CISCO 200-101 EXAM QUESTIONS & ANSWERS

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CISCO 200-101 EXAM QUESTIONS & ANSWERS

Exam Name: Interconnecting Cisco Networking Devices

LAN Switching Technologies

QUESTION 1
Refer to the exhibit. Why has this switch not been elected the root bridge for VLAN1?

```
Switch# show spanning-tree vlan 1
VLAN0001
  Spanning tree enabled protocol 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 FWD 38        128.1    P2p
Fa0/11             Altn BLK 57        128.1    P2p
Fa0/13             Desg FWD 38        128.1    P2p
```

A. It has more than one interface 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.
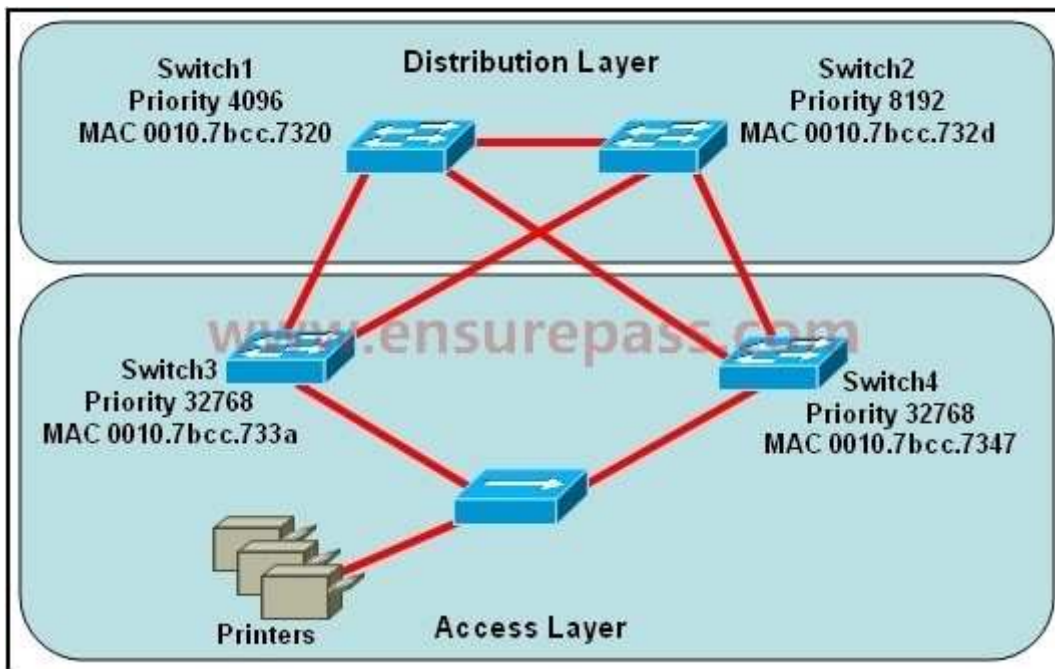
Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 2
Refer to the exhibit. Which switch provides the spanning-tree designated port role for the network segment that services the printers?

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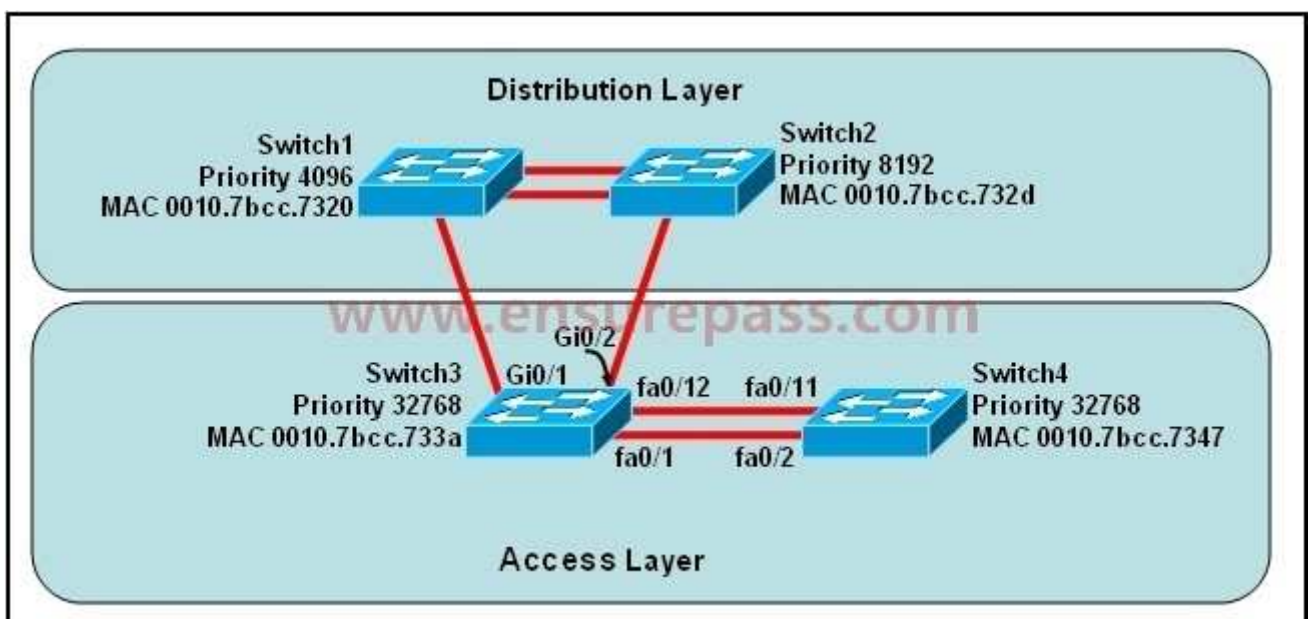B. Switch2
C. Switch3
D. Switch4

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 3
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
F. Switch3, port Gi0/2

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 4
Refer to the exhibit. Given the output shown from this Cisco Catalyst 2950, what is the reason that interface
FastEthernet 0/10 is not the root port for VLAN 2?

```
Switch# show spanning-tree interface fastethernet 0/10
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.
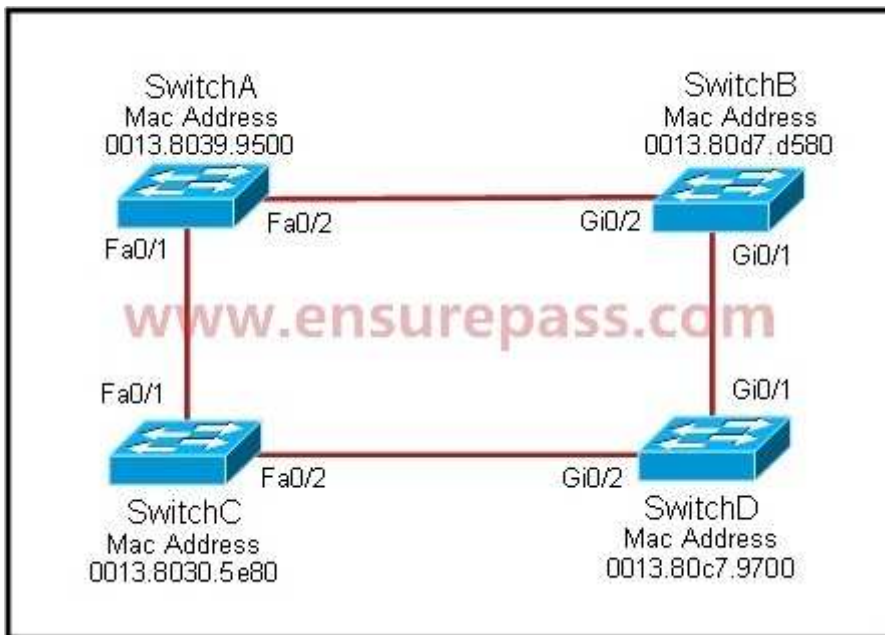
Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 5
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

Correct Answer: ABF
Section: (none)
Explanation

Explanation/Reference:

QUESTION 6
Which two states are the port states when RSTP has converged? (Choose two.)

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

Correct Answer: AD
Section: (none)
Explanation

Explanation/Reference:

QUESTION 7
At which layer of the OSI model is RSTP used to prevent loops?

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

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 8
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.

Correct Answer: BDE
Section: (none)
Explanation

Explanation/Reference:

QUESTION 9
Which term describes a spanning-tree network that has all switch ports in either the blocking or forwarding state?

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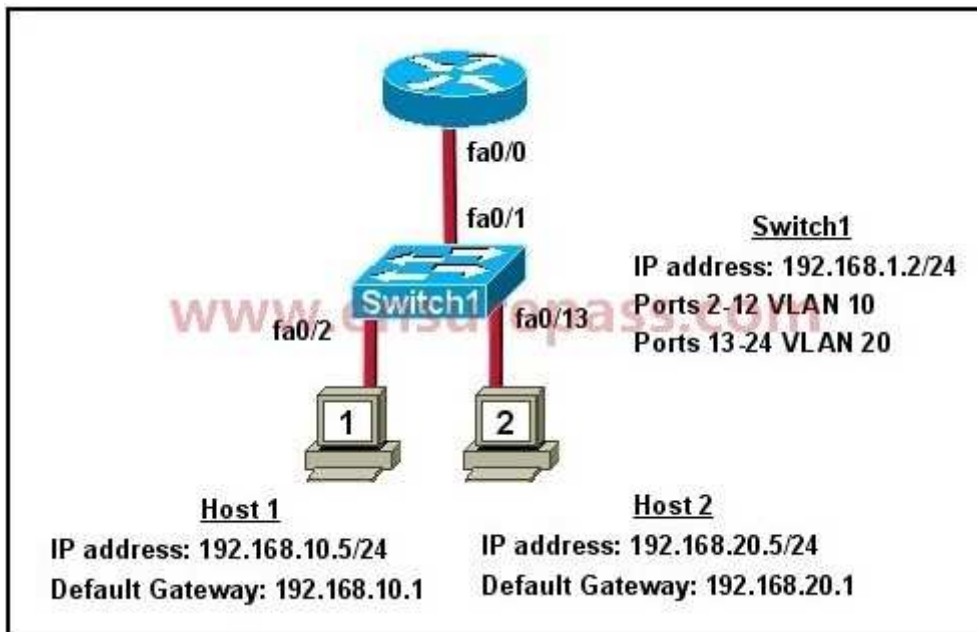B. redundant
C. provisioned
D. spanned

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 10
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 shut down
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)# 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
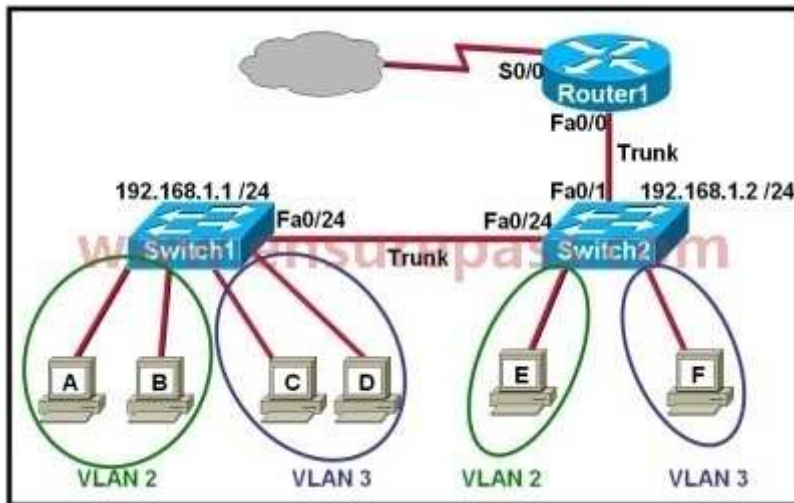Switch1(config-if)# ip default-gateway 192.168.1.1

Correct Answer: BE
Section: (none)
Explanation

Explanation/Reference:

QUESTION 11
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. Router1 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 the FastEthernet 0/1 interface on Switch2 trunk ports must be configured using the same encapsulation type.

Correct Answer: DF
Section: (none)
Explanation

Explanation/Reference:

QUESTION 12
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.

Correct Answer: ACE
Section: (none)
Explanation

Explanation/Reference:

IP Routing Technologies

QUESTION 1
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.

Correct Answer: CD
Section: (none)
Explanation

Explanation/Reference:

QUESTION 2
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 (Serial0.1), 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
```

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 3
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?
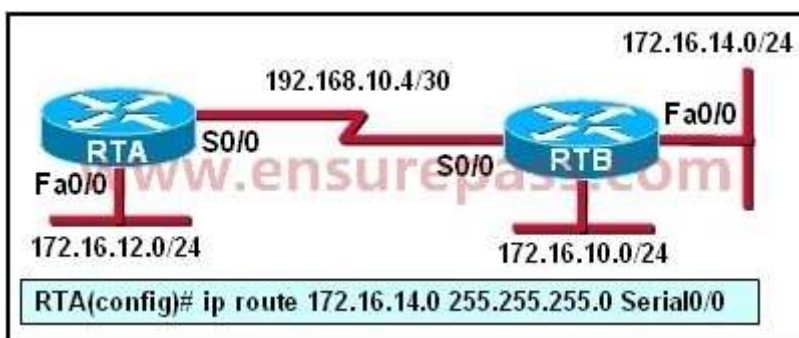
A. A route to 172.16.14.0/24 will remain in the RTA routing table.
B. A packet to host 172.16.14.225 will be dropped by router RTA.
C. Router RTA will send an ICMP packet to attempt to verify the route.
D. Because router RTB will send a poison reverse packet to router RTA, RTA will remove the route.
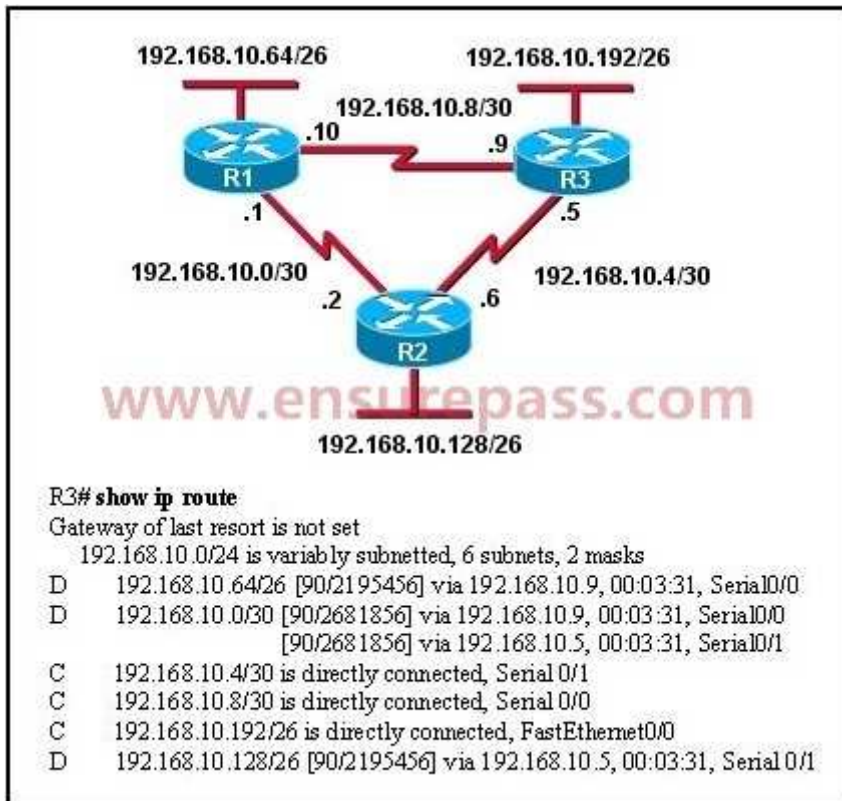
Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

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?


```
192.168.10.64/26          192.168.10.192/26
          192.168.10.8/30
       .10                    .9
   R1                         R3
    .1                        .5
192.168.10.0/30           192.168.10.4/30
       .2              .6
          R2
www.ensurepass.com
     192.168.10.128/26

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, Serial 0/1
C      192.168.10.8/30 is directly connected, Serial 0/0
C      192.168.10.192/26 is directly connected, FastEthernet0/0
D      192.168.10.128/26 [90/2195456] via 192.168.10.5, 00:03:31, Serial 0/1
```

A. The router will forward packets from R3 to R2 to R1.
B. The router will forward packets from R3 to R1 to R2.
C. The router will forward packets from R3 to R2 to R1 AND from R3 to R1.
D. The router will forward packets from R3 to R1.
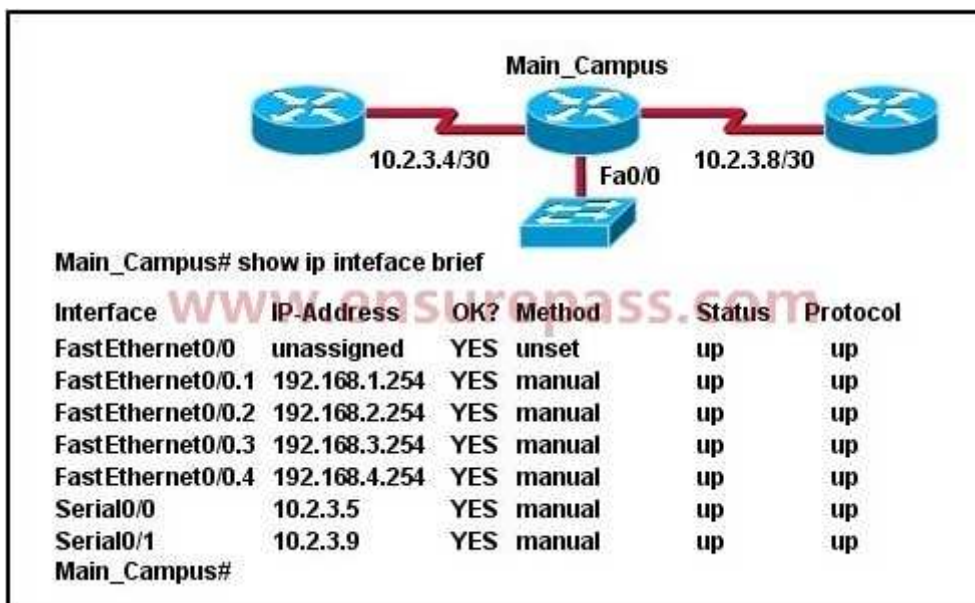
Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 5
Refer to the exhibit. What information about the interfaces on the Main_Campus router is true?

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#

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.

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 6
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 is true about this configuration?

Fa0/0.1 – 172.19.1.254 /24 VLAN 1
Fa0/0.2 – 172.19.2.254 /24 VLAN 2
Fa0/0.3 – 172.19.3.254 /24 VLAN 3

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. 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
C. These commands need to be added to the configuration:

C-router(config)# router rip
C-router(config-router)# network 172.19.0.0
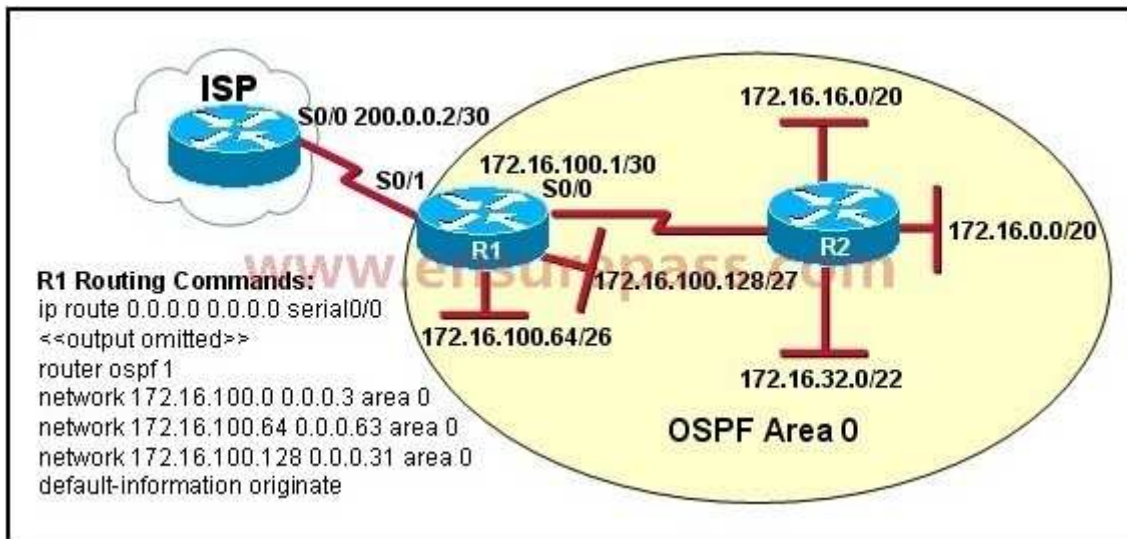D. No further routing configuration is required.

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 7
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 Ethernet networks connected to R1.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

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. Corp-4
E. Branch-1
F. Branch-2

Correct Answer: DF
Section: (none)
Explanation

Explanation/Reference:

QUESTION 9
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.

Correct Answer: ACF
Section: (none)
Explanation

Explanation/Reference:

QUESTION 10
Which parameter or parameters are used to calculate OSPF cost in Cisco routers?

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

Correct Answer: A

QUESTION 11
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.

QUESTION 12
Refer to the exhibit. Which two statements are true about the loopback address that is configured on RouterB? (Choose two.)
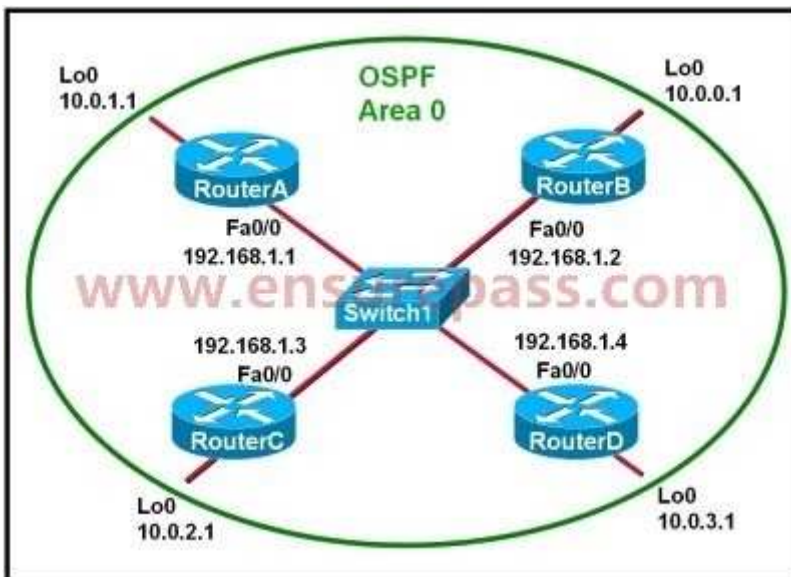
A. It ensures that data will be forwarded by RouterB.
B. It provides stability for the OSPF process on RouterB.
C. It specifies that the router ID for RouterB should be 10.0.0.1.
D. It decreases the metric for routes that are advertised from RouterB.
E. It indicates that RouterB should be elected the DR for the LAN.

QUESTION 13
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

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 14
Which two are advantages of static routing when compared to dynamic routing? (Choose two.)

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

Correct Answer: BG
Section: (none)
Explanation

Explanation/Reference:

QUESTION 15
Refer to the exhibit. Given the output for this command, if the router ID has not been manually set, what router ID will OSPF use for this router?

```
RouterD# show ip interface brief
Interface        IP-Address      OK?  Method  Status  Protocol
FastEthernet0/0  192.168.5.3     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
```

A. 10.1.1.2

B. 10.154.154.1
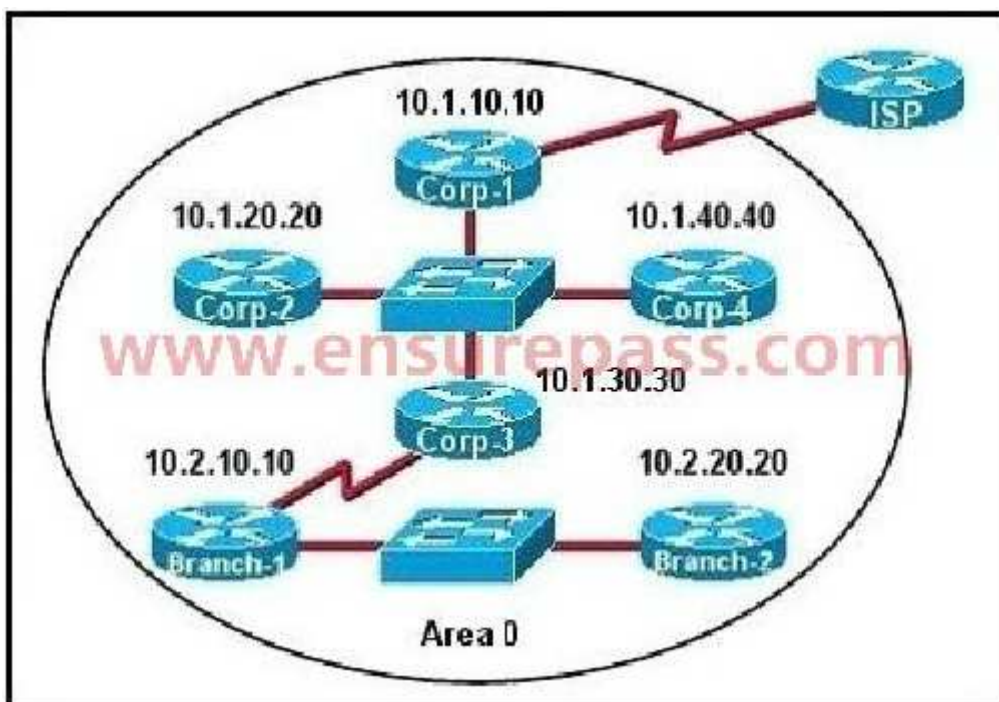
C. 172.16.5.1

D. 192.168.5.3

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 16
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. Corp-4

E. Branch-1

F. Branch-2

Correct Answer: DF
Section: (none)
Explanation

Explanation/Reference:

QUESTION 17
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.

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 18
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?
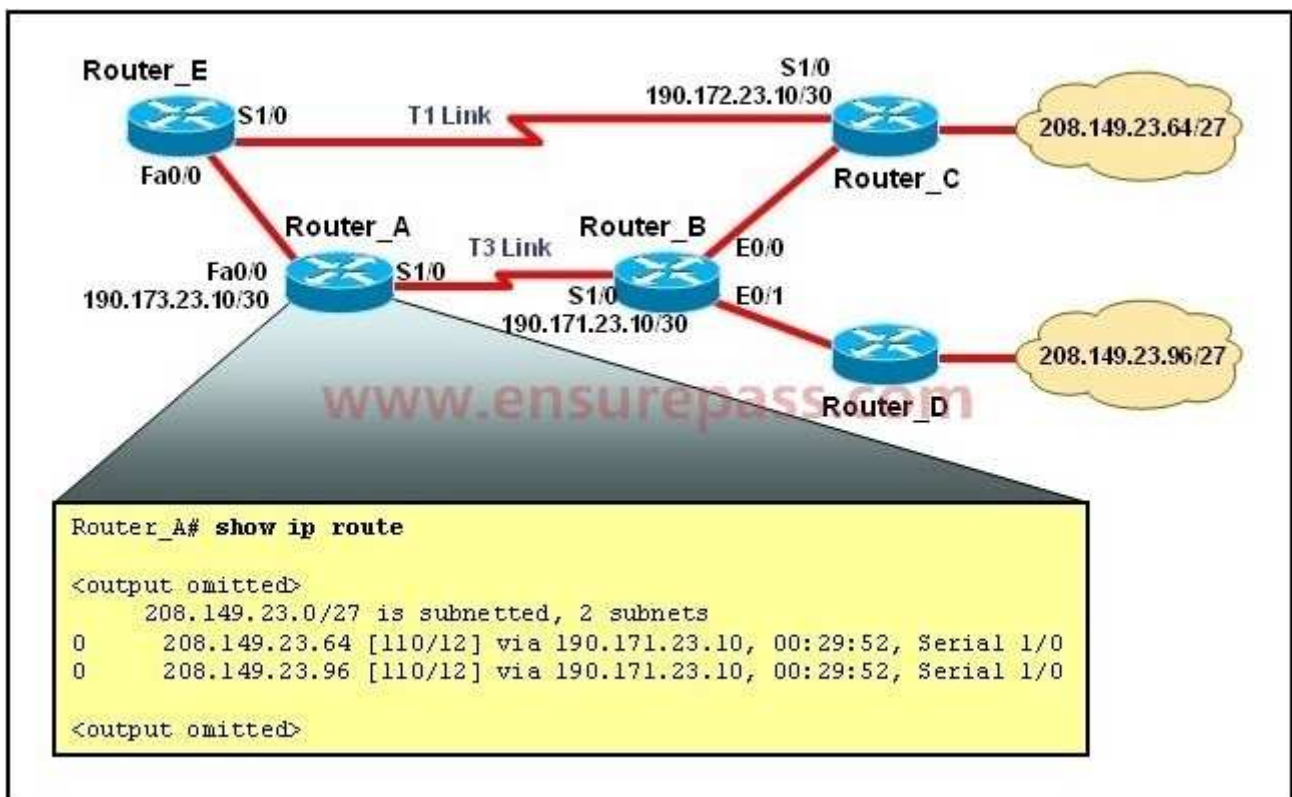
A. O 208.149.23.64 [110/13] via 190.173.23.10, 00:00:07, FastEthernet 0/0
   O 208.149.23.96 [110/13] via 190.173.23.10, 00:00:16, FastEthernet 0/0
B. O 208.149.23.64 [110/1] via 190.172.23.10, 00:00:07, Serial 1/0
   O 208.149.23.96 [110/3] via 190.173.23.10, 00:00:16, FastEthernet 0/0
C. O 208.149.23.64 [110/13] via 190.172.23.10, 00:00:07, Serial 1/0
   O 208.149.23.96 [110/13] via 190.172.23.10, 00:00:16, Serial 1/0
   O 208.149.23.96 [110/13] via 190.173.23.10, 00:00:16, FastEthernet 0/0
D. O 208.149.23.64 [110/3] via 190.172.23.10, 00:00:07, Serial 1/0
   O 208.149.23.96 [110/3] via 190.172.23.10, 00:00:16, Serial 1/0

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 19
Which command is used to display the collection of OSPF link states?

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

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 20
What is the default administrative distance of OSPF?

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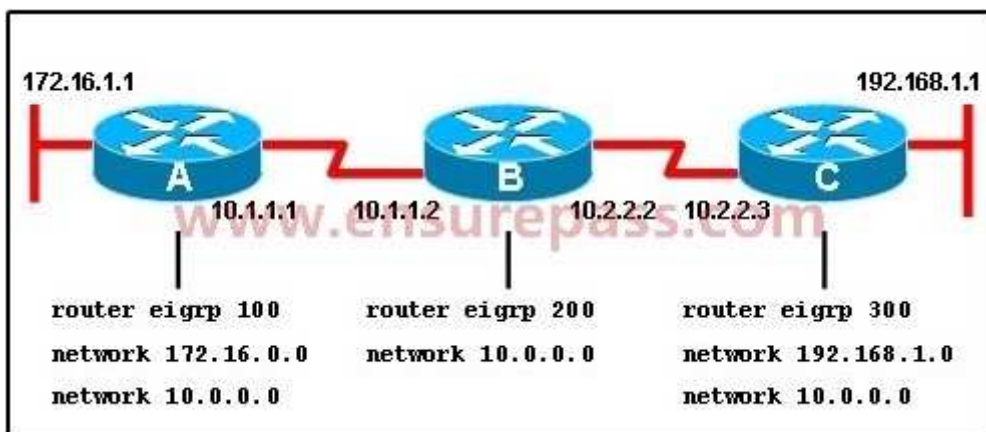B. 100
C. 110
D. 120

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 21
Refer to the exhibit. When running EIGRP, what is required for RouterA to exchange routing updates with RouterC?

A. AS numbers must be changed to match on all the routers.
B. Loopback interfaces must be configured so a DR is elected.
C. The no auto-summary command is needed on Router A and Router C.
D. Router B needs to have two network statements, one for each connected network.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 22
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 on 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?
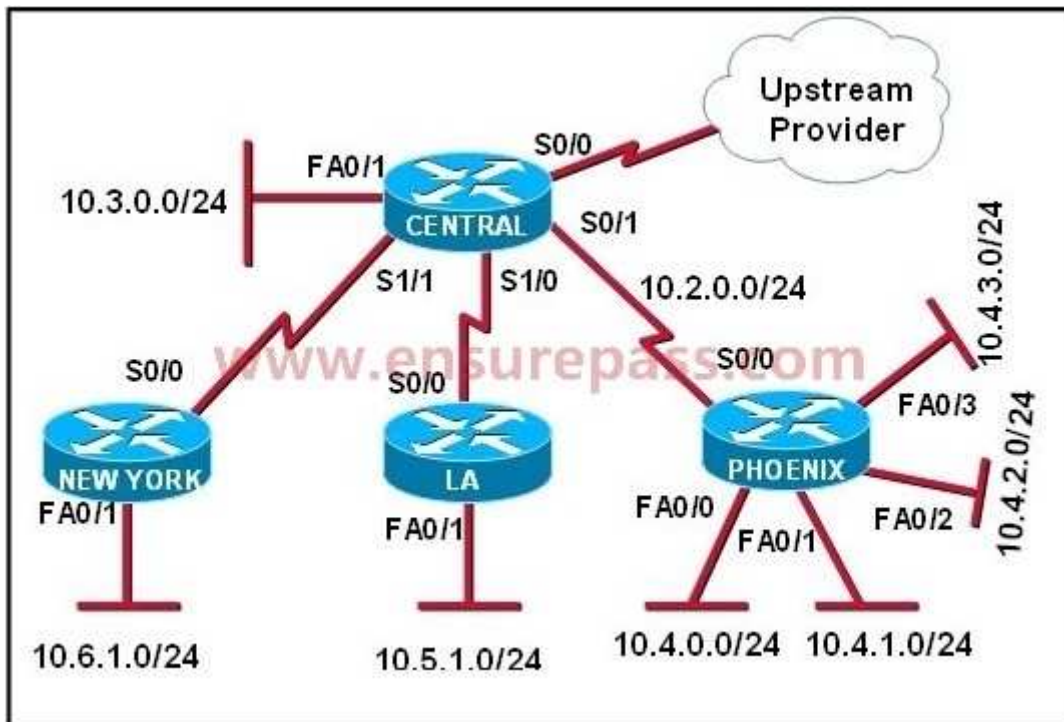
A. 10.0.0.0/22 is subnetted, 1 subnets
   D 10.0.0.0 [90/20514560] via 10.2.0.2, 6w0d, Serial0/1
B. 10.0.0.0/28 is subnetted, 1 subnets
   D 10.2.0.0 [90/20514560] via 10.2.0.2, 6w0d, Serial0/1
C. 10.0.0.0/30 is subnetted, 1 subnets
   D 10.2.2.0 [90/20514560] via 10.2.0.2, 6w0d, Serial0/1
D. 10.0.0.0/22 is subnetted, 1 subnets
   D 10.4.0.0 [90/20514560] via 10.2.0.2, 6w0d, Serial0/1
E. 10.0.0.0/28 is subnetted, 1 subnets
   D 10.4.4.0 [90/20514560] via 10.2.0.2, 6w0d, Serial0/1
F. 10.0.0.0/30 is subnetted, 1 subnets
   D 10.4.4.4 [90/20514560] via 10.2.0.2, 6w0d, Serial0/1

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 23
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

Correct Answer: AC
Section: (none)
Explanation

Explanation/Reference:

QUESTION 24
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

Correct Answer: BE
Section: (none)
Explanation

Explanation/Reference:

QUESTION 25
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

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 26

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 sends an update back to the nei ro
poison reverse		The packets flooded when a topol routers to update their topologica
count to infinity	www.ensurepass.com	This prevents sending informatio interface that originally
LSA		For a given period, this causes th poorer metrics
split horizon		

A.

B.

C.

D.

Correct Answer:
Section: (none)
Explanation

Explanation/Reference:

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

holddown timer		poison
poison reverse		L
count to infinity		split h
LSA		holddc
split horizon		

QUESTION 27

Drag the description on the left to the routing protocol on the right. (Not all options are used.)

is vendor-specific		**EIGRP**
uses cost as its metric		
uses hop count as its metric		
uses the Bellman-Ford algorithm		**OSPF**
elects a DR on each multiaccess network		
has a default administrative distance of 90		

A.
B.
C.
D.

Correct Answer:
Section: (none)
Explanation

Explanation/Reference:

Drag the description on the left to the routing protocol on the right. (Not all options are used.)

| is vendor-specific |
| uses cost as its metric |
| uses hop count as its metric |
| uses the Bellman-Ford algorithm |
| elects a DR on each multiaccess network |
| has a default administrative distance of 90 |

EIGRP

| is vendor-specif... |
| has a default administrative... |

OSPF

| uses cost as its m... |
| elects a DR on each multiacc... |

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IP Services

QUESTION 1
Which command enables IPv6 forwarding on a Cisco router?

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

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 2
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
swithcport port-security

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 Fast Ethernet 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

Correct Answer: BD
Section: (none)
Explanation
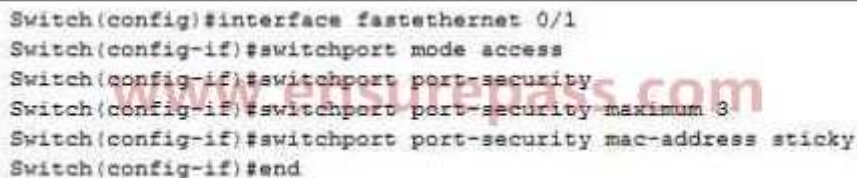
Explanation/Reference:

QUESTION 3
Refer to the exhibit. Which of these correctly describes the results of port security violation of an unknown packet?

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

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 4
Refer to the exhibit. What three actions will the switch take when a frame with an unknown source MAC address arrives at the interface? (Choose 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
SecureStatic Address Aging  : Disabled
Maximum MAC Addresses       : 2
Total MAC Addresses         : 2
Configured MAC Addresses    : 0
Sticky MAC Addresses        : 2
Last Source Address:Vlan    : 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.

Correct Answer: ABC
Section: (none)
Explanation

Explanation/Reference:

Troubleshooting

QUESTION 1
Refer to the exhibit. 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?
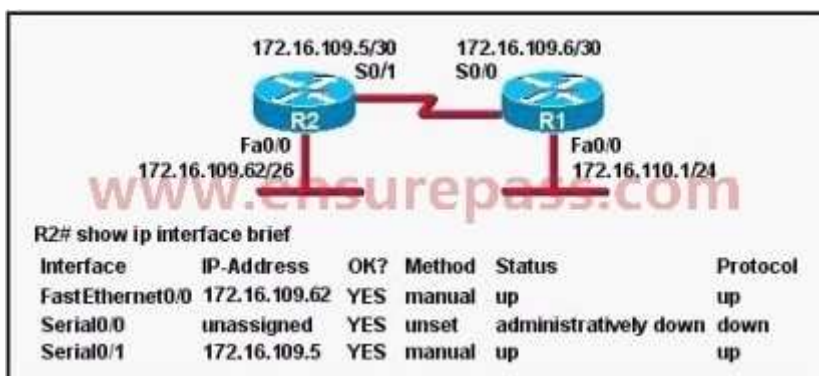
A. One interface has a problem.
B. Two interfaces have problems.
C. The interfaces are functioning correctly.
D. The operational status of the interfaces cannot be determined from the output shown.

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 2

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

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 3

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.

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 4

Topology

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

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 5

Topology

Console

S1/0

Dubai

S1/1   S1/3
   S1/2

North   SouthIslands   NorthCoast

Branch Offices

.2
USA-CAN

.3
S-AMER

.4
AUS-PAC

.5
S-ASIA

Multinational Core

```
Dubai                                                              [_]

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%LINK-3-UPDOWN: Interface FastEthernet0/0, changed state to administratively dow
n
%LINK-3-UPDOWN: Interface Serial1/0, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial1/0, changed state to up
%LINK-3-UPDOWN: Interface Serial1/1, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial1/1, changed state to up
%LINK-3-UPDOWN: Interface Serial1/2, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial1/2, changed state to up
%LINK-3-UPDOWN: Interface Serial1/3, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial1/3, changed state to up
Press RETURN to get started!
Dubai>
```

```
Dubai#sh frame-relay map
Seriall/0 (up): ip 172.30.0.2 dlci 825 (0x7B,0x1CB0), dynamic,
                   broadcast,, status defined, active
Seriall/0 (up): ip 172.30.0.3 dlci 230 (0xEA,0x38A0), dynamic,
                   broadcast,, status defined, active
Seriall/0 (up): ip 172.30.0.4 dlci 694 (0x159,0x5490), dynamic,
                   broadcast,, status defined, active
Seriall/0 (up): ip 172.30.0.5 dlci 387 (0x1C8,0x7080), dynamic,
                   broadcast,, status defined, active
Dubai#
interface FastEthernet0/0
 no ip address
 shutdown
!
interface Seriall/0
 ip address 172.30.0.1 255.255.255.240
 encapsulation frame-relay
 no fair-queue
!
interface Seriall/1
 ip address 192.168.0.1 255.255.255.252
!
interface Seriall/2         www.ensurepass.com
 ip address 192.168.0.5 255.255.255.252
 encapsulation ppp
!
interface Seriall/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
```

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

A. The serial connection to the NorthCoast branch office.
B. The serial connection to the North branch office.
C. The serial connection to the Southlands branch office.
D. The serial connection to the Multinational Core.
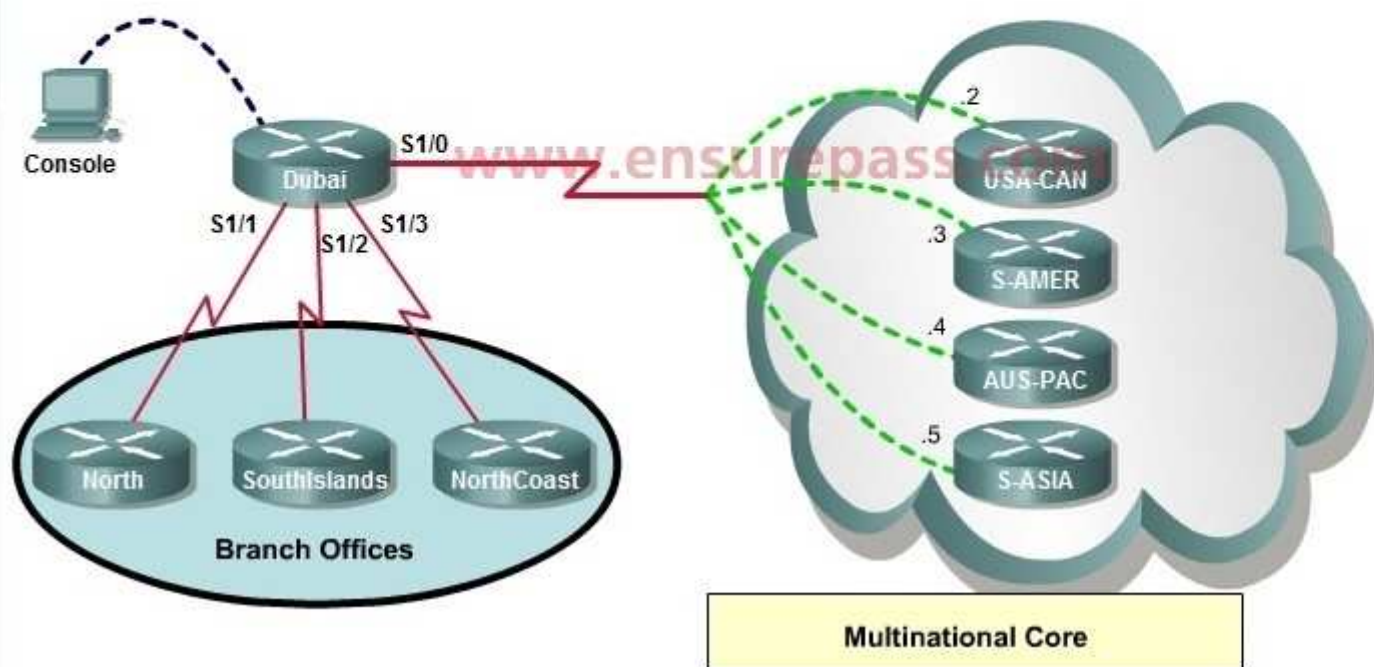
Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 6

- Enter IOS commands on the Dubai router to verify network operation and answer for multiple-choice questions. **THIS TASK DOES NOT REQUIRE DEVICE CONFIGURATION.**
- Click on the Console PC to gain access to the console of the router. No console or enable passwords are required.
- To access the multiple-choice questions, click on the numbered boxes on the left of the top panel.

Topology

```
Dubai                                                        [_]

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%LINK-3-UPDOWN: Interface FastEthernet0/0, changed state to administratively dow
n
%LINK-3-UPDOWN: Interface Serial1/0, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial1/0, changed state to up
%LINK-3-UPDOWN: Interface Serial1/1, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial1/1, changed state to up
%LINK-3-UPDOWN: Interface Serial1/2, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial1/2, changed state to up
%LINK-3-UPDOWN: Interface Serial1/3, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial1/3, changed state to up
Press RETURN to get started!
Dubai>
```

```
Dubai#sh frame-relay map
Serial1/0 (up): ip 172.30.0.2 dlci 825 (0x7B,0x1CB0), dynamic,
                broadcast,, status defined, active
Serial1/0 (up): ip 172.30.0.3 dlci 230 (0xEA,0x38A0), dynamic,
                broadcast,, status defined, active
Serial1/0 (up): ip 172.30.0.4 dlci 694 (0x159,0x5490), dynamic,
                broadcast,, status defined, active
Serial1/0 (up): ip 172.30.0.5 dlci 387 (0x1C8,0x7080), dynamic,
                broadcast,, status defined, active
Dubai#
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
```

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

A. frame-relay map ip 172.30.0.3 825 broadcast
B. frame-relay map ip 172.30.0.3 230 broadcast
C. frame-relay map ip 172.30.0.3 694 broadcast
D. frame-relay map ip 172.30.0.3 387 broadcast

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

WAN Technologies

Drag the Frame Relay acronym on the left to match its definition on the right. (Not all acronyms are used.)

CIR	a router is thi
DCE	the most common
DTE	provides status messages b
LMI	identifies the virtual connection
PVC	
SVC	
DLCI	

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A.
B.
C.
D.

Correct Answer:
Section: (none)
Explanation

Explanation/Reference:

Drag the Frame Relay acronym on the left to match its definition on the right. (Not all acronyms are used.)

CIR	D
DCE	
DTE	L
LMI	D
PVC	
SVC	
DLCI	

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QUESTION 2
Refer to the exhibit. Which WAN protocol is being used?

```
RouterA#show interface pos8/0/0
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

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

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.

Correct Answer: BC
Section: (none)
Explanation

Explanation/Reference:

QUESTION 4
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.

Correct Answer: BC
Section: (none)
Explanation

Explanation/Reference:

QUESTION 5
Which command allows you to verify the encapsulation type (CISCO or IETF) for a Frame Relay link?

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

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 6
Refer to the exhibit.

```
City#show ip interface brief

Interface          IP-Address      OK?  Method  Status  Protocol
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

Correct Answer: BCD
Section: (none)
Explanation

Explanation/Reference:

QUESTION 7
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.

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 8
Which two statistics appear in show frame-relay map output? (Choose two.)

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

Correct Answer: BD
Section: (none)
Explanation

Explanation/Reference:

QUESTION 9
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

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 10
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. DLCI 122 represents the interface of the remote serial interface
D. DLCI 122 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

Correct Answer: ADE
Section: (none)
Explanation

Explanation/Reference:

QUESTION 11
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.

Correct Answer: BD
Section: (none)
Explanation

Explanation/Reference:

QUESTION 12
What are three reasons that an organization with multiple branch offices and roaming users might implement a Cisco VPN solution instead of point-to-point WAN links? (Choose three.)

A. reduced cost
B. better throughput
C. broadband incompatibility
D. increased security
E. scalability
F. reduced latency

Correct Answer: ADE
Section: (none)
Explanation

Explanation/Reference:

QUESTION 13
Which command is used to enable CHAP authentication, with PAP as the fallback method, on a serial interface?

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

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 14
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 DCLI 202
B. defines the source IP address that is used in all broadcast packets on DCLI 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

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 15
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

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 16
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

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 17
Which PPP subprotocol negotiates authentication options?

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

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 18
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 of the remote router.
C. The PVC is configured correctly, is operating normally, and is waiting for interesting traffic 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 local switch.

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 19
Refer to the exhibit. 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?
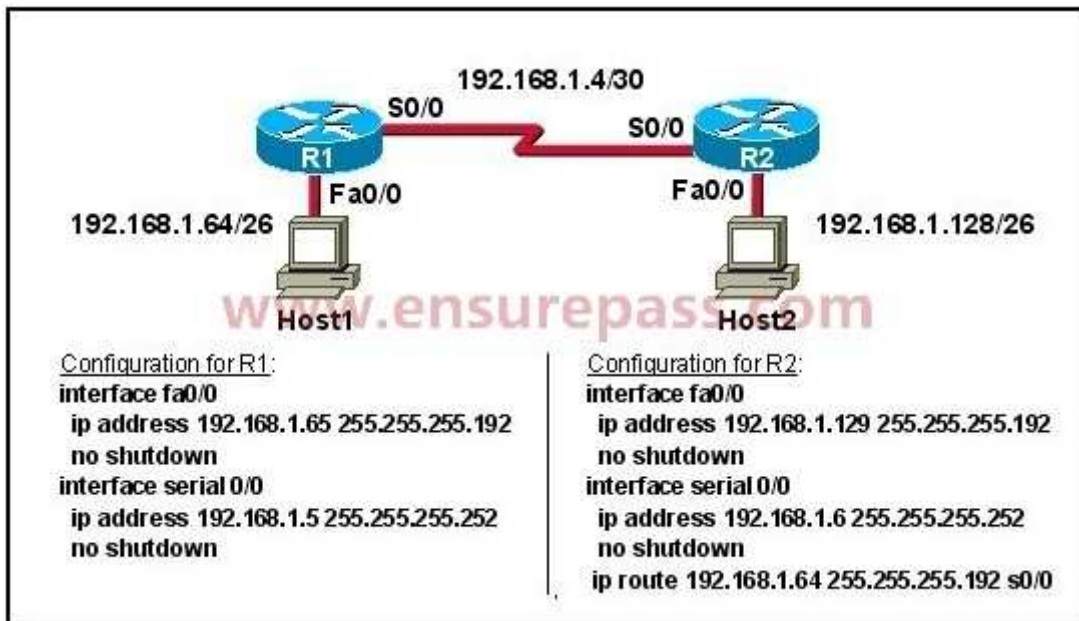
A. The serial cable on R1 needs to be replaced.
B. The interfaces on R2 are not configured properly.
C. R1 has no route to the 192.168.1.128 network.
D. The IP addressing scheme has overlapping subnetworks.
E. The ip subnet-zero command must be configured on both routers.

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 20
What does the frame-relay interface-dlci command configure?

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

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 21
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.

Correct Answer: E
Section: (none)
Explanation

Explanation/Reference: