A Core router.
B. The HQ Internet gateway router.
C. The WAN router at the central site.
D. Remote stub router at a remote site.

Answer: D

Question 5

Refer to the exhibit. What is the simplest way to configure routing between the regional office network 10.89.0.0/20 and the corporate network?

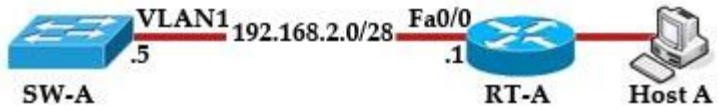


A. router1(config)#ip route 10.89.0.0 255.255.240.0 10.89.16.2
B. router2(config)#ip route 10.89.3.0 255.255.0.0 10.89.16.2
C. router1(config)#ip route 10.89.0.0 255.255.240.0 10.89.16.1
D. router2(config)#ip route 0.0.0.0 0.0.0.0 10.89.16.1

Answer: D

Question 6

Refer to the exhibit. What must be configured to establish a successful connection from Host A to switch SW-A through router RT-A?

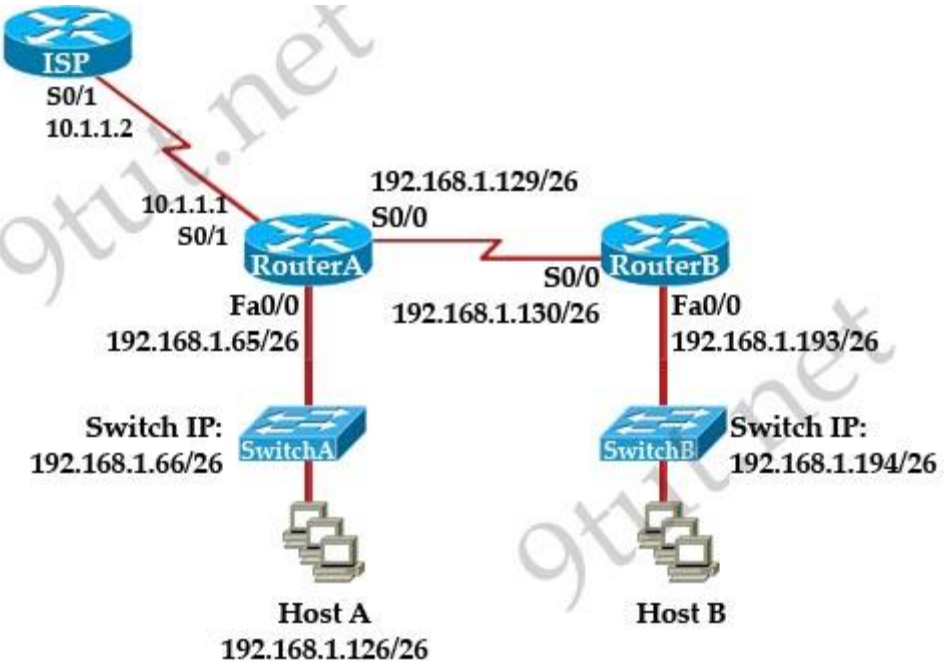


A. VLAN 1 on RT-A
B. IP routing on SW-A
C. default gateway on SW-A
D. crossover cable connecting SW-A and RT-A

Answer: C

Question 7

Refer to the exhibit. Which default gateway address should be assigned to HostA?



A. 192.168.1.1
B. 192.168.1.65
C. 192.168.1.66
D. 192.168.1.129
E. 10.1.1.1
F. 10.1.1.2

Answer: B

ICND1 – NAT/PAT

http://www.9tut.net/icnd1-100-101/new-icnd1-natpat

Question 1

What happens when computers on a private network attempt to connect to the Internet through a Cisco router running PAT?

A. The router uses the same IP address but a different TCP source port number for each connection.
B. An IP address is assigned based on the priority of the computer requesting the connection.
C. The router selects an address from a pool of one-to-one address mappings held in the lookup table.
D. The router assigns a unique IP address from a pool of legally registered addresses for the duration of the connection.

Answer: A

Question 2

In the configuration of NAT, what does the keyword overload signify?

A. When bandwidth is insufficient, some hosts will not be allowed to access network translation.
B. The pool of IP addresses has been exhausted.
C. Multiple internal hosts will use one IP address to access external network resources.
D. If the number of available IP addresses is exceeded, excess traffic will use the specified address pool.

Answer: C

Question 3

When configuring NAT, the Internet interface is considered to be what?

A. local
B. inside
C. global
D. outside

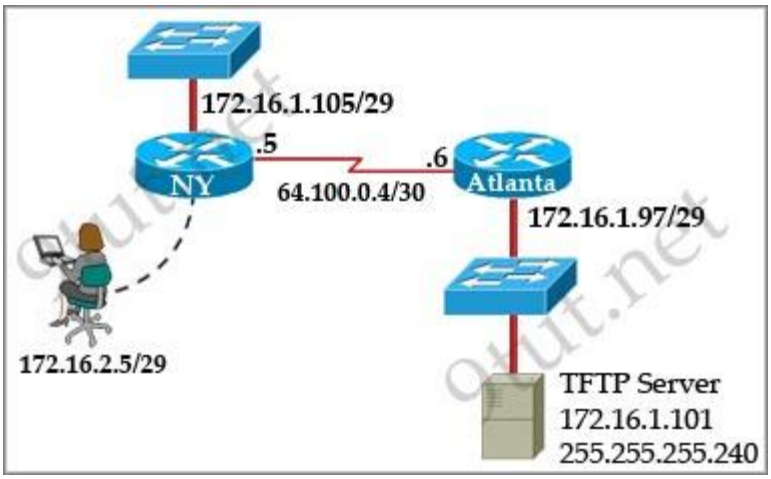
Answer: D

ICND1 – Troubleshooting

http://www.9tut.net/icnd1-100-101/new-icnd1-troubleshooting

Question 1

Refer to the exhibit. A TFTP server has recently been installed in the Atlanta office. The network administrator is located in the NY office and has made a console connection to the NY router. After establishing the connection they are unable to backup the configuration file and IOS of the NY router to the TFTP server. What is the cause of this problem?



A. The NY router has an incorrect subnet mask.
B. The TFTP server has an incorrect IP address.
C. The TFTP server has an incorrect subnet mask.
D. The network administrator computer has an incorrect IP address.

Answer: C

Question 2

Refer to the exhibit. A network administrator has configured a Catalyst 2950 switch for remote management by pasting into the console the configuration commands that are shown in the exhibit. However, a Telnet session cannot be successfully established from a remote host. What should be done to fix this problem?

```
interface vlan 1
ip address 192.168.17.253 255.255.255.240
no shutdown
exit
ip default-gateway 192.168.17.1
line vty 0 15
password cisco
login
exit
```

A. Change the first line to interface fastethernet 0/1.
B. Change the first line to interface vlan 0/1.
C. Change the fifth line to ip default-gateway 192.168.17.241.
D. Change the fifth line to ip route 0.0.0.0 0.0.0.0 192.168.17.1.
E. Change the sixth line to line con 0.

Answer: C

ICND1 – Drag and Drop

http://www.9tut.net/icnd1-100-101/new-icnd1-drag-and-drop

Question 1

Various protocols are listed on the left On the right are applications for the use of those protocols. Drag the protocol on the left to an associated function for that protocol on the right (Not all options are used)

ICMP	A PC sends packets to the default gateway IP address the first time since the PC turned on.
DHCP	The network administrator is checking basic IP connectivity from a workstation to a server.
RARP	The TCP/IP protocol stack must find an IP address for packets destined for a URL.
UDP	A network device will automatically assign IP addresses to workstations.
DNS	
ARP	

Answer:

+ ARP: A PC sends packets to the default gateway IP address the first time since the PC turned on.
+ ICMP: The network administrator is checking basic IP connectivity from a workstation to a server.
+ DNS: The TCP/IP protocol stack must find an IP address for packets destined for a URL.
+ DHCP: A network device will automatically assign IP addresses to workstations.

Question 2

Move the protocol or service on the left to a situation on the right where it would be used. (Not all options are used)

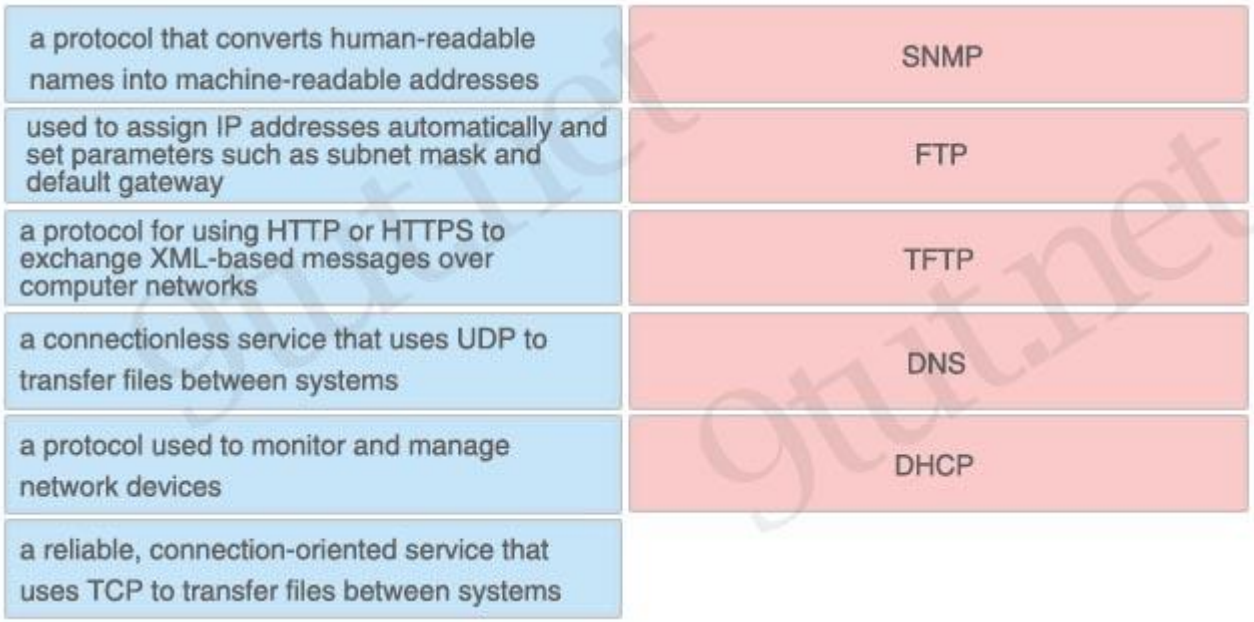
OSPF	A PC with address 10.1.5.10 must access devices on the Internet.
ARP	Only routers and servers require static IP addresses. Easy IP administration is required.
NAT	A PC only knows a server as a MediaServer. IP needs to send data to that server.
DNS	A protocol is needed to replace current static routes with automatic route updates.
SQL	
DHCP	

Answer:

+ NAT: A PC with address 10.1.5.10 must access devices on the Internet.
+ DHCP: Only routers and servers require static IP addresses. Easy IP administration is required.
+ DNS: A PC only knows a server as MediaServer. IP needs to send data to that server.
+ OSPF: A protocol is needed to replace current static routes with automatic route updates.

Question 3

Drag the definition on the left to the correct term on the right. Not all definitions on the left will be used.

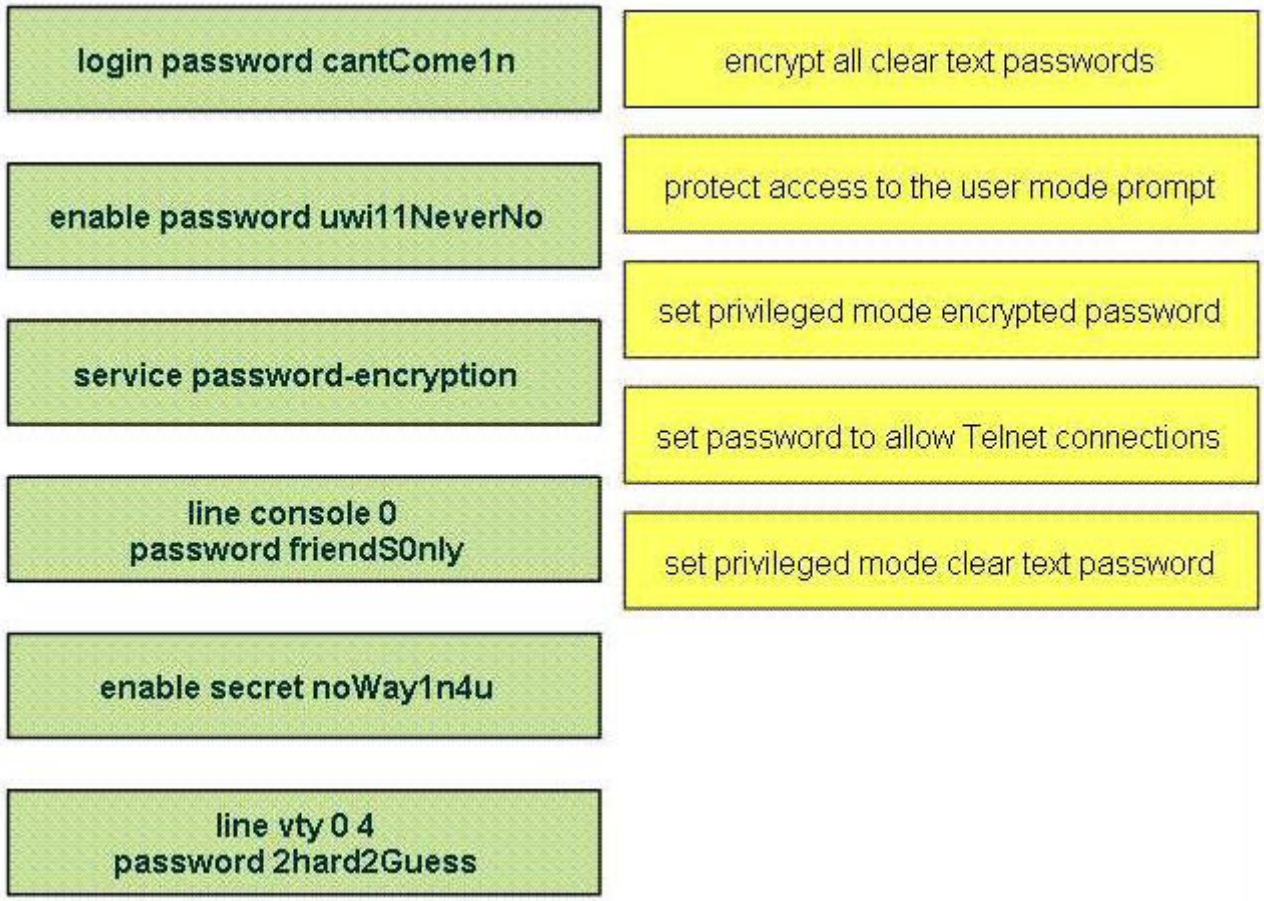


Answer:

+ SNMP: a protocol used to monitor and manage network devices
+ FTP: a reliable, connection-oriented service that uses TCP to transfer files between systems
+ TFTP: a connectionless service that uses UDP to transfer files between systems
+ DNS: a protocol that converts human-readable names into machine-readable addresses
+ DHCP: used to assign IP addresses automatically and set parameters such as subnet mask and default gateway

Question 4

Drag the appropriate command on the left to the configuration task it accomplishes (not all options are used)

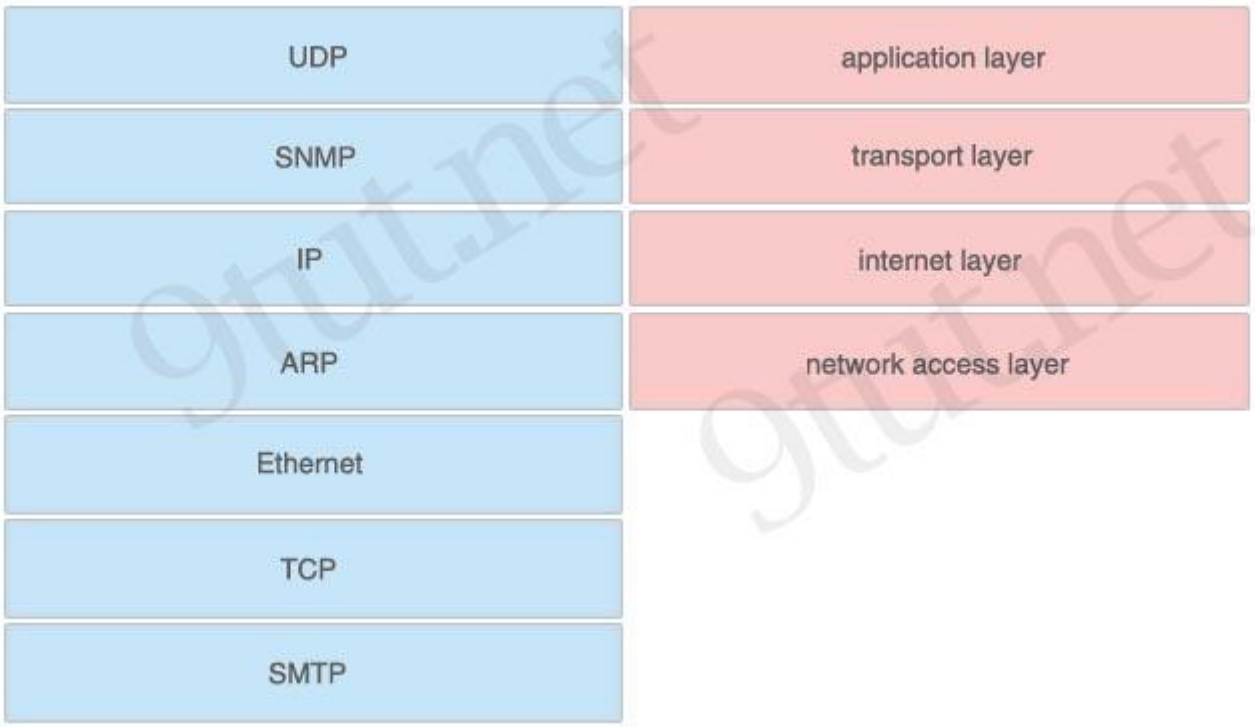


Answer:

service password-encryption	encrypt all clear text passwords
line console 0 password friendS0nly	protect access to the user mode prompt
enable secret noWay1n4u	set privileged mode encrypted password
line vty 0 4 password 2hard2Guess	set password to allow Telnet connections
enable password uwi11NeverNo	set privileged mode clear text password

Question 5

On the left are various network protocols. On the right are the layers of the TCP/IP model. Assuming a reliable connection is required, move the protocols on the left to the TCP/IP layers on the right to show the proper encapsulation for an email message sent by a host on a LAN. (Not all options are used)



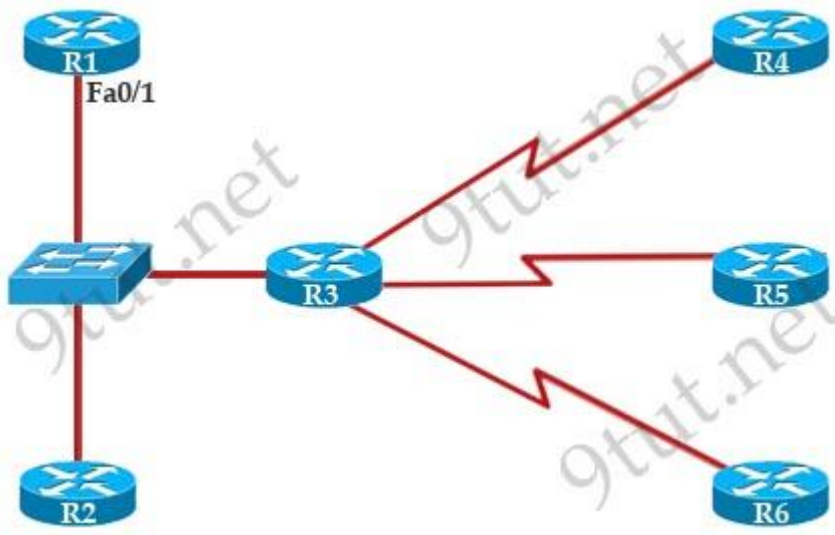
Answer:

+ application layer: SMTP
+ transport layer: TCP
+ internet layer: IP
+ network access layer: Ethernet

OSPF Neighbor Sim

http://www.9tut.net/icnd1/labsim/ospf-neighbor-sim

Topology:



Implementation SIM 2

http://www.9tut.net/icnd1/labsim/implementation-sim-2

This topology contains 3 routers and 1 switch. Complete the topology.

Drag the appropriate device icons to the labeled Device
Drag the appropriate connections to the locations labeled Connections.
Drag the appropriate IP addresses to the locations labeled IP address

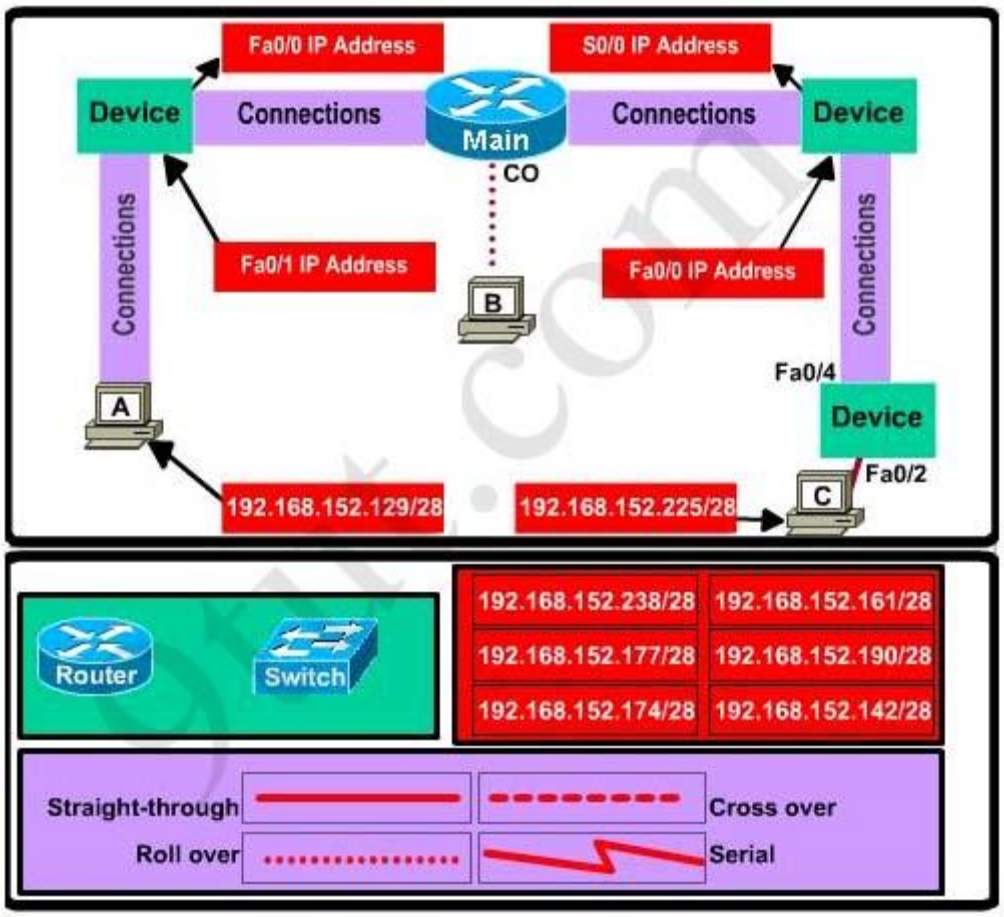
(Hint: use the given host addresses and Main router information)
To remove a device or connection, drag it away from the topology.

Use information gathered from the Main router to complete the configuration of any additional routers. No passwords are required to access the Main router. The config terminal command has been disabled for the HQ router. The router does not require any configuration.

Configure each additional router with the following:

Configure the interfaces with the correct IP address and enable the interfaces.
Set the password to allow console access to **consolepw**
Set the password to allow telnet access to **telnetpw**
Set the password to allow privilege mode access to **privpw**

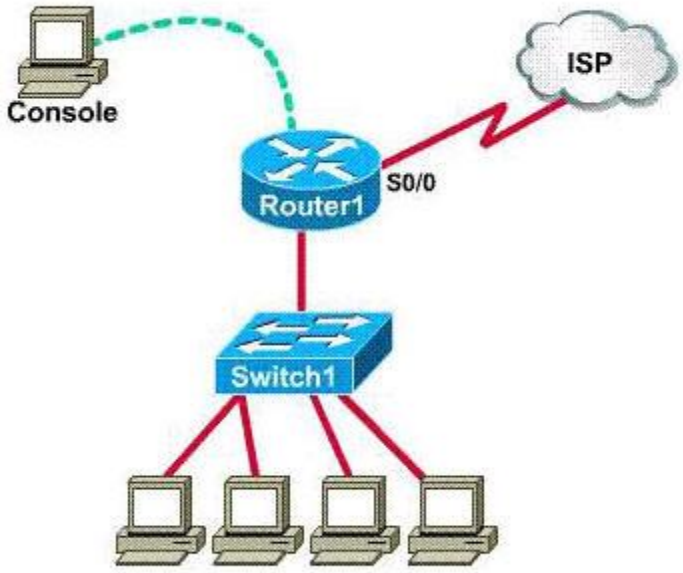
Note: Because routes are not being added to the configurations, you will not be able to ping through the internetwork.
All devices have cable autosensing capabilities disabled.
All hosts are PC's

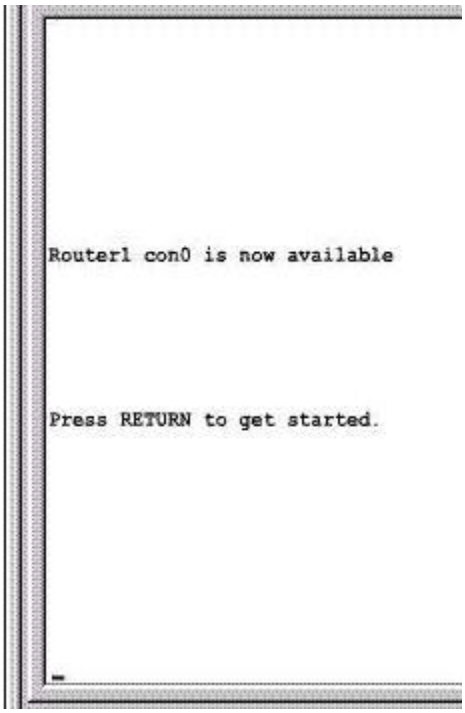


Show Configuration Sim

http://www.9tut.net/icnd1/labsim/show-configuration-sim

This task requires the use of various show commands from the CLI of Router1 to answer 5 multiple-choice questions. This does not require any configuration.





NOTE: The **show running-configuration** and the **show startup-configuration** commands have been disabled in this simulation.
To access the multiple-choice questions, click on the numbered boxes on the right of the top panel.
There are 5 multiple-choice questions with this task. Be sure to answer all 5 questions before leaving this item.

Question 1:

What is the subnet broadcast address of the LAN connected to Router1?
A – 192.168.136.15
B -192.168.136.31
C -192.168.136.63
D – 192.168.136.127
E – 255.255.255.255

Answer: A

Question 2:

What is the bandwidth on the WAN interface of Router1?
A – 16 Kbit/sec
B – 32 Kbit/sec
C – 64 Kbit/sec
D – 128 Kbit/sec
E – 512 Kbit/sec
F – 1544 Kbit/sec

Answer: E

Question 3:

What interfaces on Router1 have not had any configurations applied? (Choose two)

A – Ethernet 0
B – FastEthenet 0/0
C – FastEthernet 0/1
D – Serial 0
E – Serial 0/0
F – Serial 0/1

Answer: C F

Question 4:

Including the address on the Router1 FastEthernet interface, how many hosts can have IP addresses on the LAN to which Router1 is connected?
A – 6
B – 14
C – 62
D – 128

Answer: B

Question 5:

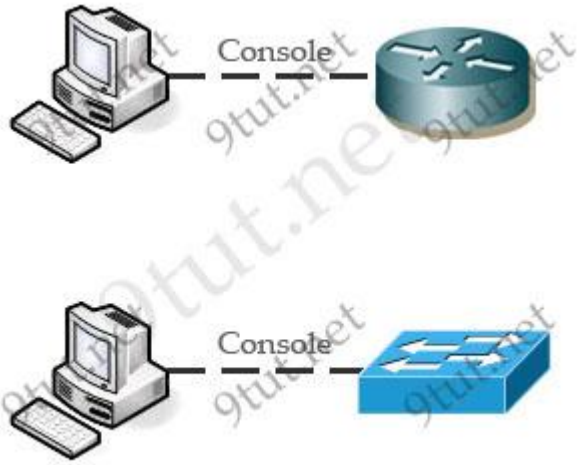
The hosts in the LAN are not able to connect to the Internet. Which commands will correct this issue?
A – Router1(conf)# interface fa0/0
Router1(conf-if)# no shutdown
B – Routed (conf)# interface fa0/1
Router1(conf-if)# no shutdown
C – Router1(conf)# interface s0/0
Router1(conf-if)# no shutdown
D – Router1(conf)# interface s0/1
Router1(conf-if)# no shutdown
E – Router1(conf)# interface s0/0
Router1(conf-if)# ip address 10.11.12.13 255.255.255.252
F – Router1(conf)# interface s0/1
Routerl (conf-if)# ip address 10.11.12.13 255.255.255.252

Answer: C

Security Testlet

http://www.9tut.net/icnd1/icnd1-security-testlet

Question



Not sure about the requirement of this question but it is something like this:

Before this switch and router can be put to use in the network, what security risks can be found…

We are still not sure about the configurations in this sim but we got some information to share with you (updated on December-07-2011. Thanks Joe Mendola, xallax and many candidates who share the information!):

Maybe this is the configurations on Router and Switch (but notice that they are surely missing something):

ROUTER A CONFIGURATION

```
!
no service password-encryption
!
enable password cisco
!
username ciscouser privilege 15 password 0 cisco
!
banner motd ^CWelcome! If you encountered any problem, please consult the
administrator^C
!
line vty 0 4
password 4t&34rkf
login local
transport input telnet ssh
!
```

SWITCH A CONFIGURATION

```
!
!
no service password-encryption
!
hostname switch1
enable password cisco
username ciscouser password 0 cisco
ip domain-name cisco.com

banner login ^c
********** welcome to Switch1. If you encountered any problem, please consult the administrator ********** ^c

line con 0
line vty 0 4
login login local
transport input ssh
line vty 5 15
login local
transport input ssh
```

Note: This is just what we gather and guess. In the exam the configurations may be different so make sure you understand about "enable secret", "enable password", "login", "login local", "transport input", "line vty", "service password-encryption", "bannder motd", "privilege" before taking this exam!

This sim has 4 questions:

Question 1

Identify security threats on RouterA (select 3)

A. unencrypted password set
B. unsecured message on banner
C. remote access can only be made through telnet or SSH
D. user gets level 15 automatically by default

Answer: A C D

Question 2

Which two of the following are true regarding the configuration of RouterA (choose two)

A. at least 5 simultaneous remote connect are possible
B. only telnet protocol connections to Router A are supported
C. remotely connection to RouterA using telnet will succeed
D. console line connection will never time out due to inactivity
E. since DHCP is not used on Fa0/1 there is not a need to use the NAT protocol

Answer: A C

Question 3

Select the options which are security issues which need to be modified before RouterA is used (not sure how many answers we can choose)

A. unencrypted weak password is configured to protect privilege mode
B. inappropriate wording in banner message
C. the virtual terminal lines have weak password configured
D. virtual terminal lines have a password, but it will not be used
E. configuration supports in-secure web server access

Answer: A D

Question 4

Select three options which are security issues with the current configuration of Switch A. (Choose three)

A. privilege mode is protected with an unencrypted password
B. inappropriate wording in banner message
C. virtual terminal lines are protected only by a password requirement
D. both the username and password are weak
E. telnet connections can be used to remotely manage the switch
F. Cisco user will be granted privilege level 15 by default

Answer: not sure

ICND2 200-101

ICND2 – HSRP VRRP GLBP

http://www.9tut.net/icnd2-200-101/new-icnd2-hsrp-vrrp-glbp

Question 1

Which one of these is a valid HSRP Virtual Mac Address?

A. 0000.0C07.AC01
B. 0000.5E00.0110
C. 0007.B400.1203
D. 0000.C007.0201

Answer: A

Question 2

Which three statements about HSRP operation are true? (Choose three)

A. The virtual IP address and virtual MAC address are active on the HSRP Master router.
B. The HSRP default timers are a 3 second hello interval and a 10 second dead interval.
C. HSRP supports only clear-text authentication.
D. The HSRP virtual IP address must be on a different subnet than the routers' interfaces on the same LAN.
E. The HSRP virtual IP address must be the same as one of the router's interface addresses on the LAN.
F. HSRP supports up to 255 groups per interface, enabling an administrative form of load balancing.

Answer: A B F

Question 3

Which statement describes VRRP object tracking?

A. It monitors traffic flow and link utilization.
B. It ensures the best VRRP router is the virtual router master for the group.
C. It causes traffic to dynamically move to higher bandwidth links
D. It thwarts man-in-the-middle attacks.

Answer: B

Question 4

In GLBP, which router will respond to client ARP requests?

A. The active virtual gateway will reply with one of four possible virtual MAC addresses.
B. All GLBP member routers will reply in round-robin fashion.
C. The active virtual gateway will reply with its own hardware MAC address.
D. The GLBP member routers will reply with one of four possible burned in hardware addresses.

Answer: A

Question 5

In a GLBP network, who is responsible for the arp request?

A. AVF
B. AVG
C. Active Router
D. Standby Router

Answer: B

Question 6

What are three benefits of GLBP? (Choose three)

A. GLBP supports up to eight virtual forwarders per GLBP group.
B. GLBP supports clear text and MD5 password authentication between GLBP group members.
C. GLBP is an open source standardized protocol that can be used with multiple vendors.
D. GLBP supports up to 1024 virtual routers.
E. GLBP can load share traffic across a maximum of four routers.
F. GLBP elects two AVGs and two standby AVGs for redundancy.

Answer: B D E

ICND2 – NetFlow

http://www.9tut.net/icnd2-200-101/new-icnd2-netflow

Question 1

What are the benefit of using Netflow? (Choose three)

A. Network, Application & User Monitoring

B. Network Planning

C. Security Analysis

D. Accounting/Billing

Answer: A C D

Question 2

What are the three things that the NetFlow uses to consider the traffic to be in a same flow?

A. IP address

B. Interface name

C. Port numbers

D. L3 protocol type

E. MAC address

Answer: A C D

Question 3

What NetFlow component can be applied to an interface to track IPv4 traffic?

A. flow monitor

B. flow record

C. flow sampler

D. flow exporter

Answer: A

Question 4

What command visualizes the general NetFlow data on the command line?

A. show ip flow export

B. show ip flow top-talkers

C. show ip cache flow

D. show mls sampling

E. show mls netflow ip

Answer: C

Question 5

What are three reasons to collect NetFlow data on a company network? (Choose three)

A. To identify applications causing congestion.

B. To authorize user network access.

C. To report and alert link up / down instances.

D. To diagnose slow network performance, bandwidth hogs, and bandwidth utilization.

E. To detect suboptimal routing in the network.

F. To confirm the appropriate amount of bandwidth that has been allocated to each Class of Service.

Answer: A D F

Question 6

What are three factors a network administrator must consider before implementing Netflow in the network? (Choose three)

A. CPU utilization

B. where Netflow data will be sent

C. number of devices exporting Netflow data

D. port availability

E. SNMP version

F. WAN encapsulation

Answer: A B C

Question 7

What Cisco IOS feature can be enabled to pinpoint an application that is causing slow network performance?

A. SNMP

B. Netflow

C. WCCP

D. IP SLA

Answer: B

ICND2 – WAN Questions

http://www.9tut.net/icnd2-200-101/new-icnd2-wan-questions

Question 1

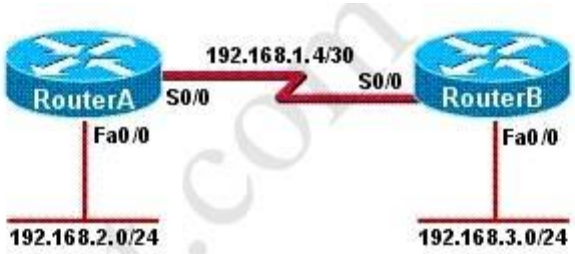
Which two statements about using the CHAP authentication mechanism in a PPP link are true? (Choose two)

A. CHAP uses a two-way handshake.
B. CHAP uses a three-way handshake.
C. CHAP authentication periodically occurs after link establishment.
D. CHAP authentication passwords are sent in plaintext.
E. CHAP authentication is performed only upon link establishment.
F. CHAP has no protection from playback attacks.

Answer: B C

Question 2

Refer to the exhibit. Hosts in network 192.168.2.0 are unable to reach hosts in network 192.168.3.0. Based on the output from RouterA, what are two possible reasons for the failure? (Choose two)




```
RouterA# show ip interface brief
Interface              IP-Address      OK? Method Status                Protocol
FastEthernet0/0        192.168.2.1     YES manual up                    up
Serial0/0              192.168.1.5     YES manual up                    down
Serial0/1              unassigned      YES manual administratively down down
```

A. The cable that is connected to S0/0 on RouterA is faulty.
B. Interface S0/0 on RouterB is administratively down.
C. Interface S0/0 on RouterA is configured with an incorrect subnet mask.
D. The IP address that is configured on S0/0 of RouterB is not in the correct subnet.
E. Interface S0/0 on RouterA is not receiving a clock signal from the CSU/DSU.
F. The encapsulation that is configured on S0/0 of RouterB does not match the encapsulation that is configured on S0/0 of RouterA.

Answer: E F

Question 3

Which command is used to enable CHAP authentication with PAP as the fallback method on a serial interface?

A. (config-if)# authentication ppp chap fallback ppp
B. (config-if)# authentication ppp chap pap
C. (config-if)# ppp authentication chap pap
D. (config-if)# ppp authentication chap fallback ppp

Answer: C

Question 4

Which Layer 2 protocol encapsulation type supports synchronous and asynchronous circuits and has built-in security mechanisms?

A. HDLC
B. PPP
C. X.25
D. Frame Relay

Answer: B

Question 5

At which layer of the OSI model does PPP perform?

A. Layer 2
B. Layer 3
C. Layer 4
D. Layer 5

Answer: A

Question 6

Which PPP subprotocol negotiates authentication options?

A. NCP
B. ISDN
C. SUP
D. LCP
E. DLCI

Answer: D

Question 7

Which two options are valid WAN connectivity methods? (Choose two)

A. PPP
B. WAP
C. DSL
D. L2TPv3
E. Ethernet

Answer: A C

Question 8

Refer to the exhibit. Which WAN protocol is being used?

```
RouterA#show interface pos8/o/o
pos8/0/0 is up, line protocol is up
Hardware is Packet over Sonet
Keepalive set (10 sec)
Scramble disabled
LMI enq sent 2474988, LMI stat recvd 2474969, LMI upd recvd 0, DTE LMI up
Broadcast queue 0/256, broadcasts sent/dropped 25760668/0, interface broadcasts 25348176
Last Input 00:00:00, output 00:00:00, output hang never
Last clearing of "show interface" counters 40w6d
5 minute input rate 0 bits/sec, 0 packets/sec
5 minute output rate 39000 bits/sec, 60 packets/sec
      63153396 packets Input, 4389121455 bytes, 0 no buffer
      Received 0 broadcasts (0 IP multicast)
      0 runts, 0 giants, 0 throttles
            0 parity
44773 input errors, 39138 CRC, 0 frame, 0 overrun, 0 ignored, 27 abort
945596253 packets output, 62753244360 bytes, 0 underruns
0 output errors, 0 applique, 0 interface resets
0 output buffer failures, 0 output buffers swapped out
0 carrier transitions
```

A. ATM
B. HDLC
C. Frame Relay
D. PPP

Answer: C

Question 9

Refer to the exhibit. The **show interfaces serial 0/1** command was issued on the R10-1 router. Based on the output displayed which statement is correct?

```
R10-1# show interfaces serial 0/1
Serial0/1 is up, line protocol is up
 Hardware is cxBus Serial
 MTU 1500 bytes, BW 1544 Kbit, DLY 20000 usec, reliability 255/255,
      txload 1/255, rxload 1/255
 Encapsulation HDLC, crc 16, loopback not set
 Keepalive set (10 sec)
 Last input 00:00:09, output 00:00:07, output hang 5w2d
 Last clearing of "show interface" counters 00:39:17
 Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
 Queueing strategy: weighted fair
 Output queue: 0/1000/64/0 (size/max total/threshold/drops)
      Conversations 0/1/256 (active/max active/max total)
      Reserved Conversations 0/0 (allocated/max allocated)
 5 minute input rate 0 bits/sec, 0 packets/sec
 5 minute output rate 0 bits/sec, 0 packets/sec
   277 packets input, 16980 bytes, 0 no buffer
   Received 0 broadcasts, 0 runts, 0 giants, 0 throttles
   0 input errors, 0 CRC, 0 frame. 0 overrun, 0 ignored, 0 abort
   277 packets output, 17106 bytes, 0 underruns
   0 output errors, 0 collisions, 0 interface resets
   0 output buffer failures, 0 output buffers swapped out
   0 carrier transitions
RTS up, CTS up, DTR up, DCD up, DSR up
```

A. The cable connected to the serial 0/1 interface of the R10-1 router is a DTE cable.
B. The R10-1 router can ping the router interface connected to the serial 0/1 interface.
C. The clock rate used for interface serial 0/1 of the R10-1 router is 1,544,000 bits per second.
D. The CSU used with the serial 0/1 interface of the R10-1 router has lost connection to the service provider.
E. The interface of the remote router connected to the serial 0/1 interface of the R10-1 router is using the default serial interface encapsulation.

Answer: E

Question 10

A network administrator needs to configure a serial link between the main office and a remote location. The router at the remote office is a non-Cisco router. How should the network administrator configure the serial interface of the main office router to make the connection?

A. Main(config)# interface serial 0/0
Main(config-if)# ip address 172.16.1.1 255.255.255.252
Main(config-if)# no shut

B. Main(config)# interface serial 0/0
Main(config-if)# ip address 172.16.1.1 255.255.255.252

Main(config-if)# encapsulation ppp
Main(config-if)# no shut

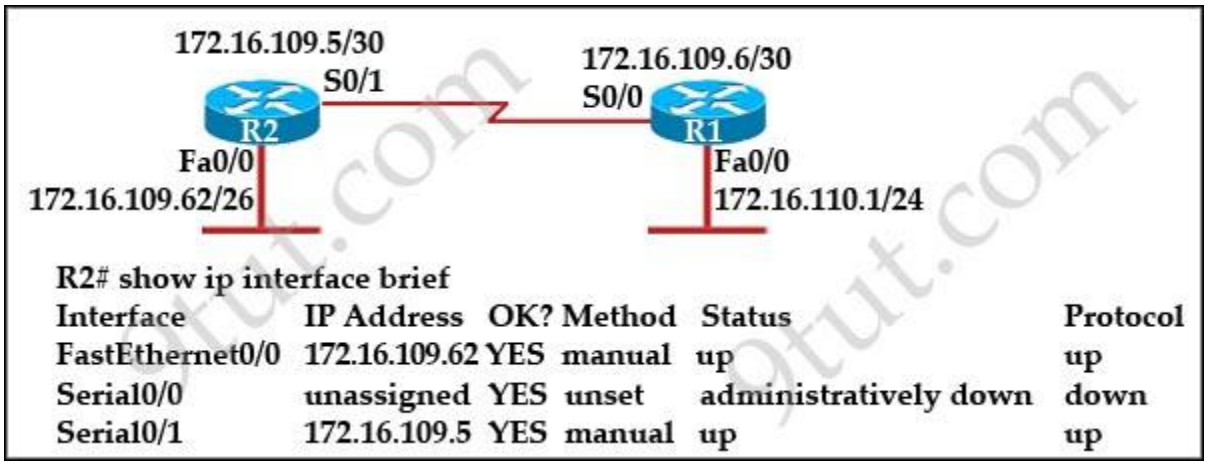
C. Main(config)# interface serial 0/0
Main(config-if)# ip address 172.16.1.1 255.255.255.252
Main(config-if)# encapsulation frame-relay
Main(config-if)# authentication chap
Main(config-if)# no shut

D. Main(config)# interface serial 0/0
Main(config-if)#ip address 172.16.1.1 255.255.255.252
Main(config-if)#encapsulation ietf
Main(config-if)# no shut

Answer: B

Question 11

Refer to the exhibit:



R2# show ip interface brief

Interface	IP Address	OK?	Method	Status	Protocol
FastEthernet0/0	172.16.109.62	YES	manual	up	up
Serial0/0	unassigned	YES	unset	administratively down	down
Serial0/1	172.16.109.5	YES	manual	up	up

Assuming that the entire network topology is shown, what is the operational status of the interfaces of R2 as indicated by the command output shown?

A. One interface has a problem.
B. Two interfaces have problems.
C. The interfaces are functioning correctly.
D. The operational status of the interfaces cannot be determined from the output shown.

Answer: C

ICND2 – Frame Relay

http://www.9tut.net/icnd2-200-101/new-icnd2-frame-relay

Question 1

What can be done to Frame Relay to resolve split-horizon issues?(Choose two)

A. Disable Inverse ARP.
B. Create a full-mesh topology.
C. Develop multipoint subinterfaces.
D. Configure point-to-point subinterfaces.
E. Remove the broadcast keyword from the frame-relay map command.

Answer: B D

Question 2

Which encapsulation type is a Frame Relay encapsulation type that is supported by Cisco routers?

A. IETF
B. ANSI Annex D
C. Q9333-A Annex A
D. HDLC

Answer: A

Question 3

What are two characteristics of Frame Relay point-to-point subinterfaces? (Choose two)

A. They create split-horizon issues.
B. They require a unique subnet within a routing domain.
C. They emulate leased lines.
D. They are ideal for full-mesh topologies.
E. They require the use of NBMA options when using OSPF.

Answer: B C

Question 4

What is the result of issuing the **frame-relay map ip 192.168.1.2 202 broadcast** command?

A. defines the destination IP address that is used in all broadcast packets on DLCI 202
B. defines the source IP address that is used in all broadcast packets on DLCI 202
C. defines the DLCI on which packets from the 192.168.1.2 IP address are received
D. defines the DLCI that is used for all packets that are sent to the 192.168.1.2 IP address

Answer: D

Question 5

What does the frame-relay interface-dlci command configure?

A. local DLCI on the subinterface
B. remote DLCI on the main interface
C. remote DLCI on the subinterface
D. local DLCI on the main interface

Answer: A

Question 6

What command is used to verify the DLCI destination address in a Frame Relay static configuration?

A. show frame-relay pvc
B. show frame-relay lmi
C. show frame-relay map
D. show frame relay end-to-end

Answer: C

Question 7

What occurs on a Frame Relay network when the CIR is exceeded?

A. All TCP traffic is marked discard eligible.
B. All UDP traffic is marked discard eligible and a BECN is sent.
C. All TCP traffic is marked discard eligible and a BECN is sent.
D. All traffic exceeding the CIR is marked discard eligible.

Answer: D

Question 8

What is the purpose of Inverse ARP?

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

Answer: D

Question 9

What is the advantage of using a multipoint interface instead of point-to-point subinterfaces when configuring a Frame Relay hub in a hub-and-spoke topology?

A. It avoids split-horizon issues with distance vector routing protocols.
B. IP addresses can be conserved if VLSM is not being used for subnetting.
C. A multipoint interface offers greater security compared to point-to-point subinterface configurations.
D. The multiple IP network addresses required for a multipoint interface provide greater addressing flexibility over point-to-point configurations.

Answer: B

Question 10

Which command allows you to verify the encapsulation type (CISCO or IETF) for a frame relay link?

A. show frame-relay map
B. show frame-relay lmi
C. show inter serial
D. show frame-relay pvc

Answer: A

ICND2 – Frame Relay 2

http://www.9tut.net/icnd2-200-101/new-icnd2-frame-relay-2

Question 1

The command **show frame-relay map** gives the following output:

Serial 0 (up): ip 192.168.151.4 dlci 122, dynamic, broadcast, status defined, active

Which statements represent what is shown? (Choose three)

A. 192.168.151.4 represents the IP address of the remote router
B. 192.168.151.4 represents the IP address of the local serial interface
C. DLC1122 represents the interface of the remote serial interface
D. DLC1122 represents the local number used to connect to the remote address
E. broadcast indicates that a dynamic routing protocol such as RIP v1 can send packets across

this PVC
F. active indicates that the ARP process is working

Answer: A D E

Question 2

The output of the show frame-relay pvc command shows ”PVC STATUS=INACTIVE”. What does this mean?

A. The PVC is configured correctly and is operating normally,but no data packets have been detected for more than five minutes.
B. The PVC is configured correctly, is operating normally and is no longer actively seeking the address the remote route.
C. The PVC is configured correctly, is operating normally and is waiting for interesting to trigger a call to the remote router.
D. The PVC is configured correctly on the local switch, but there is a problem on the remote end of the PVC.
E. The PVC is not configured on the switch.

Answer: D

Question 3

What two statistics appear in **show frame-relay map** output? (Choose two)

A. The number of FECN packets that are received by the router
B. The number of BECN packets that are received by the router
C. The ip address of the local router
D. The value of the local DLCI
E. The status of the PVC that is configured on the router

Answer: D E

ICND2 – VLAN & Trunking

http://www.9tut.net/icnd2-200-101/new-icnd2-vlan-trunking

Question 1

Which three of these statements regarding 802.1Q trunking are correct? (Choose three)

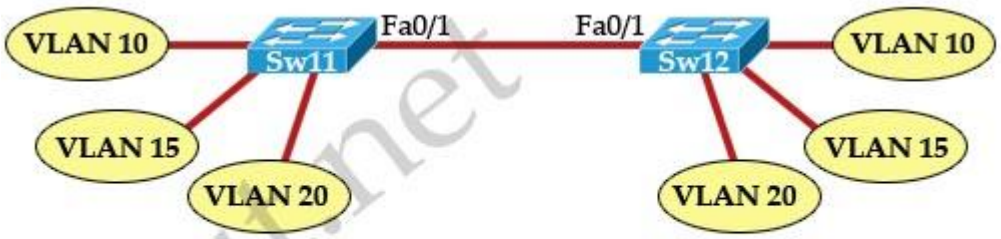
A. 802.1Q native VLAN frames are untagged by default.
B. 802.1Q trunking ports can also be secure ports.
C. 802.1Q trunks can use 10 Mb/s Ethernet interfaces.

D. 802.1Q trunks require full-duplex, point-to-point connectivity.
E. 802.1Q trunks should have native VLANs that are the same at both ends.

Answer: A C E

Question 2

Refer to the exhibit. A technician has configured the FastEthernet 0/1 interface on Sw11 as an access link in VLAN 1. Based on the output from the **show vlan brief** command issued on Sw12, what will be the result of making this change on Sw11?



Sw12# show vlan brief

VLAN	Name	Status	Ports
1	default	active	
10	Marketing	active	Fa0/6, Fa0/7, Fa0/8, Fa0/9 Fa0/10, Fa0/11, Fa0/12, Fa0/13 Fa0/14, Fa0/15
15	Accounting	active	Fa0/16, Fa0/18, Fa0/19, Fa0/20 Fa0/21, Fa0/22, Fa0/24
20	Admin	active	Fa0/2, Fa0/3, Fa0/4, Fa0/5
1002	fddi-default	active	
1003	token-ring-default	active	
1004	fddinet-default	active	
1005	trnet-default	active	

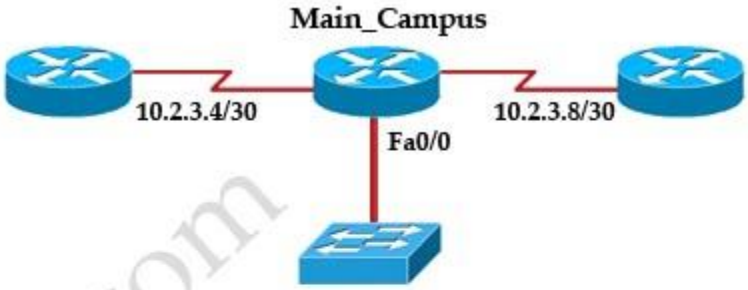
Sw12#

A. Only the hosts in VLAN 1 on the two switches will be able to communicate with each other.
B. The hosts in all VLANs on the two switches will be able to communicate with each other.
C. Only the hosts in VLAN 10 and VLAN 15 on the two switches will be able to communicate with each other.
D. Hosts will not be able to communicate between the two switches.

Answer: D

Question 3

Refer to the exhibit:




```
Main_Campus# show ip inteface brief

Interface              IP-Address      OK? Method Status  Protocol
FastEthernet0/0        unassigned      YES unset  up      up
FastEthernet0/0.1      192.168.1.254   YES manual up      up
FastEthernet0/0.2      192.168.2.254   YES manual up      up
FastEthernet0/0.3      192.168.3.254   YES manual up      up
FastEthernet0/0.4      192.168.4.254   YES manual up      up
Serial0/0              10.2.3.5        YES manual up      up
Serial0/1              10.2.3.9        YES manual up      up
Main_Campus#
```

What can be determined about the interfaces of the Main_Campus router from the output shown?

A. The LAN interfaces are configured on different subnets.
B. Interface FastEthernet 0/0 is configured as a trunk.
C. The Layer 2 protocol of interface Serial 0/1 is NOT operational.
D. The router is a modular router with five FastEthernet interfaces.
E. Interface FastEthernet 0/0 is administratively deactivated.

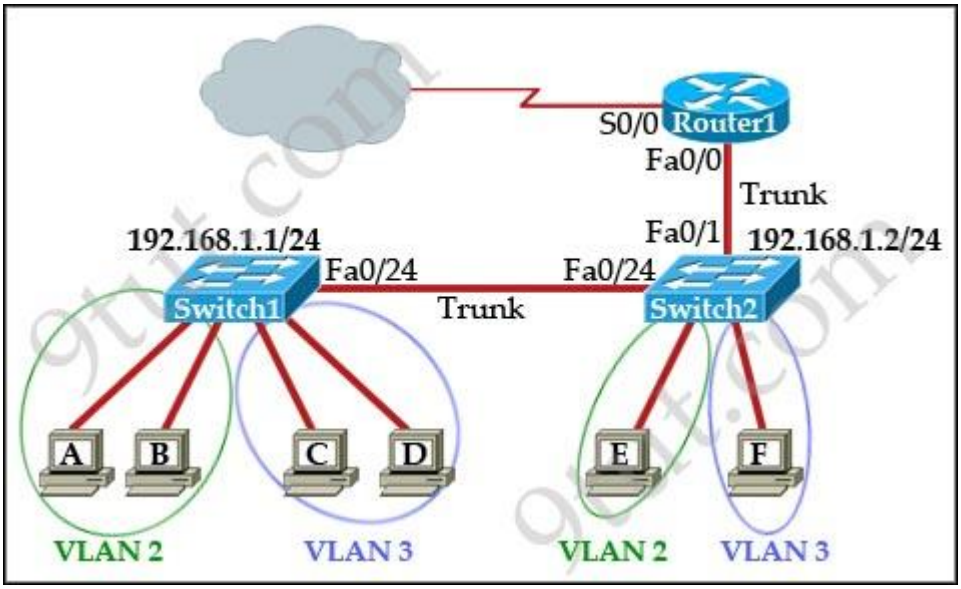
Answer: B

ICND2 – InterVLAN Routing

http://www.9tut.net/icnd2-200-101/new-icnd2-intervlan-routing

Question 1

Refer to the exhibit:



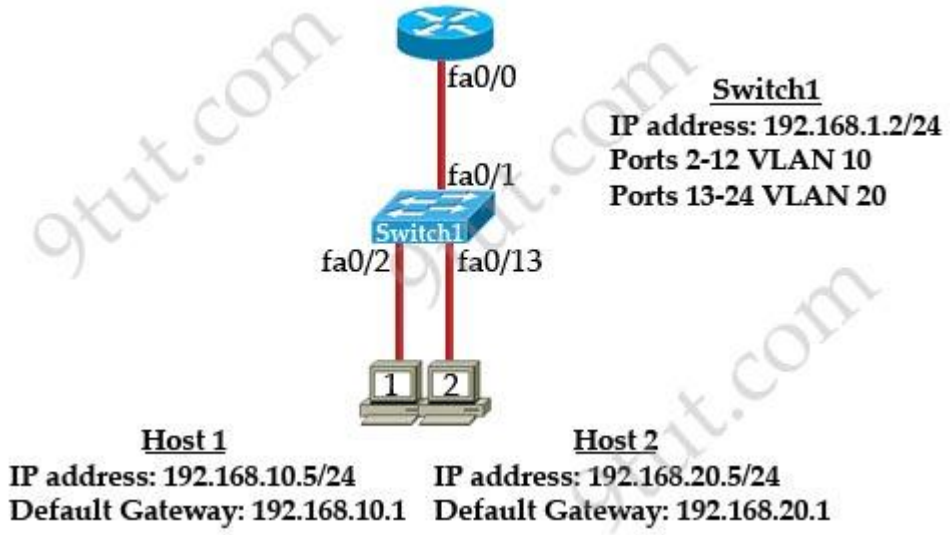
Which two statements are true about interVLAN routing in the topology that is shown in the exhibit? (Choose two)

A. Host E and host F use the same IP gateway address.
B. Routed and Switch2 should be connected via a crossover cable.
C. Router1 will not play a role in communications between host A and host D.
D. The FastEthernet 0/0 interface on Router1 must be configured with subinterfaces.
E. Router1 needs more LAN interfaces to accommodate the VLANs that are shown in the exhibit.
F. The FastEthernet 0/0 interface on Router1 and Switch2 trunk ports must be configured using the same encapsulation type.

Answer: D F

Question 2

Refer to the exhibit:



What commands must be configured on the 2950 switch and the router to allow communication between host 1 and host 2? (Choose two)

A. Router(config)#interface fastethernet 0/0
Router(config-if)#ip address 192.168.1.1 255.255.255.0
Router(config-if)#no shut down

B. Router(config)#interface fastethernet 0/0
Router(config-if)#no shutdown
Router(config)#interface fastethernet 0/0.1
Router(config-subif)#encapsulation dot1q 10
Router(config-subif)#ip address 192.168.10.1 255.255.255.0
Router(config-subif)#interface fastethernet 0/0.2
Router(config-subif)#encapsulation dot1q 20
Router(config-subif)#ip address 192.168.20.1 255.255.255.0

C. Router (config)#router eigrp 100
Router(config-router)#network 192.168.10.0
Router(config-router)#network 192.168.20.0

D. Switch1(config)# vlan database
Switch1(config-vlan)# vtp domain XYZ
Switch1(config-vlan)# vtp server

E. Switch1(config)# interface fastEthernet 0/1
Switch1(config-if)# switchport mode trunk

F. Switch1(config)# interface vlan 1
Switch1(config-if)# ip default-gateway 192.168.1.1

Answer: B E

Question 3

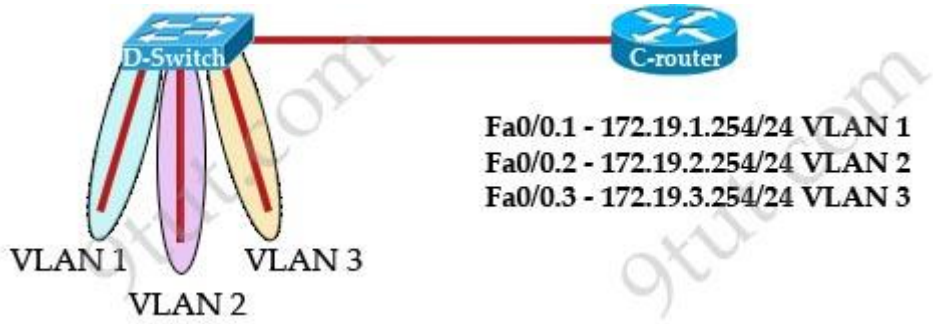
Which three statements are typical characteristics of VLAN arrangements? (Choose three)

A. A new switch has no VLANs configured.
B. Connectivity between VLANs requires a Layer 3 device.
C. VLANs typically decrease the number of collision domains.
D. Each VLAN uses a separate address space.
E. A switch maintains a separate bridging table for each VLAN.
F. VLANs cannot span multiple switches.

Answer: B D E

Question 4

Refer to the exhibit:



C-router is to be used as a "router-on-a-stick" to route between the VLANs. All the interfaces have been properly configured and IP routing is operational. The hosts in the VLANs have been configured with the appropriate default gateway. What can be said about this configuration?

A. These commands need to be added to the configuration:
C-router(config)# router eigrp 123
C-router(config-router)# network 172.19.0.0

B. No further routing configuration is required.

C. These commands need to be added to the configuration:
C-router(config)# router ospf 1
C-router(config-router)# network 172.19.0.0 0.0.3.255 area 0

D. These commands need to be added to the configuration:
C-router(config)# router rip
C-router(config-router)# network 172.19.0.0

Answer: B

ICND2 – STP

http://www.9tut.net/icnd2-200-101/new-icnd2-stp

Question 1

Which term describes a spanning-tree network that has all switch ports in either the blocking or forwarding state?

A. converged
B. redundant
C. provisioned
D. spanned

Answer: A

Question 2

Refer to the exhibit. Given the output shown from this Cisco Catalyst 2950, what is the reasons that interface FastEthernet 0/10 is not the root port for VLAN 2?

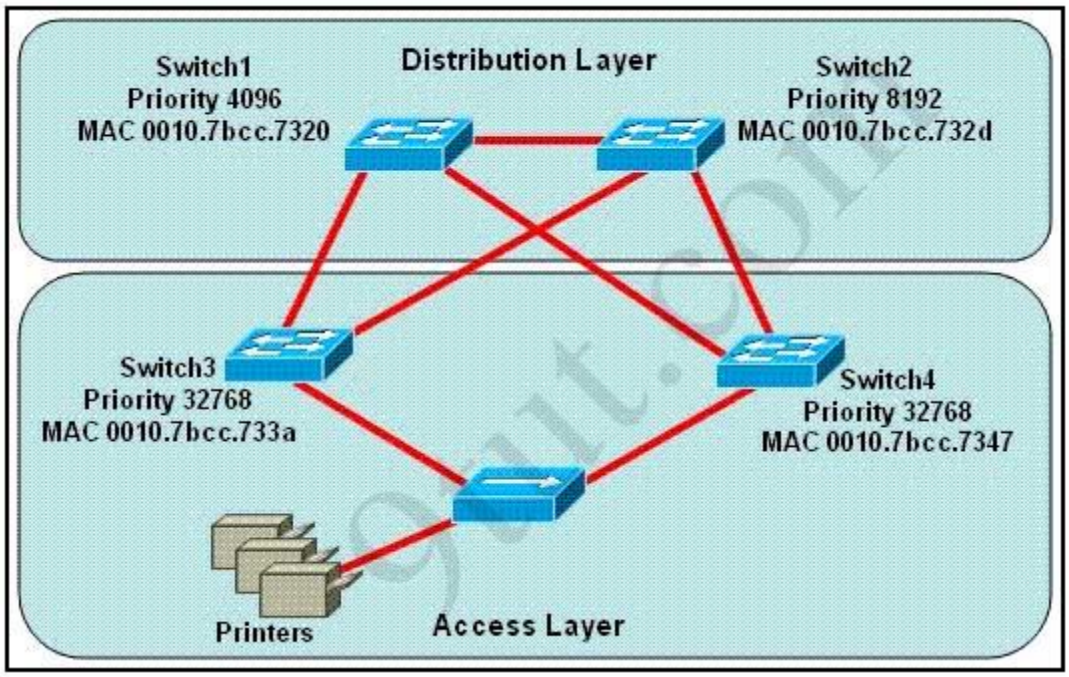
Vlan	Role	Sts	Cost	Prio.Nbr	Type
VLAN0001	Root	FWD	19	128.1	P2p
VLAN0002	Altn	BLK	19	128.2	P2p
VLAN0003	Root	FWD	19	128.2	P2p

A. This switch has more than one interface connected to the root network segment in VLAN 2.
B. This switch is running RSTP while the elected designated switch is running 802.1d Spanning Tree.
C. This switch interface has a higher path cost to the root bridge than another in the topology.
D. This switch has a lower bridge ID for VLAN 2 than the elected designated switch.

Answer: C

Question 3

Refer to the exhibit. Which switch provides the spanning-tree designated port role for the network segment that services the printers?



A. Switch1
B. Switch2
C. Switch3
D. Switch4

Answer: C

Question 4

What is one benefit of PVST+?

A. PVST+ supports Layer 3 load balancing without loops.
B. PVST+ reduces the CPU cycles for all the switches in the network.
C. PVST+ allows the root switch location to be optimized per VLAN.
D. PVST+ automatically selects the root bridge location, to provide optimized bandwidth usage.

Answer: C

Question 5

Which port state is introduced by Rapid-PVST?

A. learning
B. listening
C. discarding
D. forwarding

Answer: C

ICND2 – RSTP

http://www.9tut.net/icnd2-200-101/icnd2-rstp

Question 1

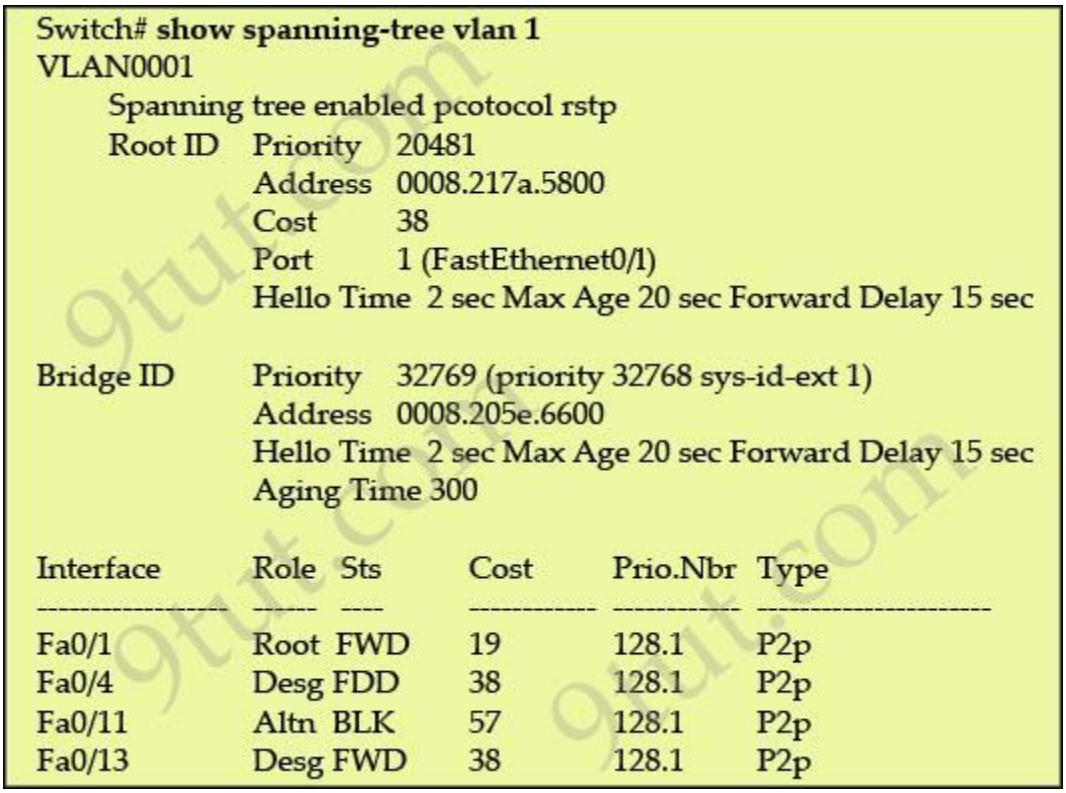
Which three statements about RSTP are true? (Choose three)

A. RSTP significantly reduces topology reconvening time after a link failure.
B. RSTP expands the STP port roles by adding the alternate and backup roles.
C. RSTP port states are blocking, discarding, learning, or forwarding.
D. RSTP provides a faster transition to the forwarding state on point-to-point links than STP does.
E. RSTP also uses the STP proposal-agreement sequence.
F. RSTP uses the same timer-based process as STP on point-to-point links.

Answer: A B D

Question 2

Refer to the exhibit:



```
Switch# show spanning-tree vlan 1
VLAN0001
     Spanning tree enabled pcotocol rstp
     Root ID   Priority   20481
               Address    0008.217a.5800
               Cost       38
               Port       1 (FastEthernet0/1)
               Hello Time 2 sec Max Age 20 sec Forward Delay 15 sec

Bridge ID      Priority   32769 (priority 32768 sys-id-ext 1)
               Address    0008.205e.6600
               Hello Time 2 sec Max Age 20 sec Forward Delay 15 sec
               Aging Time 300

Interface      Role  Sts      Cost       Prio.Nbr  Type
---------------- ------ ---- ---------- ---------- --------------------
Fa0/1          Root  FWD      19         128.1     P2p
Fa0/4          Desg FDD       38         128.1     P2p
Fa0/11         Altn  BLK      57         128.1     P2p
Fa0/13         Desg FWD       38         128.1     P2p
```

Why has this switch not been elected the root bridge for VLAN1?

A. It has more than one internee that is connected to the root network segment.
B. It is running RSTP while the elected root bridge is running 802.1d spanning tree.
C. It has a higher MAC address than the elected root bridge.
D. It has a higher bridge ID than the elected root bridge.

Answer: D

Which command enables RSTP on a switch?

A. spanning-tree mode rapid-pvst
B. spanning-tree uplinkfast
C. spanning-tree backbonefast
D. spanning-tree mode mst

Answer: A

Question 4

Refer to the exhibit. Which statement is true?

```
SwitchA# show spanning-tree vlan 20

VLAN0020
  Spanning tree enabled protocol rstp
  Root ID     Priority    24596
              Address     0017.596d.2a00
              Cost        38
              Port        11(FastEthernet0/10)
              Hello Time   2 sec  Max Age 20 sec  Forward Delay 15 sec

  Bridge ID   Priority    28692  (priority 28672 sys-id-ext 1)
              Address     0017.596d.1580
              Hello Time  2 sec  Max Age 20 sec  Forward Delay 15 sec
              Aging Time  300

Interface        Role Sts Cost      Prio.Nbr Type
---------------- ---- --- --------- -------- --------------------------
Fa0/11           Root FWD 19        128.11   P2p
Fa0/12           Altn BLK 19        128.12   P2p
```

A. The Fa0/11 role confirms that SwitchA is the root bridge for VLAN 20.
B. VLAN 20 is running the Per VLAN Spanning Tree Protocol.
C. The MAC address of the root bridge is 0017.596d.1580.
D. SwitchA is not the root bridge, because not all of the interface roles are designated.

Answer: D

Question 5

Refer to the exhibit. The output that is shown is generated at a switch. Which three of these statements are true? (Choose three)

```
Switch# show spanning-tree vlan 30
VLAN0030
Spanning tree enabled protocol rstp
Root ID Priority 24606
Address 00d0.047b.2800
This bridge is the root
Hello Time 2 sec Max Age 20 sec Forward Delay 15 sec
Bridge ID Priority 24606 (priority 24576 sys-id-ext 30)
Address 00d0.047b.2800
Hello Time 2 sec Max Age 20 sec Forward Delay 15 sec
Aging Time 300
Interface   Role  Sts   Cost  Prio.Nbr    Type
---------   ---------   ---   -------     ----- ----------
Fa1/1       Desg FWD    4     128.1       p2p
Fa1/2       Desg FWD    4     128.2       p2p
Fa5/1       Desg FWD    4     128.257     p2p
```

A. All ports will be in a state of discarding, learning or forwarding.
B. Thirty VLANs have been configured on this switch.
C. The bridge priority is lower than the default value for spanning tree.

D. All interfaces that are shown are on shared media.
E. All designated ports are in a forwarding state.
F. The switch must be the root bridge for all VLANs on this switch.

Answer: A C E

Question 6

Which two states are the port states when RSTP has converged? (choose two)

A. blocking
B. learning
C. disabled
D. forwarding
E. listening

Answer: A D

Question 7

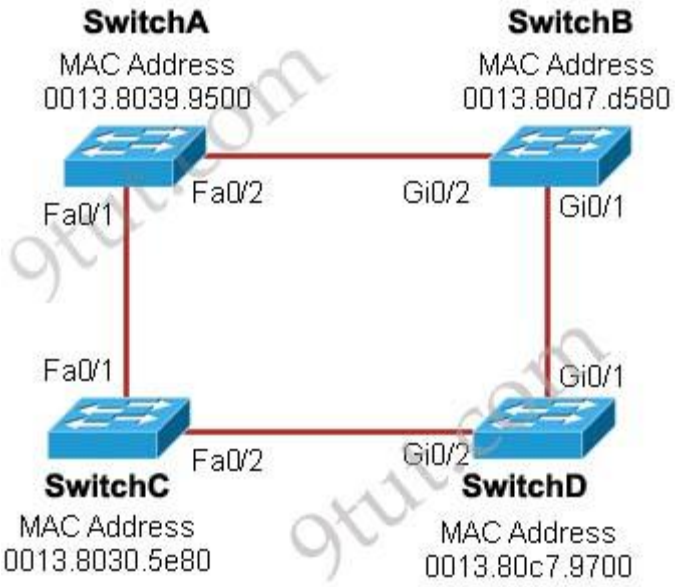
Which two of these statements regarding RSTP are correct? (Choose two)

A. RSTP cannot operate with PVST+.
B. RSTP defines new port roles.
C. RSTP defines no new port states.
D. RSTP is a proprietary implementation of IEEE 802.1D STP.
E. RSTP is compatible with the original IEEE 802.1D STP.

Answer: B E

Question 8

Refer to the exhibit. Each of these four switches has been configured with a hostname, as well as being configured to run RSTP. No other configuration changes have been made. Which three of these show the correct RSTP port roles for the indicated switches and interfaces? (Choose three)

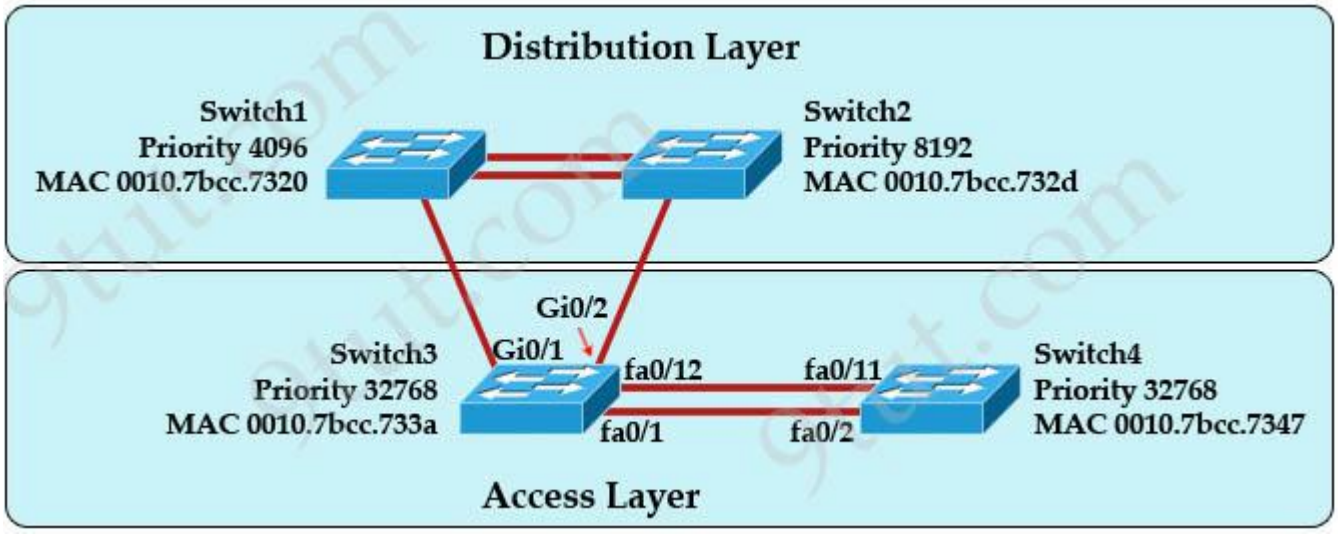


A. SwitchA, Fa0/2, designated
B. SwitchA, Fa0/1, root
C. SwitchB, Gi0/2, root
D. SwitchB, Gi0/1, designated
E. SwitchC, Fa0/2, root
F. SwitchD, Gi0/2, root

Answer: A B F

Question 9

Refer to the exhibit. At the end of an RSTP election process, which access layer switch port will assume the discarding role?



A. Switch3, port fa0/1
B. Switch3, port fa0/12
C. Switch4, port fa0/11

D. Switch4, port fa0/2
E. Switch3, port Gi0/1

Answer: C

ICND2 – IP Routing

http://www.9tut.net/icnd2-200-101/new-icnd2-ip-routing

Question 1

Which two are advantages of static routing when compared to dynamic routing? (choose two)

A. Security increases because only the network administrator may change the routing tables.
B. Configuration complexity decreases as network size increases.
C. Routing updates are automatically sent to neighbors.
D. Route summarization is computed automatically by the router.
E. Routing traffic load is reduced when used in stub network links.
F. An efficient algorithm is used to build routing tables using automatic updates.
G. Routing tables adapt automatically to topology changes.

Answer: A E

Question 2

Which parameter would you tune to affect the selection of a static route as a backup, when a dynamic protocol is also being used?

A. hop count
B. administrative distance
C. link bandwidth
D. link delay
E. link cost

Answer: B

Question 3

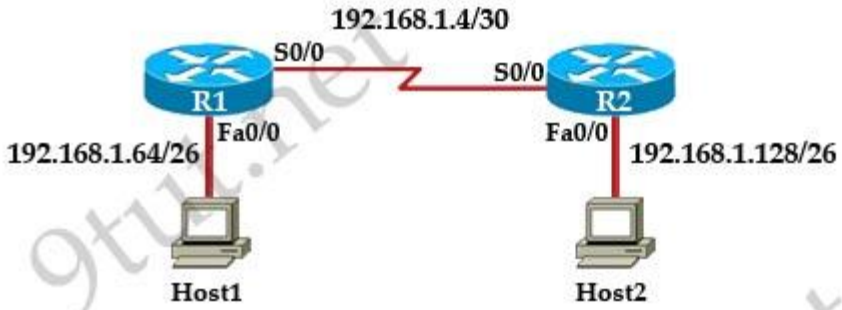
Which statement is true, as relates to classful or classless routing?

A. RIPV1 and OSPF are classless routing protocols.
B. Classful routing protocols send the subnet mask in routing updates.
C. Automatic summarization at classful boundaries can cause problems on discontigous networks.
D. EIGRP and OSPF are classful routing protocols and summarize routes by default.

Answer: C

Question 4

A technician pastes the configurations in the exhibit into the two new routers shown. Otherwise, the routers are configured with their default configurations. A ping from Host1 to Host2 fails, but the technician is able to ping the S0/0 interface of R2 from Host1. The configurations of the hosts have been verified as correct. What is the cause of the problem?



Configuration for R1:
```
interface fa0/0
 ip address 192.168.1.65 255.255.255.192
 no shutdown
interface serial 0/0
 ip address 192.168.1.5 255.255.255.252
 no shutdown
```

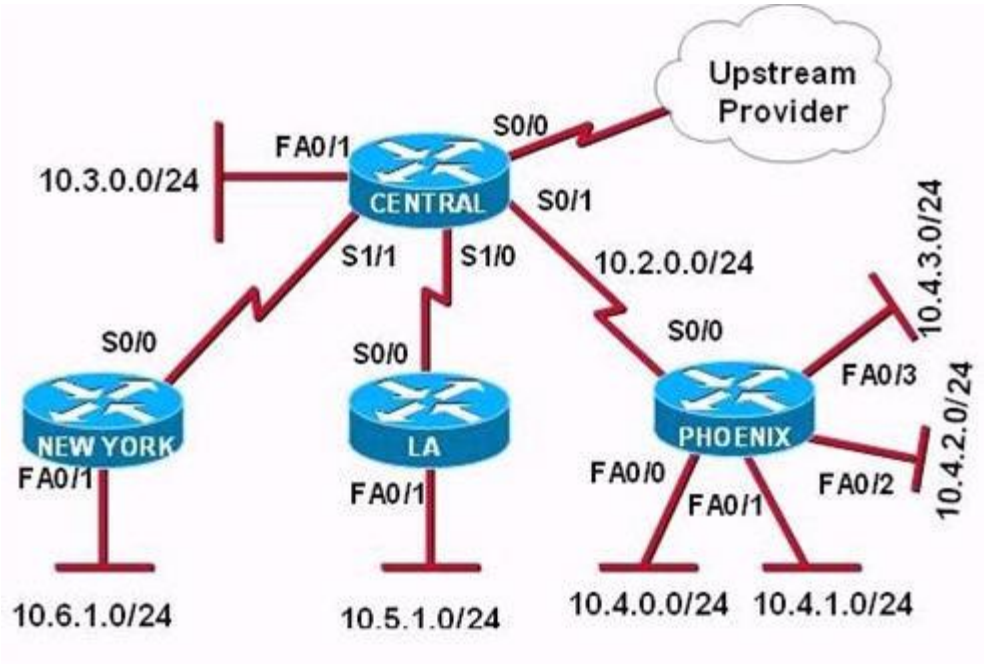
Configuration for R2:
```
interface fa0/0
 ip address 192.168.1.129 255.255.255.192
 no shutdown
interface serial 0/0
 ip address 192.168.1.6 255.255.255.252
 no shutdown
ip route 192.168.1.64 255.255.255.192 s0/0
```

A. The serial cable on R1 needs to be replaced.
B. The interfaces on R2 are not configured properly.
C. R1 has no route to the 192.168.1.128 network.
D. The IP addressing scheme has overlapping subnetworks.
E. The ip subnet-zero command must be configured on both routers.

Answer: C

Question 5

Refer to the exhibit. The Lakeside Company has the internetwork in the exhibit. The Administrator would like to reduce the size of the routing table to the Central Router. Which partial routing table entry in the Central router represents a route summary that represents the LANs in Phoenix but no additional subnets?



A – 10.0.0.0 /22 is subnetted, 1 subnet
D 10.0.0.0 [90/20514560] via 10.2.0.2 6w0d, serial 0/1

B – 10.0.0.0 /28 is subnetted, 1 subnet
D 10.2.0.0 [90/20514560] via 10.2.0.2 6w0d, serial 0/1

C – 10.0.0.0 /30 is subnetted, 1 subnet
D 10.2.2.0 [90/20514560] via 10.2.0.2 6w0d, serial 0/1

D – 10.0.0.0 /22 is subnetted, 1 subnet
D 10.4.0.0 [90/20514560] via 10.2.0.2 6w0d, serial 0/1

E – 10.0.0.0 /28 is subnetted, 1 subnet
D 10.4.4.0 [90/20514560] via 10.2.0.2 6w0d, serial 0/1

F – 10.0.0.0 /30 is subnetted, 1 subnet
D 10.4.4.4 [90/20514560] via 10.2.0.2 6w0d, serial 0/1

Answer: D

Question 6

Refer to the exhibit. How will the router handle a packet destined for 192.0.2.156?

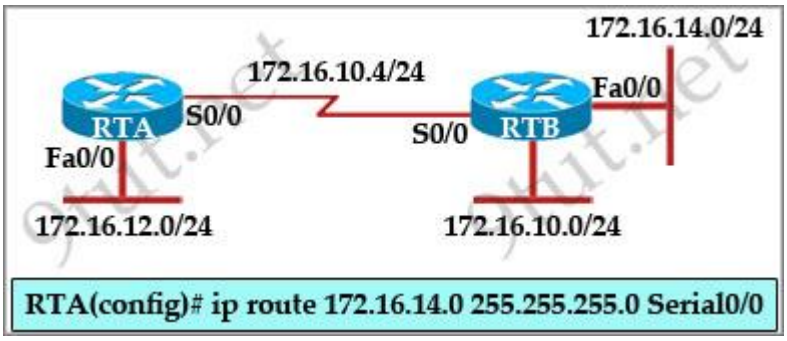
```
router# show ip route
Codes: C - connected, S - static, I - IGRP, R - RIP, M - mobile, B - BGP
D - EIGRP, EX - EIGRP external, 0 - OSPF, IA - OSPF inter area
N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
E1 - OSPF external type 1, E2 - OSPF external type 2, E - EGP
i - IS-IS, L1 - JS-IS level-1, L2 - IS-IS level-2, * - candidate default
U - per-user static route, o - ODR

Gateway of last resort is 192.168.4.1 to network 0.0.0.0

10.0.0.0/24 is subnetted, 3 subnets
C     10.0.2.0 is directly connected, Ethernet1
D     10.0.3.0 [90/2195456] via 192.168.1.2, 00:03:01, Serial0
D     10.0.4.0 [90/2195456] via 192.168.3.1, 00:03:01, Seria1
C 192.168.1.0/24 is directly connected, Serial0
D 192.168.2.0/24 [90/2681856] via 192.168.1.2, 00:03:01, Serial0
              [90/2681856] via 192.168.3.1,00:03:01, Seria1
C 192.168.3.0/24 is directly connected, Serial1
C 192.168.4.0/24 is directly connected, Serial2
```

A. The router will drop the packet.
B. The router will return the packet to its source.
C. The router will forward the packet via Serial2.
D. The router will forward the packet via either Serial0 or Serial1.

Answer: C

Question 7

Refer to the exhibit. RTA is configured with a basic configuration. The link between the two routers is operational and no routing protocols are configured on either router. The line shown in the exhibit is then added to router RTA. Should interface Fa0/0 on router RTB shut down, what effect will the shutdown have on router RTA?



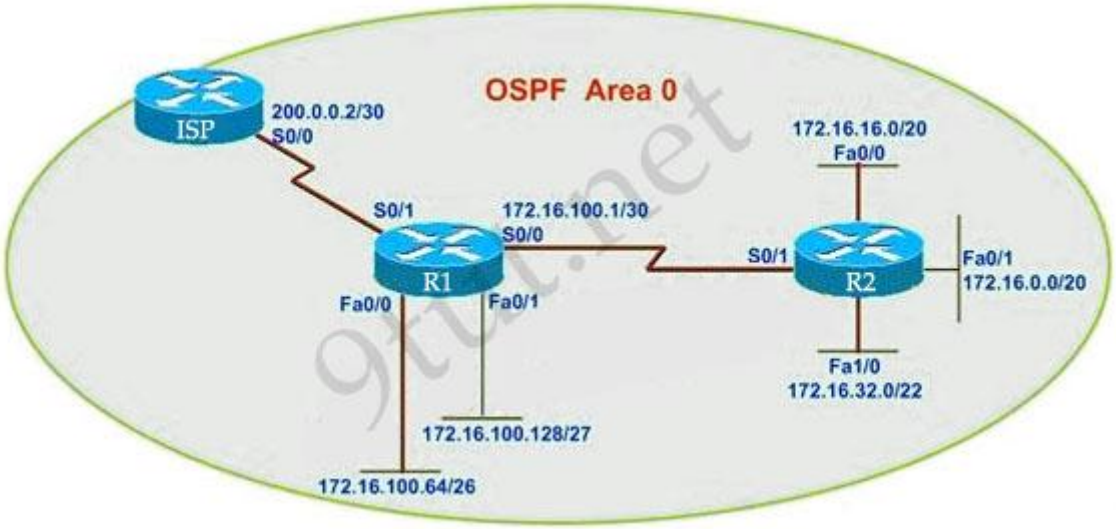
A. A route to 172.16.14.0/24 will remain in the RTA routing table.
B. A packet to host 172.16.14.225 will be dropped by router RTA
C. Router RTA will send an ICMP packet to attempt to verify the route.
D. Because router RTB will send a poison reverse packet to router RTA, RTA will remove the route.

Answer: A

ICND2 – OSPF Questions

http://www.9tut.net/icnd2-200-101/new-icnd2-ospf-questions

Question 1



R1 routing commands:
ip route 0.0.0.0 0.0.0.0 serial0/0
router ospf 1
network 172.16.100.0 0.0.0.3 area 0
network 172.16.100.64 0.0.0.63 area 0
network 172.16.100.128 0.0.0.31 area 0
default-information originate

Assuming that all router interfaces are operational and correctly configured, that OSPF has been correctly configured on router R2, how will the default route configured on R1 affect the operation of R2?

A. Any packet destined for a network that is not directly connected to router R1 will be dropped.
B. Any packet destined for a network that is not referenced in the routing table of router R2 will be directed to R1. R1 will then send that packet back to R2 and a routing loop will occur.
C. Any packet destined for a network that is not directly connected to router R2 will be dropped immediately.
D. Any packet destined for a network that is not directly connected to router R2 will be dropped immediately because of the lack of a gateway on R1.

Answer: B

Question 2

What information does a router running a link-state protocol use to build and maintain its topological database? (Choose two)

A. hello packets
B. SAP messages sent by other routers
C. LSAs from other routers
D. beacons received on point-to-point links
E. routing tables received from other link-state routers
F. TTL packets from designated routers

Answer: A C

Question 3

Which two statements describe the process identifier that is used in the command to configure OSPF on a router? (Choose two)

Router(config)# router ospf 1

A. All OSPF routers in an area must have the same process ID.
B. Only one process number can be used on the same router.
C. Different process identifiers can be used to run multiple OSPF processes
D. The process number can be any number from 1 to 65,535.
E. Hello packets are sent to each neighbor to determine the processor identifier.

Answer: C D

Question 4

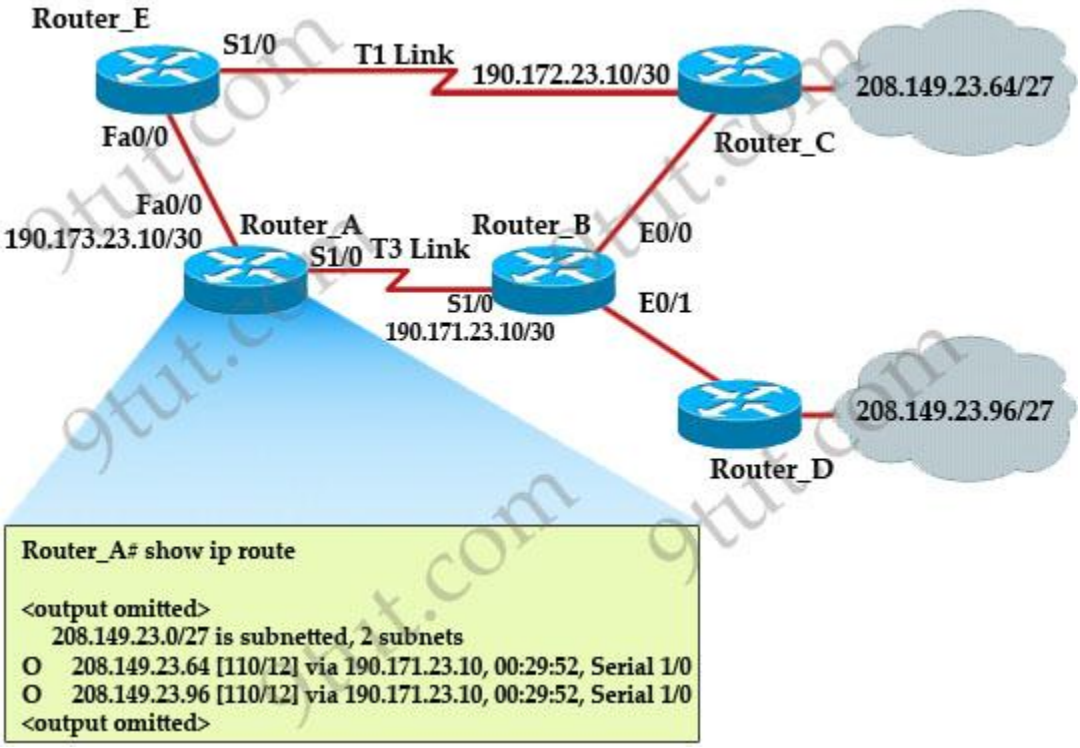
What is the default administrative distance of OSPF?

A. 90
B. 100
C. 110
D. 120

Answer: C

Question 5

Refer to the exhibit. The network is converged. After link-state advertisements are received from Router_A, what information will Router_E contain in its routing table for the subnets 208.149.23.64 and 208.149.23.96?



A. 208.149.23.64[110/13] via 190.173.23.10, 00:00:00:07, FastEthernet0/0
208.149.23.96[110/13] via 190.173.23.10, 00:00:00:16, FastEthernet0/0

B. 208.149.23.64[110/1] via 190.173.23.10, 00:00:00:07, Serial1/0
208.149.23.96[110/3] via 190.173.23.10, 00:00:00:16, FastEthernet0/0

C. 208.149.23.64[110/13] via 190.173.23.10, 00:00:00:07, Serial1/0
208.149.23.96[110/13] via 190.173.23.10, 00:00:00:16, Serial1/0
208.149.23.96[110/13] via 190.173.23.10, 00:00:00:16, FastEthernet0/0

D. 208.149.23.64[110/13] via 190.173.23.10, 00:00:00:07, Serial1/0
208.149.23.96[110/13] via 190.173.23.10, 00:00:00:16, Serial1/0

Answer: A

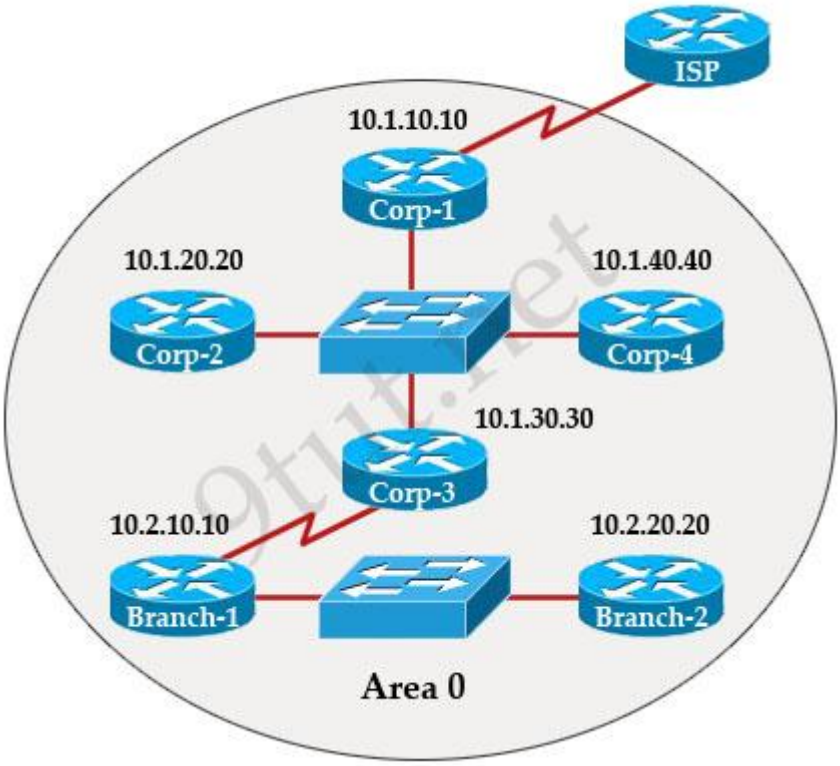
Question 6

What are three characteristics of the OSPF routing protocol? (Choose three)

A. It converges quickly.
B. OSPF is a classful routing protocol.
C. It uses cost to determine the best route.
D. It uses the DUAL algorithm to determine the best route.
E. OSPF routers send the complete routing table to all directly attached routers.
F. OSPF routers discover neighbors before exchanging routing information.

Answer: A C F

Question 7



The internetwork infrastructure of company XYZ consists of a single OSPF area as shown in the graphic. There is concern that a lack of router resources is impeding internetwork performance.

As part of examining the router resources the OSPF DRs need to be known.

All the router OSPF priorities are at the default and the router IDs are shown with each router.

Which routers are likely to have been elected as DR? (Choose two)

A. Corp-1
B. Corp-2
C. Corp-3
D. Corp4
E. Branch-1
F. Branch-2

Answer: D F

Question 8

Which parameter or parameters are used to calculate OSPF cost in Cisco routers?

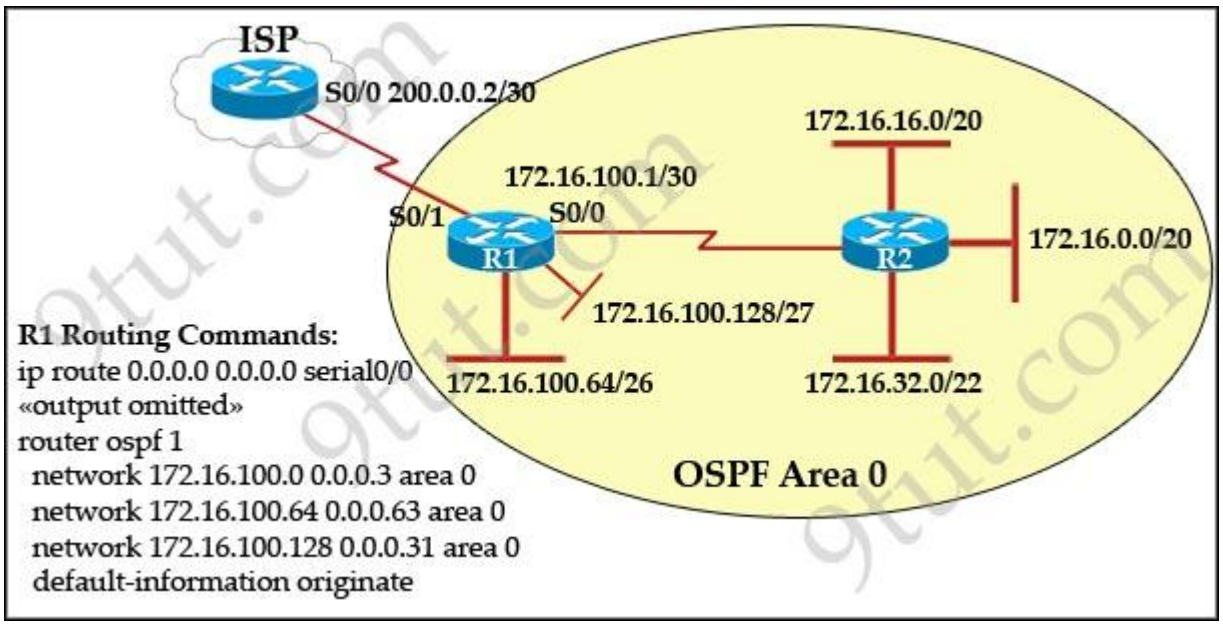
A. Bandwidth, Delay and MTU
B. Bandwidth

C. Bandwidth and MTU
D. Bandwidth, MTU, Reliability, Delay and Load

Answer: B

Question 9

Refer to the exhibit:



Assume that all of the router interfaces are operational and configured correctly. How will router R2 be affected by the configuration of R1 that is shown in the exhibit?

A. Router R2 will not form a neighbor relationship with R1.
B. Router R2 will obtain a full routing table, including a default route, from R1.
C. R2 will obtain OSPF updates from R1, but will not obtain a default route from R1.
D. R2 will not have a route for the directly connected serial network, but all other directly connected networks will be present, as well as the two networks connected to R1.

Answer: B

Question 10

Which commands are required to properly configure a router to run OSPF and to add network 192.168.16.0/24 to OSPF area 0? (Choose two)

A. Router(config)# router ospf 0
B. Router(config)# router ospf 1
C. Router(config)# router ospf area 0
D. Router(config-router)# network 192.168.16.0 0.0.0.255 0
E. Router(config-router)# network 192.168.16.0 0.0.0.255 area 0
F. Router(config-router)# network 192.168.16.0 255.255.255.0 area 0

Answer: B E

ICND2 – OSPF Questions 2

http://www.9tut.net/icnd2-200-101/new-icnd2-ospf-questions-2

Question 1

Which command is used to display the collection of OSPF link states?

A. show ip ospf link-state
B. show ip ospf Isa database
C. show ip ospf neighbors
D. show ip ospf database

Answer: D

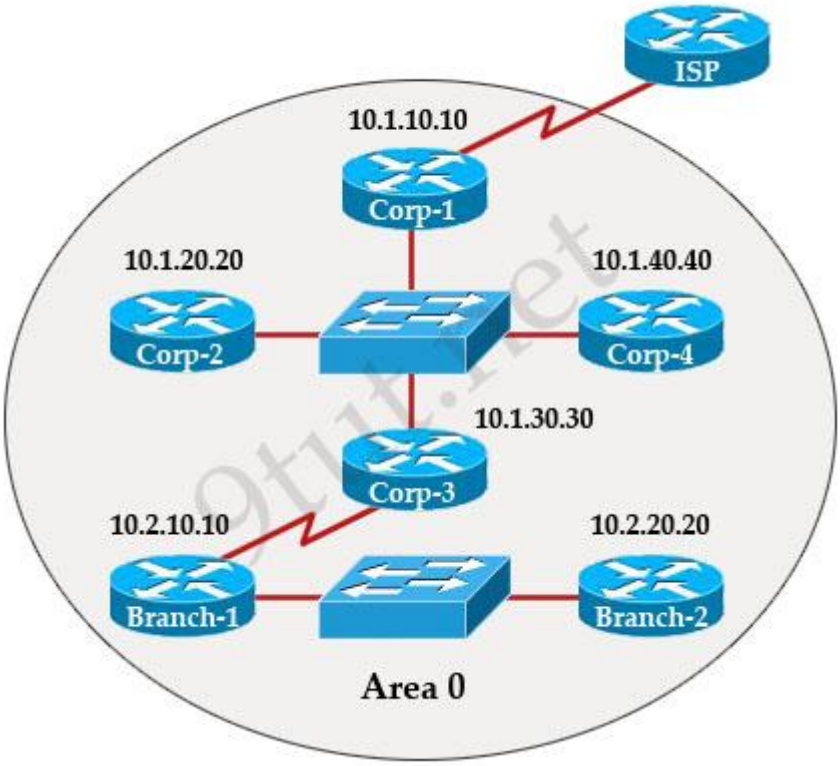
Question 2

What are two drawbacks of implementing a link-state routing protocol? (Choose two)

A. the sequencing and acknowledgment of link-state packets
B. the requirement for a hierarchical IP addressing scheme for optimal functionality
C. the high volume of link-state advertisements in a converged network
D. the high demand on router resources to run the link-state routing algorithm
E. the large size of the topology table listing all advertised routes in the converged network

Answer: B D

Question 3



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There is concern that a lack of router resources is impeding internetwork performance.

As part of examining the router resources the OSPF DRs need to be known.

All the router OSPF priorities are at the default and the router IDs are shown with each router.

Which routers are likely to have been elected as DR? (Choose two)

A. Corp-1
B. Corp-2
C. Corp-3
D. Corp4
E. Branch-1
F. Branch-2

Answer: D F

Question 4

What is the default maximum number of equal-cost paths that can be placed into the routing of a Cisco OSPF router?

A. 16
B. 2

C. unlimited
D. 4

Answer: D

Question 5

RouterD# show ip interface brief

Interface	IP-Address	OK?	Method	Status	Protocol
FastEthernet0/0	192.160.5.3	YES	manual	up	up
FastEthernet0/1	10.1.1.2	YES	manual	up	up
Loopback0	172.16.5.1	YES	NVRAM	up	up
Loopback1	10.154.154.1	YES	NVRAM	up	up

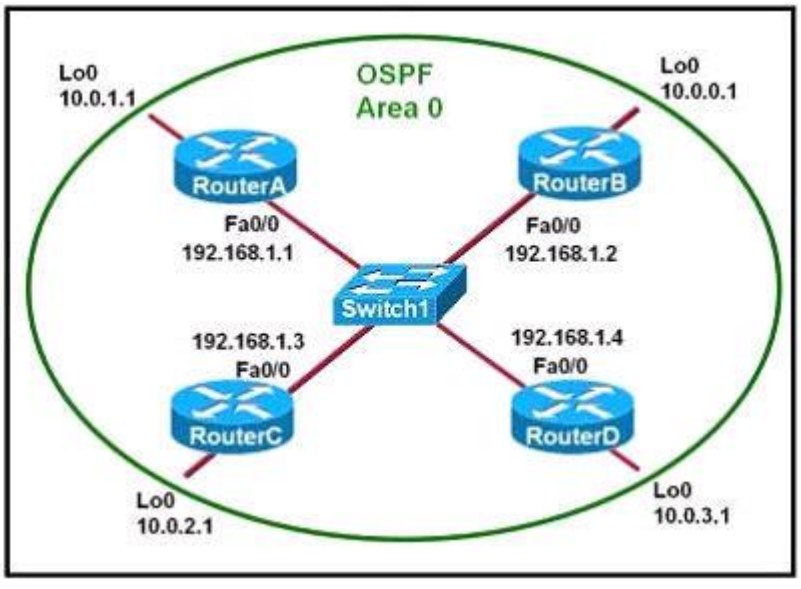
Given the output for this command, if the router ID has not been manually set, what router ID will OSPF use for this router?

A. 10.1.1.2
B. 10.154.154.1
C. 172.16.5.1
D. 192.168.5.3

Answer: C

Question 6

Refer to the exhibit. Which two statements are true about the loopback address that is configured on RouterB? (Choose two)

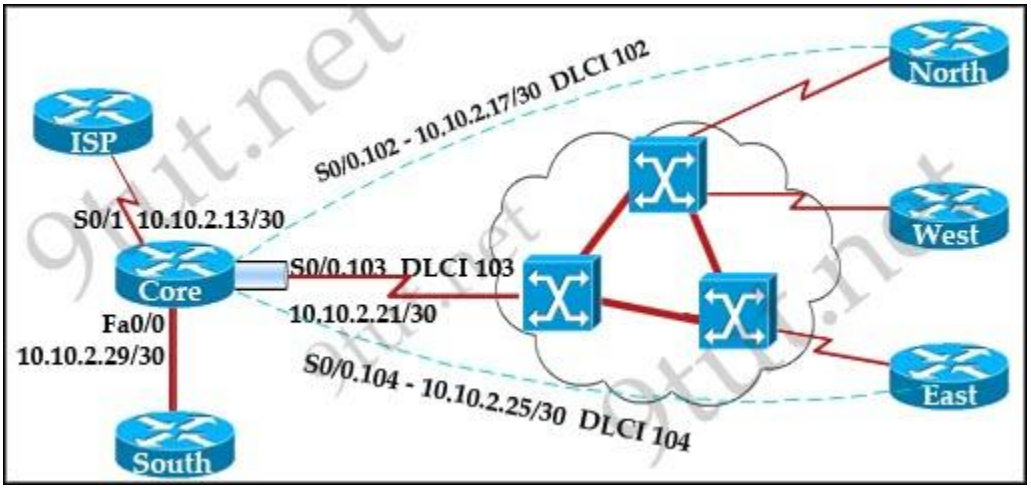


A. It ensures that data will be forwarded by RouterB.
B. It provides stability for the OSPF process on RouterB.
C. It specifies that the router ID for RouterB should be 10.0.0.1.
D. It decreases the metric for routes that are advertised from RouterB.
E. It indicates that RouterB should be elected the DR for the LAN.

Answer: B C

Question 7

Refer to the exhibit. The network associate is configuring OSPF on the Core router. All the connections to the branches should be participating in OSPF. The link to the ISP should NOT participate in OSPF and should only be advertised as the default route. What set of commands will properly configure the Core router?



A. Core(config-router)#default-information originate
Core(config-router)#network 10.0.0.0 0.255.255.255 area 0
Core(config-router)#exit
Core(config)#ip route 0.0.0.0 0.0.0.0 10.10.2.14

B. Core(config-router)#default-information originate
Core(config-router)#network 10.10.2.13 0.0.0.242 area 0
Core(config-router)#exit
Core(config)#ip route 0.0.0.0 0.0.0.0 10.10.2.14

C. Core(config-router)#default-information originate
Core(config-router)#network 10.10.2.16 0.0.0.15 area 0
Core(config-router)#exit
Core(config)#ip route 0.0.0.0 0.0.0.0 10.10.2.14

D. Core(config-router)#default-information originate
Core(config-router)#network 10.10.2.32 0.0.0.31 area 0
Core(config-router)#exit
Core(config)#ip route 0.0.0.0 0.0.0.0 10.10.2.14

Answer: C

Question 8

City# show ip interface brief

Interface	IP-Address	OK?	Method	Status	Protcocol
FastEthernet0/0	192.168.12.48	YES	manual	up	up
FastEthernet0/1	192.168.12.65	YES	manual	up	up
Serial0/0	192.168.12.121	YES	manual	up	up
Serial0/1	unassigned	YES	unset	up	up
Serial0/1.102	192.168.12.125	YES	manual	up	up
Serial0/1.103	192.168.12.129	YES	manual	up	up
Serial0/1.104	192.168.12.133	YES	manual	up	up

City#

A network associate has configured OSPF with the command:
City(config-router)# network 192.168.12.64 0.0.0.63 area 0

After completing the configuration, the associate discovers that not all the interfaces are participating in OSPF.
Which three of the interfaces shown in the exhibit will participate in OSPF according to this configuration statement? (Choose three)

A. FastEthernet0/0
B. FastEthernet0/1
C. Serial0/0
D. Serial0/1.102
E. Serial0/1.103
F. Serial0/1.104

Answer: B C D

ICND2 – EIGRP

http://www.9tut.net/icnd2-200-101/new-icnd2-eigrp

Question 1

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 addressed to the destination network to the interface indicated 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 2

Which statements are true about EIGRP successor routes? (Choose two)

A. A successor route is used by EIGRP to forward traffic to a destination.
B. Successor routes are saved in the topology table to be used if the primary route fails.
C. Successor routes are flagged as ‘active* in the routing table.
D. A successor route may be backed up by a feasible successor route.
E. Successor routes are stored in the neighbor table following the discovery process.

Answer: A D

Question 3

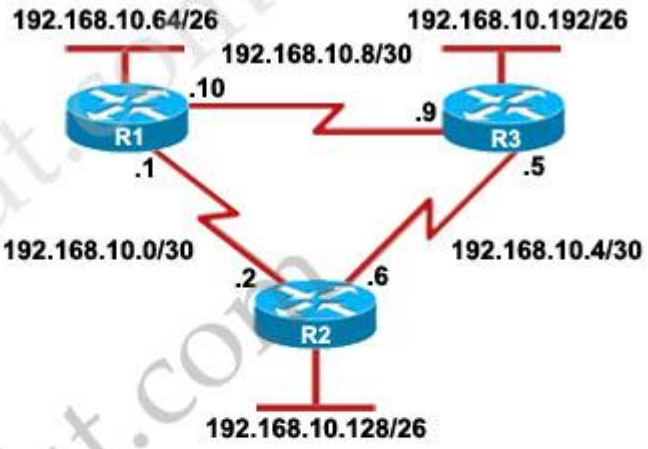
Which type of EIGRP route entry describes a feasible successor?

A. a backup route, stored in the routing table
B. a primary route, stored in the routing table
C. a backup route, stored in the topology table
D. a primary route, stored in the topology table

Answer: C

Question 4

Refer to the exhibit. Based on the exhibited routing table, how will packets from a host within the 192.168.10.192/26 LAN be forwarded to 192.168.10.1?




```
R3# show ip route
Gateway of last resort is not set
   192.168.10.0/24 is variably subnetted, 6 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
                         [90/2681856] via 192.168.10.5, 00:03:31, Serial0/1
C       192.168.10.4/30 is directly connected, Serial0/1
C       192.168.10.8/30 is directly connected, Serial0/0
C       192.168.10.192/30 is directly connected, FastEthernet0/0
C       192.168.10.128/26 [90/2195456] via 192.168.10.5, 00:03:31, Serial0/1
```

A. The router will forward packets from R3 to R2 to R1
B. The router will forward packets from R3 to R1
C. The router will forward packets from R3 to R1 to R2
D. The router will forward packets from R3 to R2 to R1 AND from R3 to R1

Answer: D

Question 5

Refer to the exhibit. Given the output from the **show ip eigrp topology** command, which router is the feasible successor?

Router# show ip eigrp topology 10.0.0.5 255.255.255.255

IP-EIGRP topology entry for 10.0.0.5/32 State is Passive, Query origin flag is 1, 1 Successor(s), FD is 41152000

A.

```
10.1.0.3 (Serial0), from 10.1.0.3, Send flag is 0x0
   Composite metric is (46866176/46354176), Route is Internal
   Vector metric:
     Minimum bandwidth is 56 Kbit
     Total delay is 45000 microseconds
     Reliability is 255/255
     Load is 1/255
     Minimum MTU is 1500
```

```
     Hop count is 2
```

B.

```
10.0.0.2 (Serial0.1), from 10.0.0.2, Send flag is 0x0
   Composite metric is (53973248/128256), Route is Internal
   Vector metric:
     Minimum bandwidth is 48 Kbit
     Total delay is 25000 microseconds
     Reliability is 255/255
     Load is 1/255
     Minimum MTU is 1500
     Hop count is 1
```

C.

```
10.1.0.1 (Serial0), from 10.1.0.1, Send flag is 0x0
   Composite metric is (46152000/41640000), Route is Internal Vector
metric:
     Minimum bandwidth is 64 Kbit
     Total delay is 45000 microseconds
     Reliability is 255/255
     Load is 1/255
     Minimum MTU is 1500
     Hop count is 2
```

D.

```
10.1.1.1 (SerialO.1), from 10.1.1.1, Send flag is 0x0
   Composite metric is (46763776/46251776), Route is External
   Vector metric:
     Minimum bandwidth is 56 Kbit
     Total delay is 41000 microseconds
     Reliability is 255/255
     Load is 1/255
     Minimum MTU is 1500
     Hop count is 2
```

Answer: B

ICND2 – Security

http://www.9tut.net/icnd2-200-101/new-icnd2-security

Question 1

Refer to the exhibit. What three actions will the switch take when a frame with an unknown source MAC address arrives at the interface? (Select three)

```
Switch# show port-security interface fa0/20
Port Security              : Enabled
Port Status                : Secure-up
Violation Mode             : Restrict
Aging Time                 : 3 mins
Aging Type                 : Inactivity
Secure Static Address Aging : Disabled
Maximum MAC Addresses      : 2
Total MAC Addresses        : 2
Configured MAC Addresses   : 0
Sticky MAC Addresses       : 2
Last Source Address:       : 0009.7C10.8E8C:50
Security Violation Count   : 1
```

A. Send an SNMP trap.
B. Send a syslog message.
C. Increment the Security Violation counter.
D. Forward the traffic.
E. Write the MAC address to the startup-config.
F. Shut down the port.

Answer: A B C

Question 2

Which protocol is an open standard protocol framework that is commonly used in VPNs, to provide secure end-to-end communications?

A. RSA
B. L2TP
C. IPsec
D. PPTP

Answer: C

Question 3

Refer to the exhibit. Which of these correctly describes the results of port security violation of an unknown packet?

```
Switch(config)#interface fastethernet 0/1
Switch(config-if)#switchport mode access
Switch(config-if)#switchport port-security
Switch(config-if)#switchport port-security maximum 3
Switch(config-if)#switchport port-security mac-address sticky
Switch(config-if)#end
```

A. port enabled; unknown packets dropped; no SNMP or syslog messages
B. port enabled; unknown packets dropped; SNMP or syslog messages
C. port disabled; no SNMP or syslog messages
D. port disabled; SNMP or syslog messages

Answer: D

Question 4

The following configuration is applied to a Layer 2 Switch:

interface fastethernet 0/4
switchport mode access
switchport port-security
switchport port-security mac-address 0000.1111.1111
switchport port-security maximum 2

What is the result of the above configuration being applied to the switch?

A. A host with a mac address of 0000.1111.1111 and up to two other hosts can connect to FastEthernet 0/4 simultaneously
B. A host with a mac address of 0000.1111.1111 and one other host can connect to FastEthernet 0/4 simultaneously
C. Violating addresses are dropped and no record of the violation is kept
D. The switch can send an SNMP message to the network management station
E. The port is effectively shutdown

Answer: B

Question 5

What can be done to secure the virtual terminal interfaces on a router? (Choose two)

A. Administratively shut down the interface.
B. Physically secure the interface.
C. Create an access list and apply it to the virtual terminal interfaces with the access-group command.
D. Configure a virtual terminal password and login process.
E. Enter an access list and apply it to the virtual terminal interfaces using the access-class command.

Answer: D E

ICND2 – IPv6 Questions

http://www.9tut.net/icnd2-200-101/new-icnd2-ipv6-questions

Question 1

Which command enables IPv6 forwarding on a Cisco router?

A. ipv6 local
B. ipv6 host
C. ipv6 unicast-routing
D. ipv6 neighbor

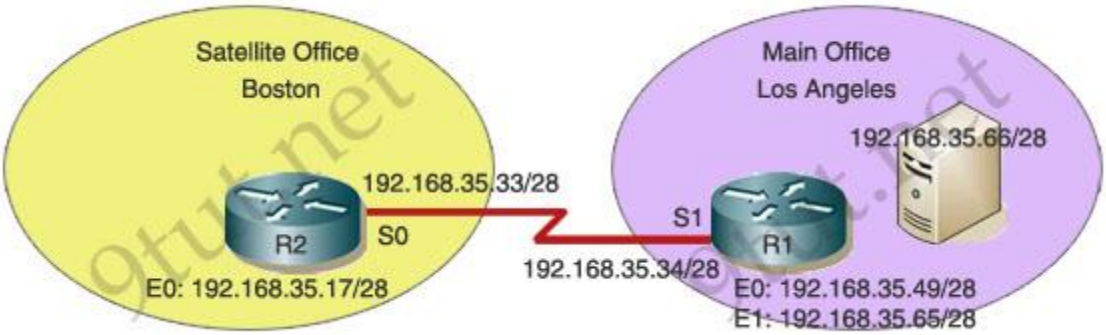
Answer: C

ICND2 – Drag and Drop

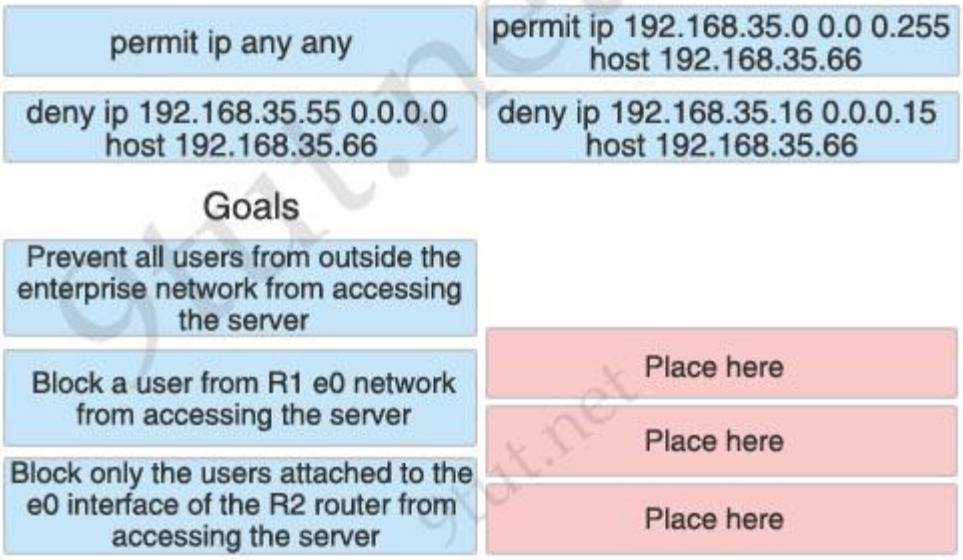
http://www.9tut.net/icnd2-200-101/new-icnd2-drag-and-drop

Question 1

Two offices are displayed below



You work as a network technician at 9tut. Study the exhibit carefully. The company has a main office in Los Angeles and a satellite office in Boston. The offices are connected through two Cisco routers. The Boston satellite office is connected through the R2 router s0 interface to the Los Angeles office R1 router s1 interface. R1 has two local area networks. Boston users receive Internet access through the R1 router. Drag the boxes on the top to complete the goal on the left.



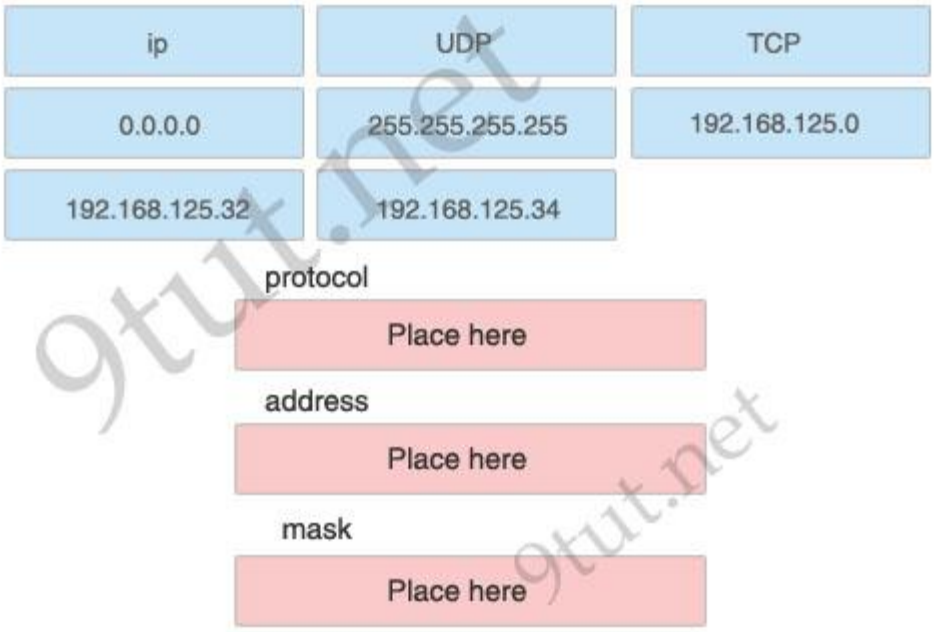
Answer:

1) **Prevent all users from outside the enterprise network from accessing the server:** permit ip 192.168.35.0 0.0 0.255 host 192.168.35.66
2) **Block a user from R1 e0 network from accessing the server:** deny ip 192.168.35.55 0.0.0.0 host 192.168.35.66
3) **Block only the users attached to the e0 interface of the R2 router from accessing the server:** deny ip 192.168.35.16 0.0.0.15 host 192.168.35.66

Question 2

You are configuring the localhost/nitunetwp office. In particular the host C, with the IP address 192.168.125.34/27, needs to be configured so that it cannot access hosts outside its own subnet. You decide to use the following command:
access-list 100 deny ***protocol address mask*** any

You are required to fill in the ***protocol***, ***address***, and ***mask*** in this command using the choices below:



Answer:

1) protocol: ip
2) address: 192.168.125.34
3) mask: 0.0.0.0

Question 3

Exhibit:

Router# show interfaces s1/0
Seria11/0 is up, line protocol is up
Hardware is CD2430 in sync mode
Internet address is 192.168.0.10/30
MTU 1500 bytes, BW 128 Kbit, DLY 20000 usec, reliability 255/255, txload 1/255, rxload 1/255
Encapsulation PPP, LCP Open Open: CDPCP. IPCP, loopback not set
Last input 00:00:00, output 00:00:00, output hang never
Last clearing of "show interface" counters 4d21h

Study the exhibit carefully. You need to match output lines in the exhibit with the proper OSI layer. One line will not be used.

Answer:

Data Link Layer:

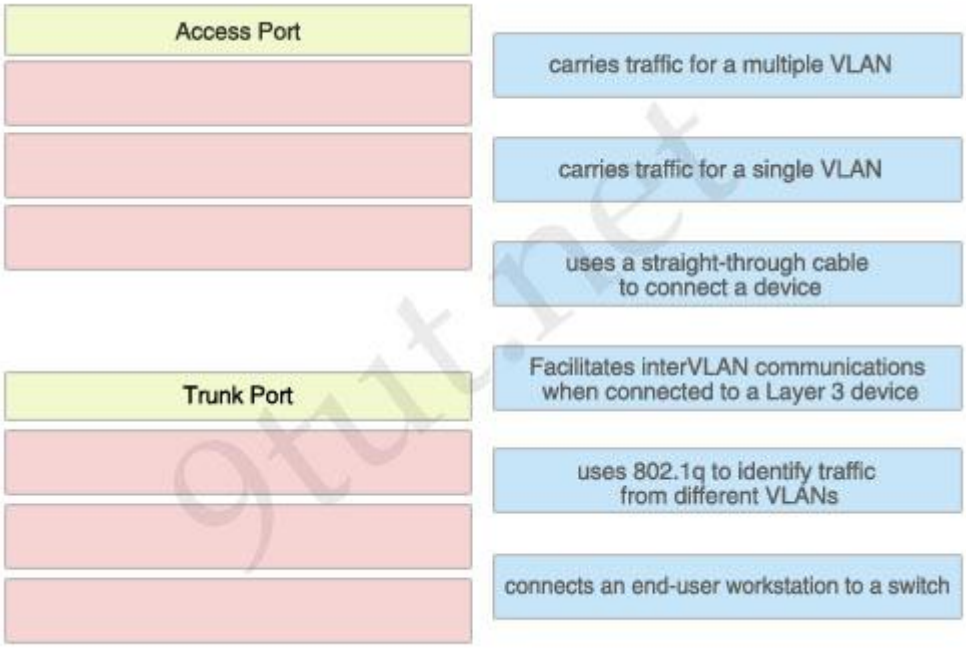
+ Encapsulation PPP
+ Line protocol is up

Physical Layer:

+ Serial 1/0 is up
+ Hardware is CD2430 in sync mode

Question 4

You work as a network administrator for your corporation, your boss is interested in switch ports. Match the options to the appropriate switch ports



Answer:

Access Port:

+ carries traffic for a single VLAN
+ uses a straight-through cable to connect a device
+ connects an end-user workstation to a switch

Trunk Port:

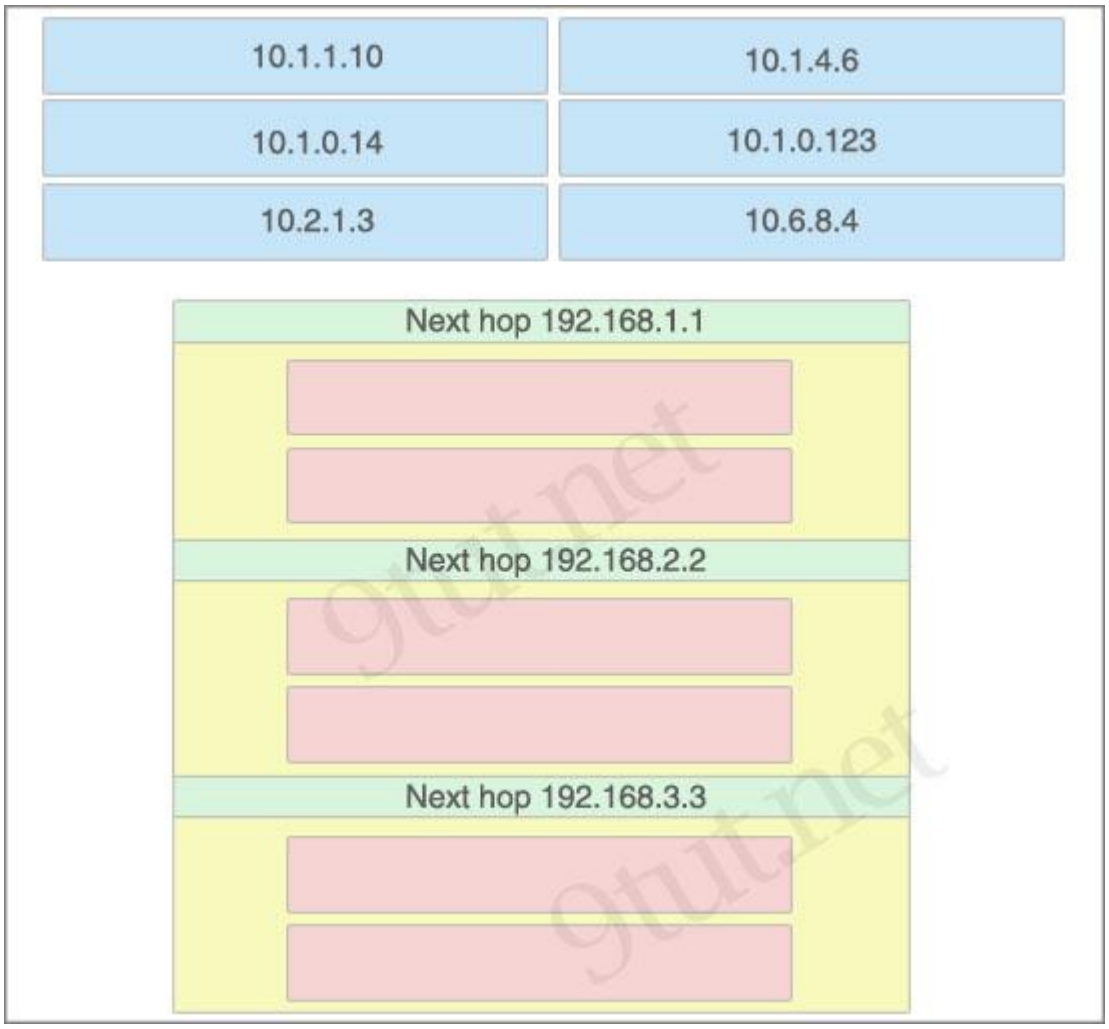
+ carries traffic for a multiple VLAN
+ Facilitates interVLAN communications when connected to a Layer 3 device
+ uses 802.1q to identify traffic from different VLANs

Question 5

Below is the configuration of the R1 router:

R1(config)# ip route 0.0.0.0 0.0.0.0 192.168.1.1
R1(config)# ip route 10.1.0.0 255.255.255.0 192.168.2.2
R1(config)# ip route 10.1.0.0 255.255.0.0 192.168.3.3

Drag each destination IP address on the top to its correct next hop address at the bottom.



Answer:

Next hop 192.168.1.1:
+ 10.2.1.3
+ 10.6.8.4

Next hop 192.168.2.2:
+ 10.1.0.14
+ 10.1.0.123

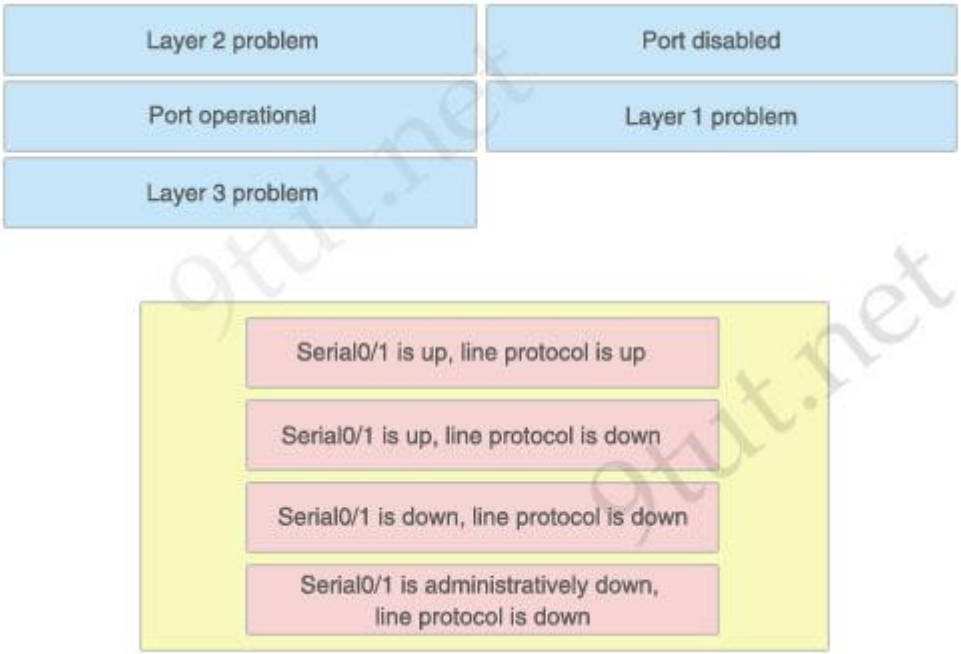
Next hop 192.168.3.3:
+ 10.1.1.10
+ 10.1.4.6

ICND2 – Drag and Drop 2

http://www.9tut.net/icnd2-200-101/new-icnd2-drag-and-drop-2

Question 1

Match the categories with the appropriate router output lines.

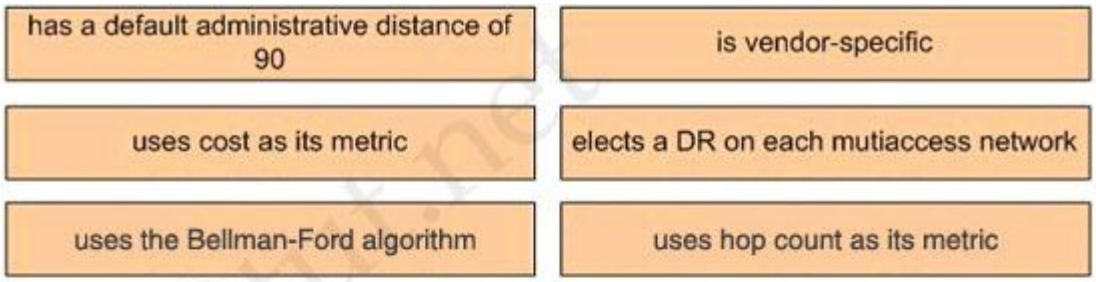


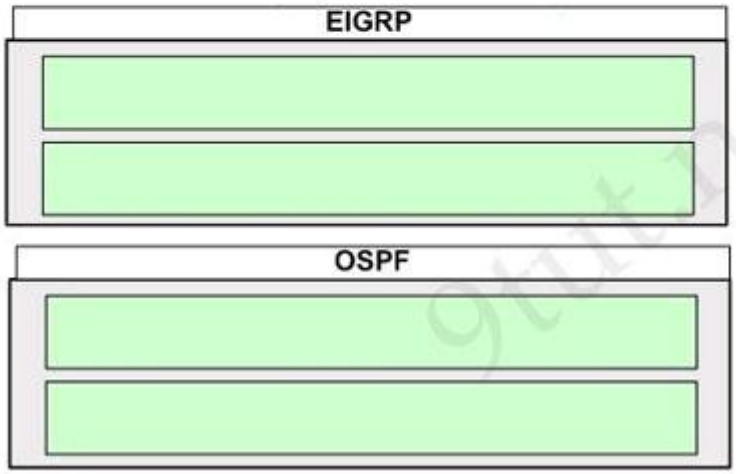
Answer:

1) **Port operational**: Serial0/1 is up, line protocol is up
2) **Layer 2 problem:** Serial0/1 is up, line protocol is down
3) **Layer 1 problem:** Serial0/1 is down, line protocol is down
4) **Port disabled:** Serial0/1 is administratively down, line protocol is down

Question 2

The above provides some descriptions, while the below provides some routing protocols. Drag the above items to the proper locations.





Answer:

EIGRP:

+ has a default administrative distance of 90
+ is vendor-specific

OSPF:

+ uses cost as its metric
+ elects a DR on each multiaccess network

Question 3

Drag the term on the left to its definition on the right (not all options are used)

holddown timer	A router learns from its neighbor that a route is down and the router sends an update back to the neighbor with an infinite metric to that route
poison reverse	The packets flooded when a topology change occurs, causing network routers to update their topological databases and recalculate routes.
count to infinity	This prevents sending information about a route back out the same interface that originally learned about the route
LSA	For a given period, this causes the router to ignore any updates with poorer metrics to a lost network
split horizon	

Answer:

+ **poison reverse**: A router learns from its neighbor that a route is down and the router sends an update back to the neighbor with an infinite metric to that route
+ **LSA**: The packets flooded when a topology change occurs, causing network routers to update their topological databases and recalculate routes
+ **split horizon**: This prevents sending information about a routeback out the same interface that originally learned about the route
+ **holddown timer**: For a given period, this causes the router to ignore any updates with poorer metrics to a lost network

Question 4

prevents invalid updates from looping the internetwork indefinitely	holddown timer
causes a routing protocol to advertise an infinite metric for a failed route	split horizon
prevents a router from improperly reinstating a route from a regular routing update	defining a maximum
prevents information about a route from being sent in the direction from which the route was learned	route poisoning
prevents, via the use of logical subdivisions, routing updates from propagating the internetwork	triggered update
decreases convergence time by immediately sending route information in response to a topology change	

Answer:

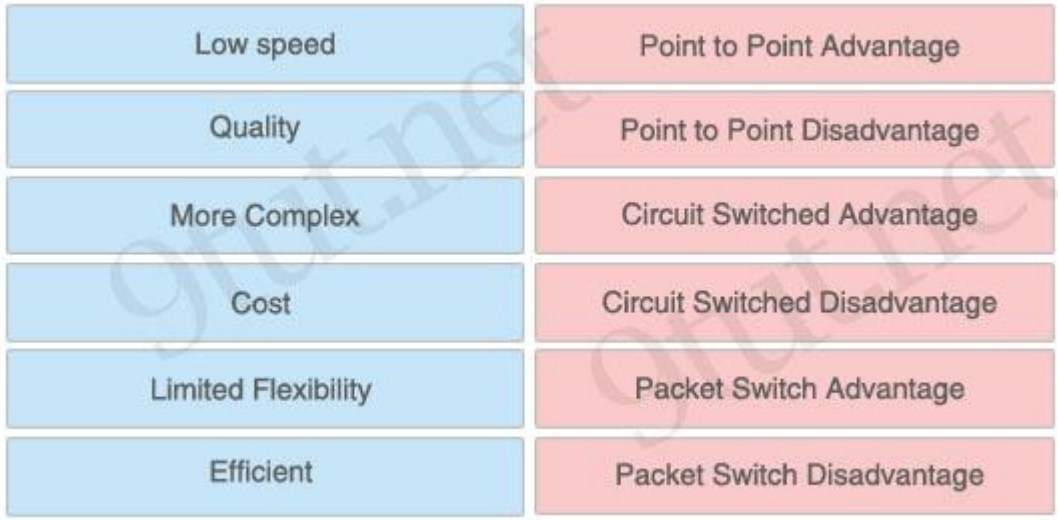
+ holddown timer: prevents a router from improperly reinstating a route from a regular routing update
+ split horizon: prevents information about a route from being sent in the direction from which the route was learned
+ defining a maximum: prevents invalid updates from looping the internetwork indefinitely
+ route poisoning: causes a routing protocol to advertise an infinite metric for a failed route
+ triggered update: decreases convergence time by immediately sending route information in response to a topology change

ICND2 – Drag and Drop 3

http://www.9tut.net/icnd2-200-101/new-icnd2-drag-and-drop-3

Question 1

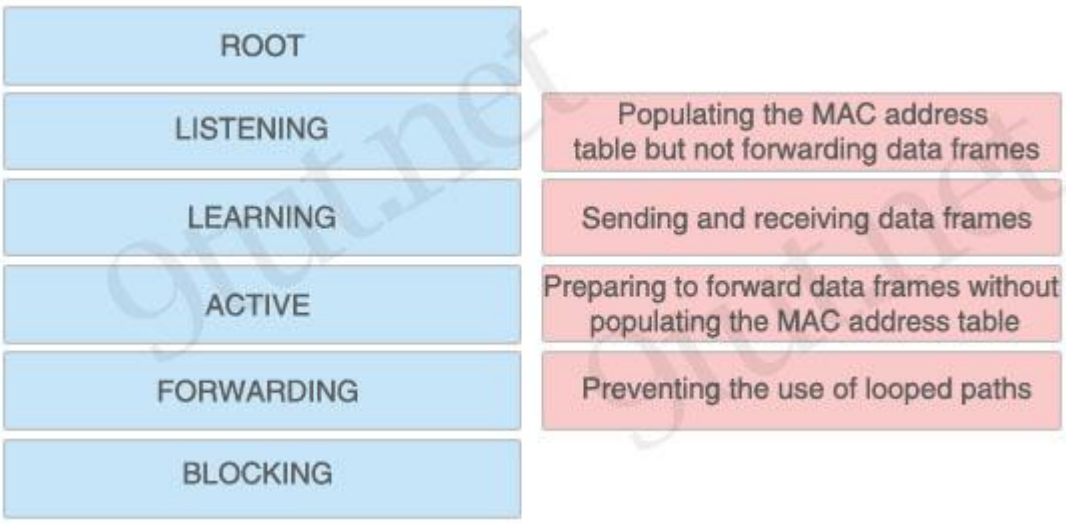
Drag item on left to match item on right



Answer:
+ Point to Point Advantage: Quality
+ Point to Point Disadvantage: Limited Flexibility
+ Circuit Switched Advantage: Cost
+ Circuit Switched Disadvantage: Low speed
+ Packet Switch Advantage: Efficient
+ Packet Switch Disadvantage: More Complex

Question 2

Place the Spanning-Tree Protocol port state on its functions (not all options on the left are used)



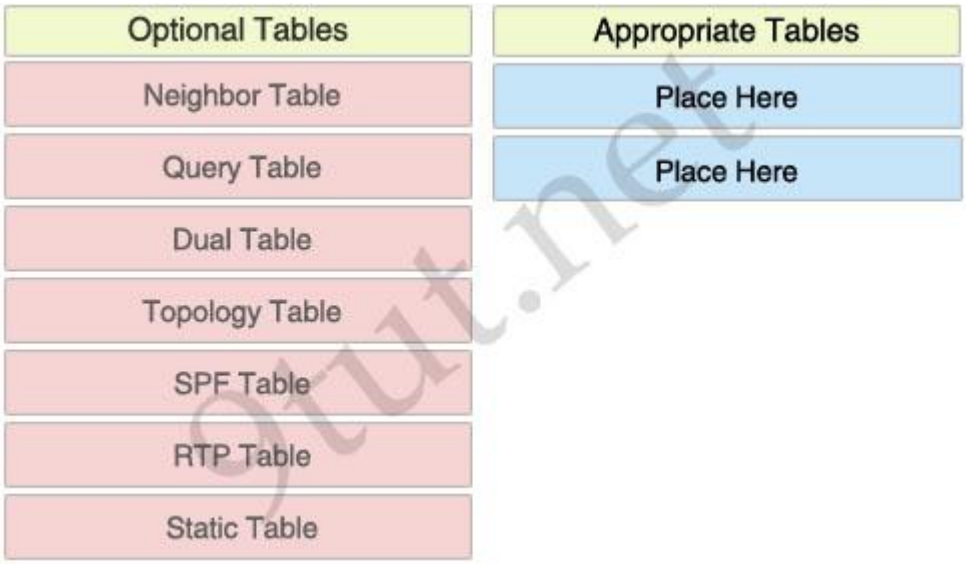
Answer:

+ Populating the MAC address table but not forwarding data frames: LEARNING
+ Sending and receiving data frames: FORWARDING
+ Preparing to forward data frames without populating the MAC address table: LISTENING
+ Preventing the use of looped paths: BLOCKING

Question 3

As a CCNA candidate, you need to know EIGRP very well.
Which tables of EIGRP route information are held in RAM and maintained through the use of hello and update packets?

Please choose two appropriate tables and drag the items to the proper locations.



Answer:

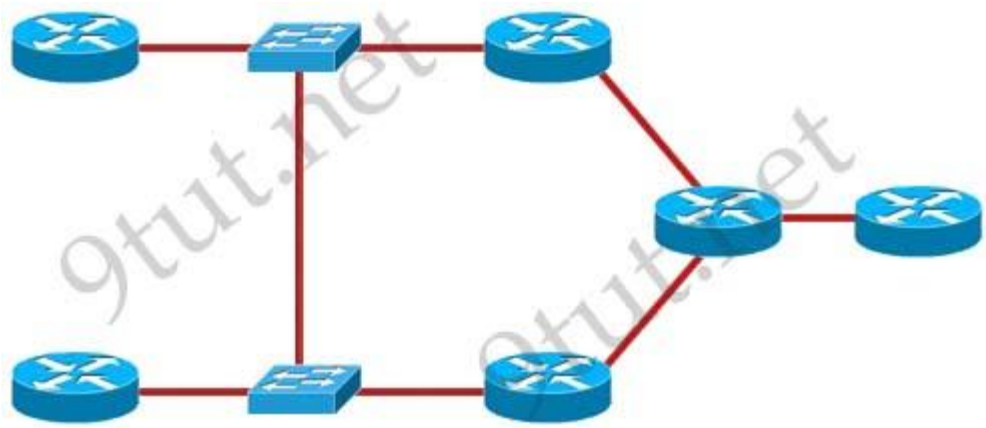
Neighbor Table
Topology Table

EIGRP Troubleshooting Sim

http://www.9tut.net/icnd2/icnd2-labsim/eigrp-troubleshooting-sim

Refer to the topology. The EIGRP routing protocol is configured. You are required to troubleshoot and resolve the EIGRP issues between the various routers. Use the appropriate show commands to troubleshoot the issues.

Topology:

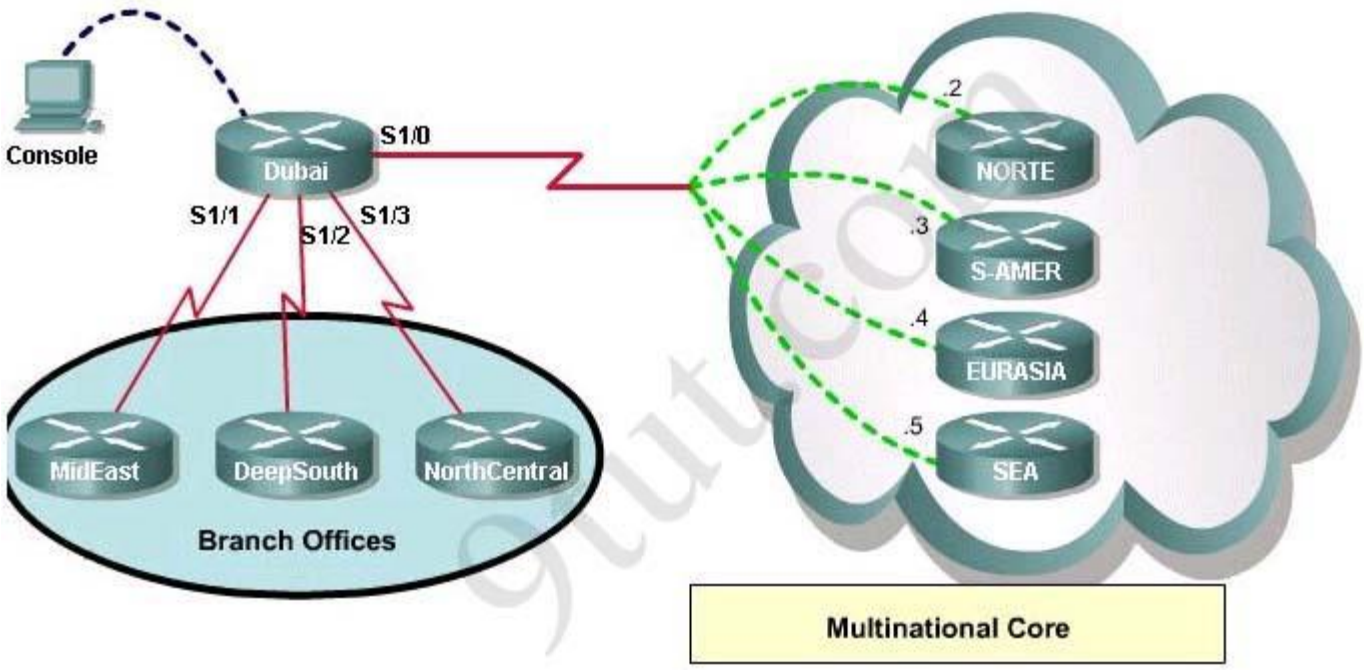


Frame Relay Sim

http://www.9tut.net/icnd2/icnd2-labsim/frame-relay-sim

Question

Enter IOS commands on the Dubai router to verify network operation and answer four multiple-choice questions. **THIS TASK DOES NOT REQUIRE DEVICE CONFIGURATION**.



Note: If you are not sure about Frame-Relay, please read my Frame Relay tutorial.

To answer 4 questions below, you have to type show frame-relay map and show running-config to get its configuration. You can use the outputs of these commands to answer all 4 multiple-choice questions.

```
Dubai#sh frame-relay map
Serial1/0 (up): ip 172.30.0.2 dlci 704 (0x7B,0x1CB0), dynamic,
                broadcast,, status defined, active
Serial1/0 (up): ip 172.30.0.3 dlci 196 (0xEA,0x38A0), dynamic,
                broadcast,, status defined, active
Serial1/0 (up): ip 172.30.0.4 dlci 702 (0x159,0x5490), dynamic,
                broadcast,, status defined, active
Serial1/0 (up): ip 172.30.0.5 dlci 344 (0x1C8,0x7080), dynamic,
                broadcast,, status defined, active
```

```
Dubai#sh run
interface FastEthernet0/0
 no ip address
 shutdown
!
interface Serial1/0
 ip address 172.30.0.1 255.255.255.240
 encapsulation frame-relay
 no fair-queue
!
interface Serial1/1
 ip address 192.168.0.1 255.255.255.252
!
interface Serial1/2
 ip address 192.168.0.5 255.255.255.252
 encapsulation ppp
!
interface Serial1/3
 ip address 192.168.0.9 255.255.255.252
 encapsulation ppp
 ppp authentication chap
!
router rip
 version 2
 network 172.30.0.0
 network 192.168.0.0
 no auto-summary
!
line con 0
 exec-timeout 0 0
line aux 0
line vty 0 4
 password Tlnet
 login
!
end
```


Question 1

What destination Layer 2 address will be used in the frame header containing a packet for host 172.30.0.4?

A – 704
B – 196
C – 702
D – 344

Answer: C

Question 2

A static map to the S-AMER location is required. Which command should be used to create this map?

A – frame-relay map ip 172.30.0.3 704 broadcast
B – frame-relay map ip 172.30.0.3 196 broadcast
C – frame-relay map ip 172.30.0.3 702 broadcast
D – frame-relay map ip 172.30.0.3 344 broadcast

Answer: B

Question 3

Which connection uses the default encapsulation for serial interfaces on Cisco routers?

A – The serial connection to the MidEast branch office
B – The serial connection to the DeepSouth branch office
C – The serial connection to the NorthCentral branch office
D – The serial connection to the Multinational Core

Answer: A

Question 4

If required, what password should be configured on the router in the MidEast branch office to allow a connection to be established with the Dubai router?

A – No password is required
B – Enable
C – Scr
D – Telnet
E – Console

Answer: A or D (because maybe there are 2 versions of this question, depending on the output of "show running-config" command, please read the explanation below)

VTP Configuration Sim

http://www.9tut.net/icnd2/icnd2-labsim/vtp-configuration-sim

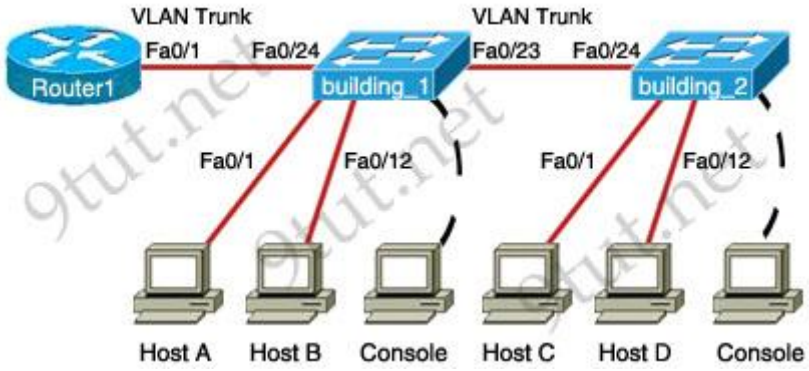
Question

A new switch is being added to the River Campus LAN. You will work to complete this process by first configuring the building_2 switch with an IP address and default gateway. For the switch host address, you should use the last available IP address on the management subnet. In addition, the switch needs to be configured to be in the same VTP domain as the building_1 switch and also needs to be configured as a VTP client. Assume that the IP configuration and VTP configuration on building_1 are complete and correct.

The configuration of the router is not accessible for this exercise. You must accomplish the following tasks:

Determine and configure the IP host address of the new switch.
Determine and configure the default gateway of the new switch.
Determine and configure the correct VTP domain name for the new switch.
Configure the new switch as a VTP client.

Note: In the exam, you might be asked to use first, second… available IP address on the management subnet.



Nat Sim

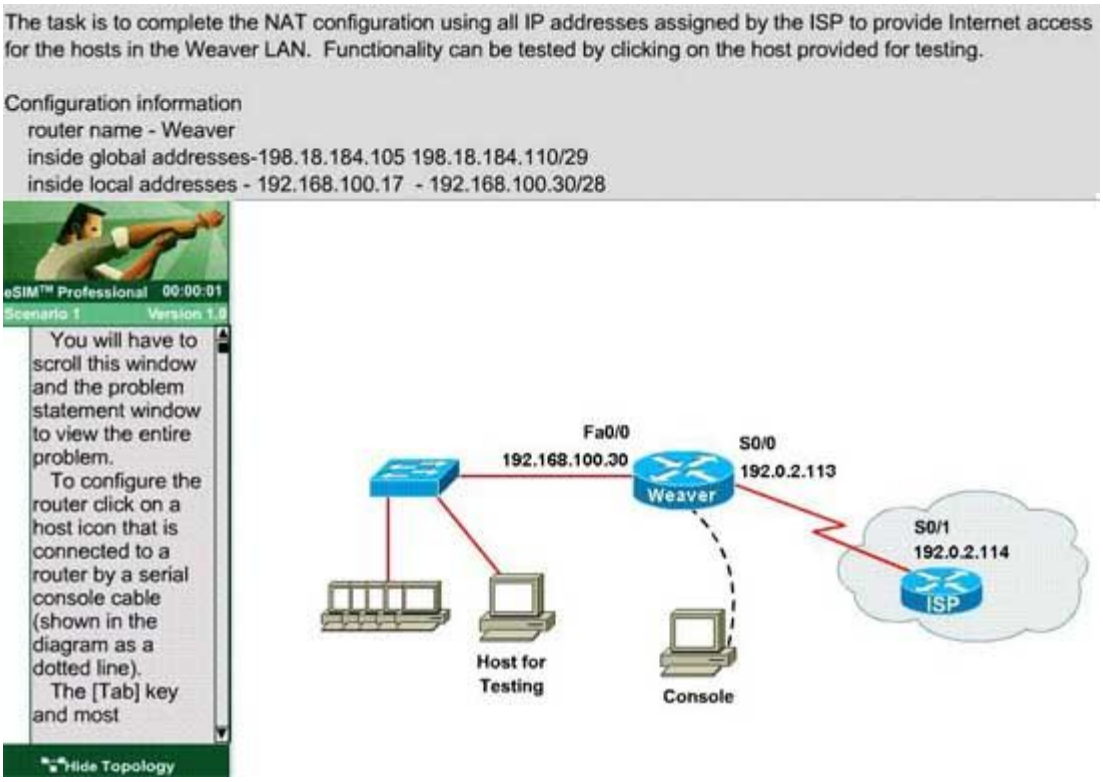
http://www.9tut.net/icnd2/icnd2-labsim/nat-sim-question

Question

A network associate is configuring a router for the weaver company to provide internet access. The ISP has provided the company six public IP addresses of 198.18.184.105 198.18.184.110. The company has 14 hosts that need to access the internet simultaneously. The hosts in the company LAN have been assigned private space addresses in the range of 192.168.100.17 – 192.168.100.30.

The following have already been configured on the router：

– The basic router configuration
– The appropriate interfaces have been configured for NAT inside and NAT outside
– The appropriate static routes have also been configured (since the company will be a stub network, no routing protocol will be required.)
– All passwords have been temporarily set to “cisco”



OSPF Sim

http://www.9tut.net/icnd2/icnd2-labsim/ospf-sim

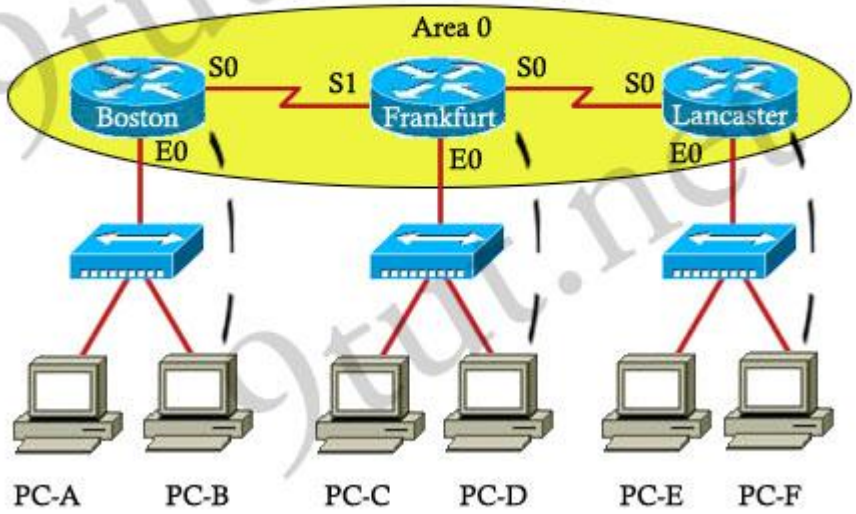
Question

Acme company has decided to network three locations to improve efficiency in inventory control. The routers have been named to reflect the location: Boston, Frankfurt, Lancaster.

Boston
Name: Boston
E0 : 192.168.4.1/24
S0 : 192.168.155.5/30
Secret Password : cisco

Frankfurt
Name: Frankfurt
E0 : 192.168.29.1/24
S0 : 192.168.155.10/30
S1 : 192.168.155.6/30
Secret Password : cisco

Lancaster
Name: Lancaster
E0 : 192.168.43.1/24
S0 : 192.168.155.9/30
Secret Password : cisco



The necessary networking has been completed at each location, and the routers have been configured with single area OSPF as the routing protocol. The Boston router was recently installed but connectivity is not complete because of incomplete routing tables. Identify and correct any problem you see in the configuration.