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Number: 200-125

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Compiled by Genius

31 May 2017, version 27

341q+17sim

I have remove duplicate from previous version of this file (v21, v18, v16),
add explanation in some question and
rewrite sim question according to 9tut

Added question from 266, Simlets v3, 352(350), 191, 6 new(smart), 3 old(reporter), 2 new(Zoro).
Removed duplicate, and corrected answer (explanation and reference in some question)

Thanks to doka, PPAP, Mr.madman, KINGSMAN, ManhDT, Liam, coolguy01, NET-37, flipdruid, softcrew, Rivan IT Cebu

Checked all - 341 (I changed some wrong answers according to my opinion and posts on 9tut with explanation)
Sims RIPV2, DHCP, EIGRP, OSPF, ACLv2 from 9tut.com (explanation look on the site)

Permanent link for updated dump <http://gg.gg/8zgkc>

CCNAv6.com - Good luck in exam!!!

MCQ

QUESTION 1

Which technology supports the stateless assignment of IPv6 addresses?

- A. DNS
- B. DHCPv6
- C. DHCP
- D. autoconfiguration

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

DHCPv6 Technology Overview

IPv6 Internet Address Assignment Overview

IPv6 has been developed with Internet Address assignment dynamics in mind. Being aware that IPv6 Internet addresses are 128 bits in length and written in hexadecimal makes automation of address- assignment an important aspect within network design. These attributes make it inconvenient for a user to manually assign IPv6 addresses, as the format is not naturally intuitive to the human eye. To facilitate address assignment with little or no human intervention, several methods and technologies have been developed to automate the process of address and configuration parameter assignment to IPv6 hosts. The various IPv6 address assignment methods are as follows:

1. Manual Assignment

An IPv6 address can be statically configured by a human operator. However, manual assignment is quite open to errors and operational overhead due to the 128 bit length and hexadecimal attributes of the addresses, although for router interfaces and static network elements and resources this can be an appropriate solution.

2. Stateless Address Autoconfiguration (RFC2462)

Stateless Address Autoconfiguration (SLAAC) is one of the most convenient methods to assign Internet addresses to IPv6 nodes. This method does not require any human intervention at all from an IPv6 user. If one wants to use IPv6 SLAAC on an IPv6 node, it is important that this IPv6 node is connected to a network with at least one IPv6 router connected. This router is configured by the network administrator and sends out Router Advertisement announcements onto the link. These announcements can allow the on-link connected IPv6 nodes to configure themselves with IPv6 address and routing parameters, as specified in RFC2462, without further human intervention.

3. Stateful DHCPv6

The Dynamic Host Configuration Protocol for IPv6 (DHCPv6) has been standardized by the IETF through RFC3315. DHCPv6 enables DHCP servers to pass configuration parameters, such as IPv6 network addresses, to IPv6 nodes. It offers the capability of automatic allocation of reusable network addresses and additional configuration flexibility. This protocol is a stateful counterpart to "IPv6 Stateless Address Autoconfiguration" (RFC 2462), and can be used separately, or in addition to the stateless autoconfiguration to obtain configuration parameters.

4. DHCPv6-PD

DHCPv6 Prefix Delegation (DHCPv6-PD) is an extension to DHCPv6, and is specified in RFC3633. Classical DHCPv6 is typically focused upon parameter assignment from a DHCPv6 server to an IPv6 host running a DHCPv6 protocol stack. A practical example would be the stateful address assignment of "2001:db8::1" from a DHCPv6 server to a DHCPv6 client. DHCPv6-PD however is aimed at assigning complete subnets and other network and interface parameters from a DHCPv6-PD server to a DHCPv6-PD client. This means that instead of a single address assignment, DHCPv6-PD will assign a set of IPv6 "subnets". An example could be the assignment of "2001:db8::/60" from a DHCPv6-PD server to a DHCPv6-PD client. This will allow the DHCPv6-PD client (often a CPE device) to segment the received address IPv6 address space, and assign it dynamically to its IPv6 enabled interfaces.

5. Stateless DHCPv6

Stateless DHCPv6 is a combination of "stateless Address Autoconfiguration" and "Dynamic Host Configuration Protocol for IPv6" and is specified by RFC3736. When using stateless-DHCPv6, a device will use Stateless Address Auto-Configuration (SLAAC) to assign one or more IPv6 addresses to an interface, while it utilizes DHCPv6 to receive "additional parameters" which may not be available through SLAAC. For example, additional parameters could include information such as DNS or NTP server addresses, and are provided in a stateless manner by DHCPv6. Using stateless DHCPv6 means that the DHCPv6 server does not need to keep track of any state of assigned IPv6 addresses, and there is no need for state refreshment as result. On network media supporting a large number of hosts associated to a single DHCPv6 server, this could mean a significant reduction in DHCPv6 messages due to the reduced need for address state refreshments. From Cisco IOS 12.4(15) onwards the client can also receive timing information, in addition to the "additional parameters" through DHCPv6. This timing information provides an indication to a host when it should refresh its DHCPv6 configuration data. This behavior (RFC4242) is particularly useful in unstable environments where changes are likely to occur.

QUESTION 2

What are two requirements for an HSRP group? (Choose two.)

- A. exactly one active router
- B. one or more standby routers

- C. one or more backup virtual routers
- D. exactly one standby active router
- E. exactly one backup virtual router

Correct Answer: AD

Section: (none)

Explanation

Explanation/Reference:

<http://www.cisco.com/c/en/us/support/docs/ip/hot-standby-router-protocol-hsrp/9234-hsrpguidetoc.html#multihsrp>

Using HSRP, a set of routers works in concert to present the illusion of a single virtual router to the hosts on the LAN. This set is known as an HSRP group or a standby group. A single router elected from the group is responsible for forwarding the packets that hosts send to the virtual router. This router is known as the Active router. Another router is elected as the Standby router. In the event that the Active router fails, the Standby assumes the packet-forwarding duties of the Active router. Although an arbitrary number of routers may run HSRP, only the Active router forwards the packets sent to the virtual router.

To minimize network traffic, only the Active and Standby routers send periodic HSRP messages once the protocol has completed the election process. If the Active router fails, the Standby router takes over as the Active router. If the Standby router fails or becomes the Active router, then another router is elected as the Standby router.

On a particular LAN, multiple hot standby groups may coexist and overlap. Each standby group emulates a single virtual router. The individual routers may participate in multiple groups. In this case, the router maintains separate state and timers for each group.

Each standby group has a single, well-known MAC address, as well as an IP address.

QUESTION 3

After you configure the Loopback0 interface, which command can you enter to verify the status of the interface and determine whether fast switching is enabled?

- A. Router#show ip interface loopback 0
- B. Router#show run
- C. Router#show interface loopback 0
- D. Router#show ip interface brief

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

Output from real device

```
Router2901#sh int g0/0
GigabitEthernet0/0 is up, line protocol is up
  Hardware is CN Gigabit Ethernet, address is c471.fe99.9999 (bia c471.fe99.9999)
  Description: Lan
  Internet address is 10.1.1.1/25
  MTU 1500 bytes, BW 1000000 Kbit/sec, DLY 10 usec,
    reliability 255/255, txload 1/255, rxload 1/255
  Encapsulation ARPA, loopback not set
  Keepalive set (10 sec)
  Full Duplex, 1Gbps, media type is RJ45
  output flow-control is unsupported, input flow-control is unsupported
  ARP type: ARPA, ARP Timeout 04:00:00
  Last input 00:00:00, output 00:00:00, output hang never
  Last clearing of "show interface" counters never
  Input queue: 0/75/61/0 (size/max/drops/flushes); Total output drops: 0
  Queueing strategy: fifo
  Output queue: 0/40 (size/max)
  5 minute input rate 39000 bits/sec, 30 packets/sec
  5 minute output rate 73000 bits/sec, 37 packets/sec
    41068530 packets input, 3905407112 bytes, 0 no buffer
    Received 8678853 broadcasts (0 IP multicasts)
    0 runts, 0 giants, 45 throttles
    0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
    0 watchdog, 79853 multicast, 0 pause input
    39267208 packets output, 2262399504 bytes, 0 underruns
    0 output errors, 0 collisions, 0 interface resets
    79926 unknown protocol drops
    0 babbles, 0 late collision, 0 deferred
    0 lost carrier, 0 no carrier, 0 pause output
    0 output buffer failures, 0 output buffers swapped out
```

```
Router2901#
Router2901 ip int g0/0
GigabitEthernet0/0 is up, line protocol is up
  Internet address is 10.1.1.1/25
  Broadcast address is 255.255.255.255
  Address determined by non-volatile memory
  MTU is 1500 bytes
  Helper address is not set
  Directed broadcast forwarding is disabled
  Secondary address 192.168.1.7/24
  Multicast reserved groups joined: 224.0.0.10
  Outgoing access list is not set
  Inbound access list is not set
  Proxy ARP is enabled
  Local Proxy ARP is disabled
  Security level is default
  Split horizon is enabled
  ICMP redirects are always sent
  ICMP unreachable are always sent
  ICMP mask replies are never sent
  IP fast switching is enabled
  IP fast switching on the same interface is disabled
  IP Flow switching is disabled
  IP CEF switching is enabled
  IP CEF switching turbo vector
  IP multicast fast switching is enabled
  IP multicast distributed fast switching is disabled
  IP route-cache flags are Fast, CEF
  Router Discovery is disabled
  IP output packet accounting is disabled
  IP access violation accounting is disabled
  TCP/IP header compression is disabled
  RTP/IP header compression is disabled
  Policy routing is disabled
  Network address translation is enabled, interface in domain inside
  BGP Policy Mapping is disabled
  Input features: Common Flow Table, Stateful Inspection, Virtual Fragment Reassembly, Virtual Fragment Reassembly After
IPSec Decryption, CAR, MCI Check
  Output features: NAT Inside, Common Flow Table, Stateful Inspection, NAT ALG proxy, CAR
  Post encapsulation features: CAR
  IPv4 WCCP Redirect outbound is disabled
  IPv4 WCCP Redirect inbound is disabled
  IPv4 WCCP Redirect exclude is disabled
Router2901#
```

QUESTION 4

Which command sequence can you enter to create VLAN 20 and assign it to an interface on a switch?

- A. Switch(config)#vlan 20
Switch(config)#Interface gig x/y
Switch(config-if)#switchport access vlan 20
- B. Switch(config)#Interface gig x/y
Switch(config-if)#vlan 20
Switch(config-vlan)#switchport access vlan 20
- C. Switch(config)#vlan 20
Switch(config)#Interface vlan 20
Switch(config-if)#switchport trunk native vlan 20
- D. Switch(config)#vlan 20
Switch(config)#Interface vlan 20
Switch(config-if)#switchport access vlan 20
- E. Switch(config)#vlan 20
Switch(config)#Interface vlan 20
Switch(config-if)#switchport trunk allowed vlan 20

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 5

Which three commands can you use to set a router boot image? (Choose three.)

- A. Router(config)# boot system flash c4500-p-mz.121-20.bin
- B. Router(config)# boot system tftp c7300-js-mz.122-33.SB8a.bin
- C. Router(config)#boot system rom c7301-advipservicesk9-mz.124-24.T4.bin
- D. Router> boot flash:c180x-adventerprisek9-mz-124-6T.bin
- E. Router(config)#boot flash:c180x-adventerprisek9-mz-124-6T.bin
- F. Router(config)#boot bootldr bootflash:c4500-jk9s-mz.122-23f.bin

Correct Answer: ABC

Section: (none)

Explanation

Explanation/Reference:

QUESTION 6

Which two statements about IPv6 and routing protocols are true? (Choose two.)

- A. Link-local addresses are used to form routing adjacencies.
- B. OSPFv3 was developed to support IPv6 routing.
- C. EIGRP, OSPF, and BGP are the only routing protocols that support IPv6.
- D. Loopback addresses are used to form routing adjacencies.
- E. EIGRPv3 was developed to support IPv6 routing.

Correct Answer: AB

Section: (none)

Explanation

Explanation/Reference:

QUESTION 7

If primary and secondary root switches with priority 16384 both experience catastrophic losses, which tertiary switch can take over?

- A. a switch with priority 20480
- B. a switch with priority 8192
- C. a switch with priority 4096
- D. a switch with priority 12288

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 8

Which two statements about late collisions are true? (Choose two.)

- A. They may indicate a duplex mismatch.
- B. By definition, they occur after the 512th bit of the frame has been transmitted.
- C. They indicate received frames that did not pass the FCS match.
- D. They are frames that exceed 1518 bytes.
- E. They occur when CRC errors and interference occur on the cable.

Correct Answer: AB

Section: (none)

Explanation

Explanation/Reference:

QUESTION 9

Which command can you enter to set the default route for all traffic to an interface?

- A. router(config)#ip route 0.0.0.0 0.0.0.0 GigabitEthernet0/1
- B. router(config)#ip route 0.0.0.0 255.255.255.255 GigabitEthernet0/1
- C. router(config-router)#default-information originate
- D. router(config-router)#default-information originate always

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 10

Which two spanning-tree port states does RSTP combine to allow faster convergence? (Choose two.)

- A. blocking
- B. listening
- C. learning
- D. forwarding
- E. discarding

Correct Answer: AB

Section: (none)

Explanation

Explanation/Reference:

QUESTION 11

If a router has four interfaces and each interface is connected to four switches, how many broadcast domains are present on the router?

- A. 1
- B. 2
- C. 4
- D. 8

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 12

The left describes the types of cables, while the right describes the purposes of the cables. Drag the items on the left to the proper locations. (Not all items can be used.) (THE COMMUNITY SHARED THAT THERE IS ANOTHER OPTION SO STUDY ALL OF WHAT THIS CABLES ARE FOR)

- crossover
- null modem
- straight-through
- rollover
- 9-25 pin serial

- switch access port to router
- switch to switch
- PC COM to Switch Console Port

A.

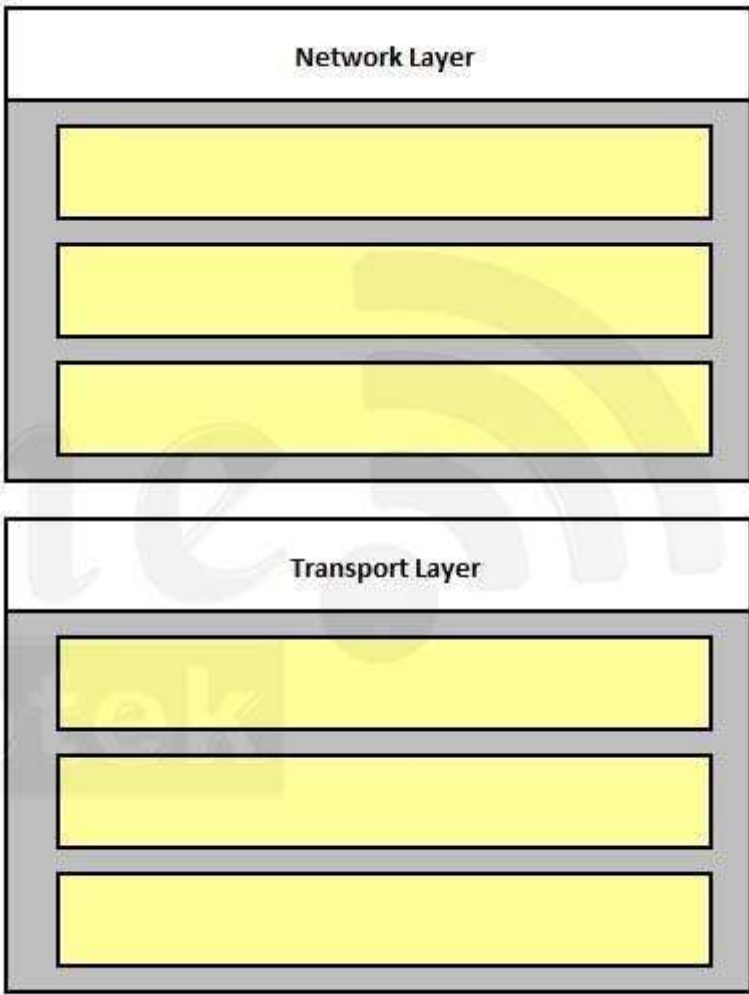
-
- null modem
-
-
- 9-25 pin serial

- straight-through
- crossover
- rollover

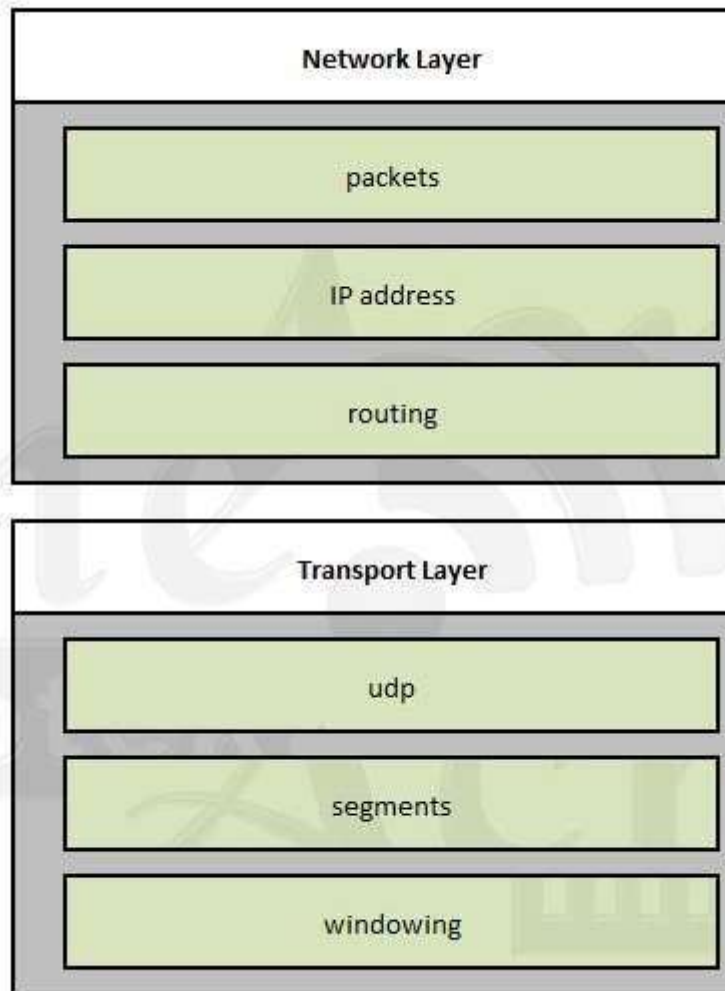
Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 13
Match the items on the left with appropriate OSI layer on the right. (Not all options are used.)



A.



Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 14

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

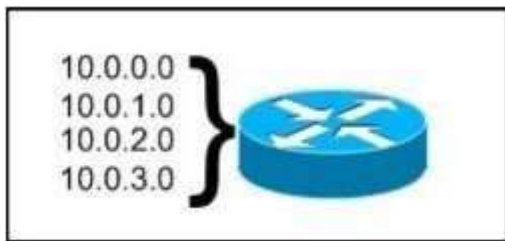
Section: (none)

Explanation

Explanation/Reference:

QUESTION 15

Refer to the exhibit. What is the most appropriate summarization for these routes?



- A. 10.0.0.0 /21
- B. 10.0.0.0 /22
- C. 10.0.0.0 /23
- D. 10.0.0.0 /24

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

Explanation:

The 10.0.0.0/22 subnet mask will include the 10.0.0.0, 10.0.1.0, 10.0.2.0, and 10.0.3.0 networks, and only those four networks.

QUESTION 16

Which set of commands is recommended to prevent the use of a hub in the access layer?

- A. switch(config-if)#switchport mode trunk
switch(config-if)#switchport port-security maximum 1
- B. switch(config-if)#switchport mode trunk
switch(config-if)#switchport port-security mac-address 1
- C. switch(config-if)#switchport mode access
switch(config-if)#switchport port-security maximum 1
- D. switch(config-if)#switchport mode access
switch(config-if)#switchport port-security mac-address 1

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 17

A router has learned three possible routes that could be used to reach a destination network. One route is from EIGRP and has a composite metric of 20514560. Another route is from OSPF with a metric of 782. The last is from RIPv2 and has a metric of 4. Which route or routes will the router install in the routing table?

- A. the OSPF route
- B. the EIGRP route
- C. the RIPv2 route
- D. all three routes
- E. the OSPF and RIPv2 routes

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 18

Two routers named Atlanta and Brevard are connected via their serial interfaces as illustrated, but they are unable to communicate. The Atlanta router is known to have the correct configuration.



Given the partial configurations, identify the fault on the Brevard router that is causing the lack of connectivity

- A. incompatible IP address
- B. insufficient bandwidth
- C. incorrect subnet mask
- D. incompatible encapsulation
- E. link reliability too low
- F. IPCP closed

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 19

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 20

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

Correct Answer: B

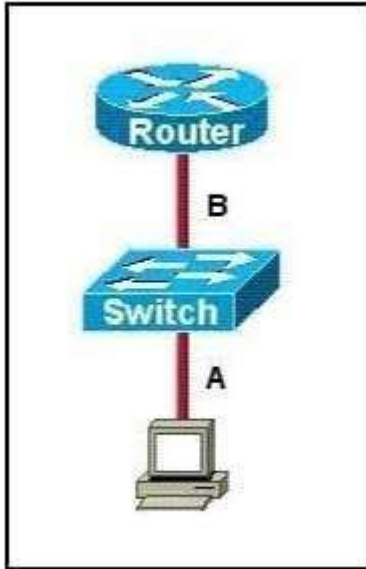
Section: (none)

Explanation

Explanation/Reference:

QUESTION 21

Refer to the exhibit. The two connected ports on the switch are not turning orange or green. What would be the most effective steps to troubleshoot this physical layer problem? (Choose three.)



- A. Ensure that the Ethernet encapsulations match on the interconnected router and switch ports.
- B. Ensure that cables A and B are straight-through cables.
- C. Ensure cable A is plugged into a trunk port.
- D. Ensure the switch has power.
- E. Reboot all of the devices.
- F. Reseat all cables.

Correct Answer: BDF

Section: (none)

Explanation

Explanation/Reference:

QUESTION 22

A network administrator is troubleshooting the OSPF configuration of routers R1 and R2. The routers cannot establish an adjacency relationship on their common Ethernet link.

```

R1: Ethernet0 is up, line protocol is up
    Internet address 192.168.1.2/24, Area 0
    Process ID 1, Router ID 192.168.31.33, Network Type BROADCAST, Cost: 10
    Transmit Delay is 1 sec, State DR, Priority 1
    Designated Router (ID) 192.168.31.33, Interface address 192.168.1.2
    No backup designated router on this network
    Timer intervals configured, Hello 5, Dead 20, Wait 20, Retransmit 5

R2: Ethernet0 is up, line protocol is up
    Internet address 192.168.1.1/24, Area 0
    Process ID 2, Router ID 192.168.31.11, Network Type BROADCAST, Cost: 10
    Transmit Delay is 1 sec, State DR, Priority 1
    Designated Router (ID) 192.168.31.11, Interface address 192.168.1.1
    No backup designated router on this network
    Timer intervals configured, Hello 10, Dead 40, Wait 40, Retransmit 5
  
```

The graphic shows the output of the show ip ospf interface e0 command for routers R1 and R2. Based on the information in the graphic, what is the cause of this problem?

- A. The OSPF area is not configured properly.
- B. The priority on R1 should be set higher.
- C. The cost on R1 should be set higher.
- D. The hello and dead timers are not configured properly.
- E. A backup designated router needs to be added to the network.
- F. The OSPF process ID numbers must match.

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 23

What will happen if a private IP address is assigned to a public interface connected to an ISP?

- A. Addresses in a private range will be not be routed on the Internet backbone.
- B. Only the ISP router will have the capability to access the public network.
- C. The NAT process will be used to translate this address to a valid IP address.
- D. A conflict of IP addresses happens, because other public routers can use the same range.

Correct Answer: A

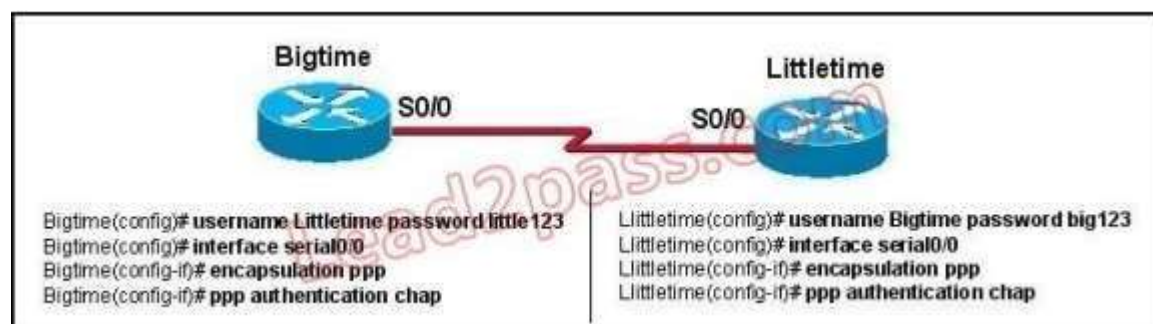
Section: (none)

Explanation

Explanation/Reference:

QUESTION 24

Refer to the exhibit. The Bigtime router is unable to authenticate to the Littletime router. What is the cause of the problem?



- A. The usernames are incorrectly configured on the two routers.
- B. The passwords do not match on the two routers.

- C. CHAP authentication cannot be used on a serial interface.
- D. The routers cannot be connected from interface S0/0 to interface S0/0.
- E. With CHAP authentication, one router must authenticate to another router. The routers cannot be configured to authenticate to each other.

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 25

What will be the result if the following configuration commands are implemented on a Cisco switch?

**Switch(config-if)# switchport port-security
Switch(config-if)# switchport port-security mac-address sticky**

- A. A dynamically learned MAC address is saved in the startup-configuration file.
- B. A dynamically learned MAC address is saved in the running-configuration file.
- C. A dynamically learned MAC address is saved in the VLAN database.
- D. Statically configured MAC addresses are saved in the startup-configuration file if frames from that address are received.
- E. Statically configured MAC addresses are saved in the running-configuration file if frames from that address are received.

Correct Answer: B

Section: (none)

Explanation

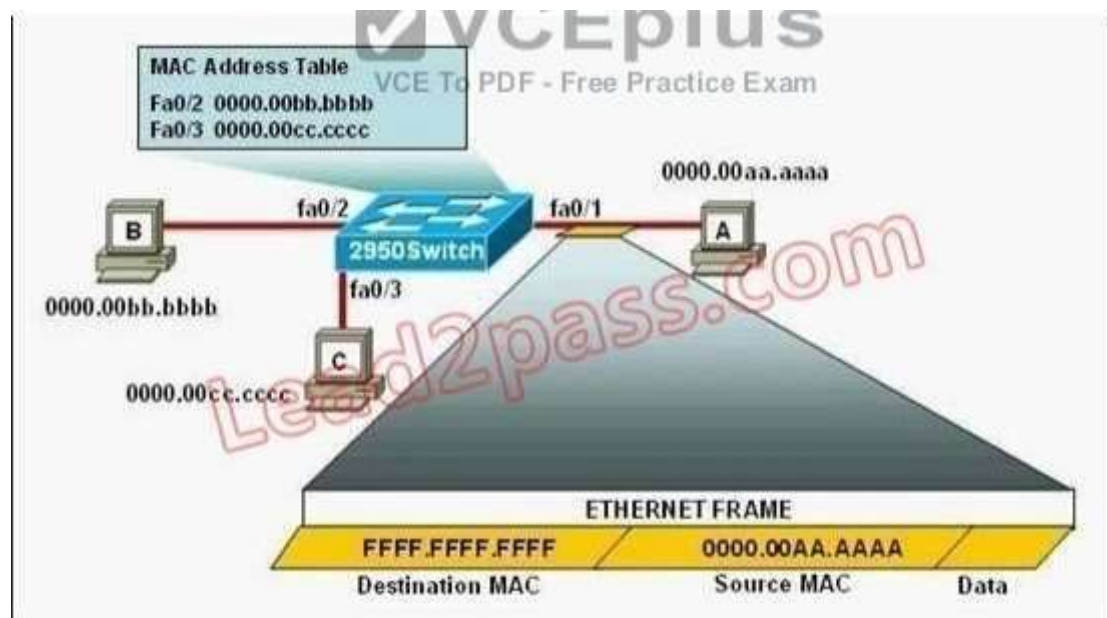
Explanation/Reference:

QUESTION 26

Refer to the exhibit. The following commands are executed on interface fa0/1 of 2950Switch.

**2950Switch(config-if)# switchport port-security
2950Switch(config-if)# switchport port-security mac-address sticky
2950Switch(config-if)# switchport port-security maximum 1**

The Ethernet frame that is shown arrives on interface fa0/1. What two functions will occur when this frame is received by 2950Switch? (Choose two.)



- A. The MAC address table will now have an additional entry of fa0/1 FFFF.FFFF.FFFF.
- B. Only host A will be allowed to transmit frames on fa0/1.
- C. This frame will be discarded when it is received by 2950Switch.
- D. All frames arriving on 2950Switch with a destination of 0000.00aa.aaaa will be forwarded out fa0/1.
- E. Hosts B and C may forward frames out fa0/1 but frames arriving from other switches will not be forwarded out fa0/1.
- F. Only frames from source 0000.00bb.bbbb, the first learned MAC address of 2950Switch, will be forwarded out fa0/1.

Correct Answer: BD

Section: (none)

Explanation

Explanation/Reference:

QUESTION 27

Which command would you configure globally on a Cisco router that would allow you to view directly connected Cisco devices?

- A. enable cdp
- B. cdp enable
- C. cdp run
- D. run cdp

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 28

A Cisco router is booting and has just completed the POST process. It is now ready to find and load an IOS image. What function does the router perform next?

- A. It checks the configuration register.
- B. It attempts to boot from a TFTP server.
- C. It loads the first image file in flash memory.
- D. It inspects the configuration file in NVRAM for boot instructions.

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 29

What are three advantages of VLANs? (Choose three.)

- A. VLANs establish broadcast domains in switched networks.
- B. VLANs utilize packet filtering to enhance network security.
- C. VLANs provide a method of conserving IP addresses in large networks.
- D. VLANs provide a low-latency internetworking alternative to routed networks.
- E. VLANs allow access to network services based on department, not physical location.
- F. VLANs can greatly simplify adding, moving, or changing hosts on the network.

Correct Answer: AEF

Section: (none)

Explanation

Explanation/Reference:

QUESTION 30

Refer to the exhibit. The output that is shown is generated at a switch. Which three 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. This switch must be the root bridge for all VLANs on this switch.

Correct Answer: ACE

Section: (none)

Explanation

Explanation/Reference:

QUESTION 31

Which two commands can be used to verify a trunk link configuration status on a given Cisco switch interface? (Choose two.)

- A. show interface trunk
- B. show interface interface
- C. show ip interface brief
- D. show interface vlan
- E. show interface switchport

Correct Answer: AE

Section: (none)

Explanation

Explanation/Reference:

:

QUESTION 32

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

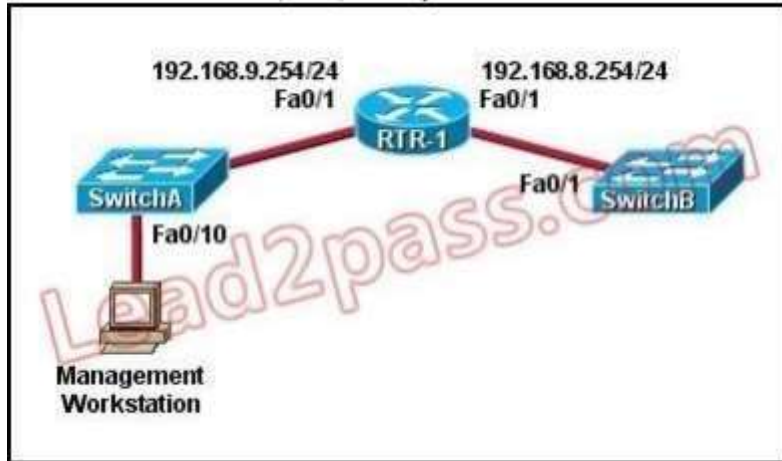
Section: (none)

Explanation

Explanation/Reference:

QUESTION 33

Refer to the exhibit. A technician has installed Switch B and needs to configure it for remote access from the management workstation connected to Switch A. Which set of commands is required to accomplish this task?



- A. SwitchB(config)# interface FastEthernet 0/1
SwitchB(config-if)# ip address 192.168.8.252 255.255.255.0 SwitchB(config-if)# no shutdown
- B. SwitchB(config)# interface vlan 1
SwitchB(config-if)# ip address 192.168.8.252 255.255.255.0 SwitchB(config-if)# ip default-gateway 192.168.8.254 255.255.255.0 SwitchB(config-if)# no shutdown
- C. SwitchB(config)# ip default-gateway 192.168.8.254
SwitchB(config)# interface vlan 1
SwitchB(config-if)# ip address 192.168.8.252 255.255.255.0 SwitchB(config-if)# no shutdown
- D. SwitchB(config)# ip default-network 192.168.8.254
SwitchB(config)# interface vlan 1
SwitchB(config-if)# ip address 192.168.8.252 255.255.255.0 SwitchB(config-if)# no shutdown
- E. SwitchB(config)# ip route 192.168.8.254 255.255.255.0
SwitchB(config)# interface FastEthernet 0/1
SwitchB(config-if)# ip address 192.168.8.252 255.255.255.0 SwitchB(config-if)# no shutdown

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 34

Which of the following are benefits of VLANs? (Choose three.)

- A. They increase the size of collision domains.
- B. They allow logical grouping of users by function.
- C. They can enhance network security.
- D. They increase the size of broadcast domains while decreasing the number of collision domains.
- E. They increase the number of broadcast domains while decreasing the size of the broadcast domains.
- F. They simplify switch administration.

Correct Answer: BCE

Section: (none)

Explanation

Explanation/Reference:

QUESTION 35

What are three benefits of implementing VLANs? (Choose three.)

- A. A higher level of network security can be reached by separating sensitive data traffic from other network traffic.
- B. A more efficient use of bandwidth can be achieved allowing many physical groups to use the same network infrastructure.
- C. A more efficient use of bandwidth can be achieved allowing many logical networks to use the same network infrastructure.
- D. Broadcast storms can be mitigated by increasing the number of broadcast domains, thus reducing their size.
- E. Broadcast storms can be mitigated by decreasing the number of broadcast domains, thus increasing their size.
- F. VLANs make it easier for IT staff to configure new logical groups, because the VLANs all belong to the same broadcast domain.
- G. Port-based VLANs increase switch-port use efficiency, thanks to 802.1Q trunks.

Correct Answer: ACD

Section: (none)

Explanation

Explanation/Reference:

QUESTION 36

Which three statements accurately describe Layer 2 Ethernet switches? (Choose three.)

- A. Spanning Tree Protocol allows switches to automatically share VLAN information.
- B. Establishing VLANs increases the number of broadcast domains.
- C. Switches that are configured with VLANs make forwarding decisions based on both Layer 2 and Layer 3 address information.
- D. Microsegmentation decreases the number of collisions on the network.
- E. In a properly functioning network with redundant switched paths, each switched segment will contain one root bridge with all its ports in the forwarding state. All other switches in that broadcast domain will have only one root port.
- F. If a switch receives a frame for an unknown destination, it uses ARP to resolve the address.

Correct Answer: BDE

Section: (none)

Explanation

Explanation/Reference:

QUESTION 37

Which of the following correctly describe steps in the OSI data encapsulation process? (Choose two.)

- A. The transport layer divides a data stream into segments and may add reliability and flow control information.
- B. The data link layer adds physical source and destination addresses and an FCS to the segment.
- C. Packets are created when the network layer encapsulates a frame with source and destination host addresses and protocol-related control information.
- D. Packets are created when the network layer adds Layer 3 addresses and control information to a segment.
- E. The presentation layer translates bits into voltages for transmission across the physical link.

Correct Answer: AD

Section: (none)

Explanation

Explanation/Reference:

QUESTION 38

Which of the following describes the roles of devices in a WAN? (Choose three.)

- A. A CSU/DSU terminates a digital local loop.
- B. A modem terminates a digital local loop.
- C. A CSU/DSU terminates an analog local loop.
- D. A modem terminates an analog local loop.
- E. A router is commonly considered a DTE device.
- F. A router is commonly considered a DCE device.

Correct Answer: ADE

Section: (none)

Explanation

Explanation/Reference:

QUESTION 39

Which interface counter can you use to diagnose a duplex mismatch problem?

- A. no carrier
- B. late collisions
- C. giants
- D. CRC errors
- E. deferred
- F. runts

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 40

Which feature can you implement to reserve bandwidth for VoIP calls across the call path?

- A. PQ
- B. CBWFQ
- C. round robin
- D. RSVP

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 41

When an interface is configured with PortFast BPDU guard, how does the interface respond when it receives a BPDU?

- A. It continues operating normally.
- B. It goes into a down/down state.
- C. It becomes the root bridge for the configured VLAN.
- D. It goes into an errdisable state.

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 42

What are three characteristics of the TCP protocol? (Choose three.)

- A. It uses a single SYN-ACK message to establish a connection.
- B. The connection is established before data is transmitted.
- C. It ensures that all data is transmitted and received by the remote device.
- D. It supports significantly higher transmission speeds than UDP.
- E. It requires applications to determine when data packets must be retransmitted.
- F. It uses separate SYN and ACK messages to establish a connection.

Correct Answer: BCF

Section: (none)

Explanation

Explanation/Reference:

QUESTION 43

Which command can you enter to determine whether serial interface 0/2/0 has been configured using HDLC encapsulation?

- A. router#show platform
- B. router#show interfaces Serial 0/2/0
- C. router#show ip interface s0/2/0
- D. router#show ip interface brief

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

Output from real device

```
Router2901#sh int g0/0
GigabitEthernet0/0 is up, line protocol is up
  Hardware is CN Gigabit Ethernet, address is c471.fe99.9999 (bia c471.fe99.9999)
  Description: Lan
  Internet address is 10.1.1.1/25
  MTU 1500 bytes, BW 1000000 Kbit/sec, DLY 10 usec,
    reliability 255/255, txload 1/255, rxload 1/255
  Encapsulation ARPA, loopback not set
  Keepalive set (10 sec)
  Full Duplex, 1Gbps, media type is RJ45
  output flow-control is unsupported, input flow-control is unsupported
  ARP type: ARPA, ARP Timeout 04:00:00
  Last input 00:00:00, output 00:00:00, output hang never
  Last clearing of "show interface" counters never
  Input queue: 0/75/61/0 (size/max/drops/flushes); Total output drops: 0
  Queueing strategy: fifo
  Output queue: 0/40 (size/max)
  5 minute input rate 39000 bits/sec, 30 packets/sec
  5 minute output rate 73000 bits/sec, 37 packets/sec
    41068530 packets input, 3905407112 bytes, 0 no buffer
    Received 8678853 broadcasts (0 IP multicasts)
    0 runs, 0 giants, 45 throttles
    0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
    0 watchdog, 79853 multicast, 0 pause input
    39267208 packets output, 2262399504 bytes, 0 underruns
    0 output errors, 0 collisions, 0 interface resets
    79926 unknown protocol drops
    0 babbles, 0 late collision, 0 deferred
    0 lost carrier, 0 no carrier, 0 pause output
    0 output buffer failures, 0 output buffers swapped out
Router2901#
Router2901 ip int g0/0
GigabitEthernet0/0 is up, line protocol is up
  Internet address is 10.1.1.1/25
  Broadcast address is 255.255.255.255
  Address determined by non-volatile memory
  MTU is 1500 bytes
  Helper address is not set
  Directed broadcast forwarding is disabled
  Secondary address 192.168.1.7/24
  Multicast reserved groups joined: 224.0.0.10
  Outgoing access list is not set
  Inbound access list is not set
  Proxy ARP is enabled
  Local Proxy ARP is disabled
  Security level is default
```

Split horizon is enabled
ICMP redirects are always sent
ICMP unreachable are always sent
ICMP mask replies are never sent
IP fast switching is enabled
IP fast switching on the same interface is disabled
IP Flow switching is disabled
IP CEF switching is enabled
IP CEF switching turbo vector
IP multicast fast switching is enabled
IP multicast distributed fast switching is disabled
IP route-cache flags are Fast, CEF
Router Discovery is disabled
IP output packet accounting is disabled
IP access violation accounting is disabled
TCP/IP header compression is disabled
RTP/IP header compression is disabled
Policy routing is disabled
Network address translation is enabled, interface in domain inside
BGP Policy Mapping is disabled
Input features: Common Flow Table, Stateful Inspection, Virtual Fragment Reassembly, Virtual Fragment Reassembly After
IPSec Decryption, CAR, MCI Check
Output features: NAT Inside, Common Flow Table, Stateful Inspection, NAT ALG proxy, CAR
Post encapsulation features: CAR
IPv4 WCCP Redirect outbound is disabled
IPv4 WCCP Redirect inbound is disabled
IPv4 WCCP Redirect exclude is disabled
Router2901#

QUESTION 44

Which two statements about IPv4 multicast traffic are true? (Choose two.)

- A. It burdens the source host without affecting remote hosts.
- B. It uses a minimum amount of network bandwidth.
- C. It is bandwidth-intensive.
- D. It simultaneously delivers multiple streams of data.
- E. It is the most efficient way to deliver data to multiple receivers.

Correct Answer: BE

Section: (none)

Explanation

Explanation/Reference:

http://www.cisco.com/c/dam/en_us/about/ciscoitnetwork/downloads/ciscoitnetwork/pdf/cisco_it_case_study_multicast.pdf

Cisco IOS IP Multicast in the Cisco Network

“IP Multicast as defined in RFC1112, the standard for IP Multicast across networks and the Internet, supports one-to-many content needs by delivering application-source traffic to multiple users without burdening the source or the network, using a minimum amount of network bandwidth. At the point where paths diverge, Cisco routers replace IP Multicast packets in the network, resulting in the most efficient delivery of data to multiple receivers.”

Even low-bandwidth applications can benefit from IP Multicast when there are thousands of receivers. High-bandwidth applications, such as MPEG video, may need a large portion of the available network bandwidth for a single stream. In these applications, IP Multicast is the only way to efficiently send the same content to more than one receiver simultaneously, because it makes sure that only one copy of the data stream is sent across any one network link. It relies on each router in the stream to intelligently copy the data stream whenever it needs to deliver it to multiple receivers.

QUESTION 45

What are two benefits of private IPv4 IP addresses? (Choose two.)

- A. They are routed the same as public IP addresses.
- B. They are less costly than public IP addresses.
- C. They can be assigned to devices without Internet connections.
- D. They eliminate the necessity for NAT policies.
- E. They eliminate duplicate IP conflicts.

Correct Answer: BC

Section: (none)

Explanation

Explanation/Reference:

QUESTION 46

What is the authoritative source for an address lookup?

- A. a recursive DNS search
- B. the operating system cache
- C. the ISP local cache
- D. the browser cache

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 47

Which command can you enter to verify that a BGP connection to a remote device is established?

- A. show ip bgp summary
- B. show ip community-list
- C. show ip bgp paths
- D. show ip route

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 48

During which phase of PPPoE is PPP authentication performed ?

- A. the PPP Session phase
- B. Phase 2
- C. the Active Discovery phase
- D. the Authentication phase
- E. Phase 1

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 49

Which three circumstances can cause a GRE tunnel to be in an up/down state? (Choose three.)

- A. The tunnel interface IP address is misconfigured.
- B. The tunnel interface is down.
- C. A valid route to the destination address is missing from the routing table.
- D. The tunnel address is routed through the tunnel itself.
- E. The ISP is blocking the traffic.
- F. An ACL is blocking the outbound traffic.

Correct Answer: BCD

Section: (none)

Explanation

Explanation/Reference:

QUESTION 50

Which two statements about using leased lines for your WAN infrastructure are true? (Choose two.)

- A. Leased lines provide inexpensive WAN access.
- B. Leased lines with sufficient bandwidth can avoid latency between endpoints.
- C. Leased lines require little installation and maintenance expertise.
- D. Leased lines provide highly flexible bandwidth scaling.
- E. Multiple leased lines can share a router interface.
- F. Leased lines support up to T1 link speeds.

Correct Answer: CD

Section: (none)

Explanation

Explanation/Reference:

from W.Odom Official Cert Guide for ICND1 v3

Telcos offer a wide variety of speeds for leased lines. However, you cannot pick the exact speed you want; instead, you must pick from a long list of predefined speeds. Slower-speed links run at multiples of 64 kbps (kilobits per second), while faster links run at multiples of about 1.5 Mbps (megabits per second).

Leased lines have many benefits that have led to their relatively long life in the WAN marketplace. These lines are simple for the customer, are widely available, are of high quality, and are private. However, they do have some negatives as well compared to newer WAN technologies, including a higher cost and typically longer lead times to get the service installed.

QUESTION 51

Which two statements about wireless LAN controllers are true? (Choose two.)

- A. They can simplify the management and deployment of wireless LANs.
- B. They rely on external firewalls for WLAN security.
- C. They are best suited to smaller wireless networks.
- D. They must be configured through a GUI over HTTP or HTTPS.
- E. They can manage mobility policies at a systemwide level.

Correct Answer: AE

Section: (none)

Explanation

Explanation/Reference:

QUESTION 52

Which two statements about northbound and southbound APIs are true? (Choose two.)

- A. Only southbound APIs allow program control of the network.
- B. Only northbound APIs allow program control of the network.
- C. Only southbound API interfaces use a Service Abstraction Layer.
- D. Only northbound API interfaces use a Service Abstraction Layer.
- E. Both northbound and southbound API interfaces use a Service Abstraction Layer.
- F. Both northbound and southbound APIs allow program control of the network.

Correct Answer: BC

Section: (none)

Explanation

Explanation/Reference:

QUESTION 53

Which command can you enter to set the default route for all traffic to an interface?

- A. router(config)#ip route 0.0.0.0 0.0.0.0 GigabitEthernet0/1
- B. router(config-router)#default-information originate always
- C. router(config)#ip route 0.0.0.0 255.255.255.255 GigabitEthernet0/1
- D. route(config-router)#default-information originate

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 54

Which statement about RADIUS security is true?

- A. It supports EAP authentication for connecting to wireless networks.
- B. It provides encrypted multiprotocol support.
- C. Device-administration packets are encrypted in their entirety.
- D. It ensures that user activity is fully anonymous.

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 55

If you are configuring syslog messages specifying 'logging trap warning', which log messages will the router send?

- A. 0-4
- B. 0-5
- C. 0-2
- D. 0-6
- E. 0-1

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

Explanation:

0 emergencies System is unusable

1 alerts Immediate action is needed

2 critical Critical conditions exist

3 errors Error conditions exist

4 warnings Warning conditions exist

5 notification Normal, but significant, conditions exist

6 informational Informational messages

7 debugging Debugging messages

QUESTION 56

What is true about Ethernet? (Choose Two.)

- A. 802.2 Protocol
- B. 802.3 Protocol
- C. 10BaseT half duplex
- D. CSMA/CD Stops transmitting when congestion occurs
- E. CSMA/CA Stops transmitting when congestion occurs

Correct Answer: BD

Section: (none)

Explanation

Explanation/Reference:

<http://www.ieee802.org/3/>

CSMA/CD - It uses a carrier sensing scheme in which a transmitting station detects collisions by sensing transmissions from other stations while transmitting a frame. When this collision condition is detected, the station stops transmitting that frame.

QUESTION 57**What IP SLA ICMP Echo measures?**

- A. Packet loss
- B. Congestion
- C. Hop-by-hop "something"
- D. -ANOTHER OPTION-
- E. -ANOTHER OPTION-

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 58**What are types of IPv6 static routes? (Choose Three)**

- A. Recursive routes
- B. Directly connected routes
- C. Fully specified routes
- D. Advertised routes
- E. Virtual links
- F. Redistributed routes

Correct Answer: ABC

Section: (none)

Explanation

Explanation/Reference:

http://www.cisco.com/c/en/us/td/docs/ios-xml/ios/iproute_pi/configuration/xr-16/iri-xr-16-book/iri-recursive-static-route-xr.html

QUESTION 59**What is the status of port-channel if LACP is misconfigured ?**

- A. Forwarding
- B. Enabled
- C. Disabled
- D. Errdisabled

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 60**What is true about DTP? (Choose Three.)**

- A. Layer 2 protocol
- B. Layer 3 protocol
- C. Proprietary protocol
- D. enabled by default
- E. disabled by default

Correct Answer: ACD

Section: (none)

Explanation

Explanation/Reference:

https://en.wikipedia.org/wiki/Dynamic_Trunking_Protocol

QUESTION 61

How to create a trunk port and allow VLAN 20? (Choose Three.)

- A. switchport trunk encapsulation dot1q
- B. switchport mode trunk
- C. switchport trunk allowed vlan 20
- D. switchport trunk native vlan 20
- E. switchport mode dynamic desirable

Correct Answer: ABC

Section: (none)

Explanation

Explanation/Reference:

QUESTION 62

What 8-bit field exists in IP packet for QoS ?

- A. Tos Field
- B. DSCP
- C. IP Precedence
- D. Cos
- E. -ANOTHER OPTION-

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

<http://flylib.com/books/2/686/1/html/2/images/1587051990/graphics/13fig01.gif>

QUESTION 63

What feature uses a random time to re-sent a frame?

- A. CSMA/CA
- B. -ANOTHER OPTION-
- C. -ANOTHER OPTION-
- D. CSMA/CD

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 64

Which mode is compatible with Trunk, Access, and desirable ports?

- A. Trunk Ports
- B. Access Ports
- C. Dynamic Auto
- D. Dynamic Desirable

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

Explanation from <http://www.9tut.com/trunking-questions>

Maybe this question wanted to ask “if the other end is configured with trunk/access/desirable mode” then which mode is compatible so that the link can work. In that case both “dynamic auto” and “dynamic desirable” mode are correct. The difference between these two modes is “dynamic auto” is passively waiting for the other end to request to form a trunk while “dynamic desirable” will actively attempt to negotiate to convert the link into a trunk.

QUESTION 65

If you configure syslog messages without specifying the logging trap level, which log messages will the router send ?

- A. 0-4
- B. 0-5
- C. 0-2
- D. 0-6
- E. 0-1

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

Router(config)# logging trap level - Specifies the kind of messages, by severity level, to be sent to the syslog server. The default is informational (6) and lower (0 6). The possible values for level are as follows:

Emergency: 0

Alert: 1

Critical: 2

Error: 3

Warning: 4

Notice: 5

Informational: 6

Debug: 7

QUESTION 66

Which command can you execute to set the user inactivity timer to 10 seconds?

- A. SW1(config-line)#exec-timeout 0 10
- B. SW1(config-line)#exec-timeout 10
- C. SW1(config-line)#absolute-timeout 0 10
- D. SW1(config-line)#absolute-timeout 10

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 67

Which standards-based First Hop Redundancy Protocol is a Cisco supported alternative to Hot Standby Router Protocol?

- A. VRRP
- B. GLBP
- C. TFTP
- D. DHCP

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 68

Two hosts are attached to a switch with the default configuration. Which statement about the configuration is true?

- A. IP routing must be enabled to allow the two hosts to communicate.
- B. The two hosts are in the same broadcast domain.
- C. The switch must be configured with a VLAN to allow the two hosts to communicate.
- D. Port security prevents the hosts from connecting to the switch.

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 69

If there are 3 hosts connected in one port of a switch and two other hosts connected in another port, how many collision domains are present on the router?

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

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 70

What are three parts of an IPv6 global unicast address? (Choose three.)

- A. an interface ID that is used to identify the local host on the network.
- B. an interface ID that is used to identify the local network for a particular host.
- C. a subnet ID that is used to identify networks inside of the local enterprise site
- D. a global routing prefix that is used to identify the network portion of the address that has been provided by an ISP
- E. a global routing prefix that is used to identify the portion of the network address provided by a local administrator

Correct Answer: ACD

Section: (none)

Explanation

Explanation/Reference:

QUESTION 71

You have been asked to come up with a subnet mask that will allow all three web servers to be on the same network while providing the maximum number of subnets. Which network address and subnet mask meet this requirement?

- A. 192.168.252.0 255.255.255.252
- B. 192.168.252.8 255.255.255.248
- C. 192.168.252.8 255.255.255.252
- D. 192.168.252.16 255.255.255.240
- E. 192.168.252.16 255.255.255.252

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 72

What parameter can be different on ports within an EtherChannel?

- A. speed
- B. DTP negotiation settings
- C. trunk encapsulation
- D. duplex

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 73

Which two statements about IPv6 router advertisement messages are true? (Choose two.)

- A. They use ICMPv6 type 134.
- B. The advertised prefix length must be 64 bits.
- C. The advertised prefix length must be 48 bits.
- D. They are sourced from the configured IPv6 interface address.
- E. Their destination is always the link-local address of the neighboring node.

Correct Answer: AB

Section: (none)

Explanation

Explanation/Reference:

<https://supportforums.cisco.com/document/77521/ipv6-neighbor-discovery-protocol-ndp>

QUESTION 74

Which spanning-tree protocol rides on top of another spanning-tree protocol?

- A. MSTP
- B. RSTP
- C. PVST+
- D. Mono Spanning Tree

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 75

A network administrator needs to configure port security on a switch. Which two statements are true? (Choose two.)

- A. The network administrator can apply port security to dynamic access ports.
- B. The network administrator can apply port security to EtherChannels.
- C. The sticky learning feature allows the addition of dynamically learned addresses to the running configuration.
- D. When dynamic MAC address learning is enabled on an interface, the switch can learn new addresses, up to the maximum defined.
- E. The network administrator can configure static secure or sticky secure MAC addresses in the voice VLAN

Correct Answer: CD

Section: (none)

Explanation

Explanation/Reference:

QUESTION 76

Which switching method duplicates the first six bytes of a frame before making a switching decision?

- A. fragment-free switching
- B. store-and-forward switching
- C. cut-through switching
- D. ASIC switching

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 77

Which logging command can enable administrators to correlate syslog messages with millisecond precision?

- A. no logging console
- B. logging buffered 4
- C. no logging monitor
- D. service timestamps log datetime msec
- E. logging host 10.2.0.21

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 78

Which three statements about link-state routing are true? (Choose three.)

- A. OSPF is a link-state protocol.
- B. Updates are sent to a broadcast address.
- C. It uses split horizon.
- D. Routes are updated when a change in topology occurs.
- E. RIP is a link-state protocol.
- F. Updates are sent to a multicast address by default.

Correct Answer: ADF

Section: (none)

Explanation

Explanation/Reference:

QUESTION 79

Which command can you enter to determine whether a switch is operating in trunking mode?

- A. show ip interface brief
- B. show vlan
- C. show interfaces
- D. show interface switchport

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 80

Which command can you enter to view the ports that are assigned to VLAN 20 ?

- A. Switch#show ip interface vlan 20

- B. Switch#show vlan id 20
- C. Switch#show ip interface brief
- D. Switch#show interface vlan 20

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 81

In which two formats can the IPv6 address fd15:0db8:0000:0000:0700:0003:400F:572B be written? (Choose two.)

- A. fd15:0db8:0000:0000:700:3:400F:527B
- B. fd15::db8::700:3:400F:527B
- C. fd15:db8:0::700:3:4F:527B
- D. fd15:0db8::7:3:4F:527B
- E. fd15:db8::700:3:400F:572B

Correct Answer: AE

Section: (none)

Explanation

Explanation/Reference:

QUESTION 82

Which function of the IP SLAs ICMP jitter operation can you use to determine whether a VoIP issue is caused by excessive end-to-end time?

- A. packet loss
- B. jitter
- C. successive packet loss
- D. round-trip time latency

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 83

Refer to the exhibit.

```
00:00:39: %LINEPROTO-5-UPDOWN: Line protocol on Interface Vlan1, changed state to down
00:00:40: %SPANTREE-5-EXTENDED_SYSID: Extended SysId enabled for type vlan
00:00:42: %SYS-5-CONFIG_I: Configured from memory by console
00:00:42: %SYS-5-RESTART: System restarted --
Cisco IOS Software, C2960 Software (C2960-LANBASEK9-M), Version 12.2(25)SEE2, RELEASE SOFTWARE (fc.1)
Copyright (c) 1986-2006 by Cisco Systems, Inc.
Compiled Fri 28-Jul-06 11:57 by yenanh
00:00:44: %LINK-5-CHANGED: Interface Vlan1, changed state to administratively down
00:00:44: %LINK-3-UPDOWN: Interface FastEthernet0/1, changed state to up
00:00:44: %LINK-3-UPDOWN: Interface FastEthernet0/2, changed state to up
00:00:44: %LINK-3-UPDOWN: Interface FastEthernet0/11, changed state to up
00:00:45: %LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/1, changed state to up
00:00:45: %LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/2, changed state to up
00:00:45: %LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/11, changed state to up
00:00:48: %LINK-3-UPDOWN: Interface FastEthernet0/12, changed state to up
00:00:49: %LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/12, changed state to up
```

Which of these statements correctly describes the state of the switch once the boot process has

been completed?

- A. A. The switch will need a different IOS code in order to support VLANs and ST.
- B. Remote access management of this switch will not be possible without configuration change.
- C. As FastEthernet0/12 will be the last to come up, it will be blocked by STP.
- D. More VLANs will need to be created for this switch.

Correct Answer: B

Section: (none)

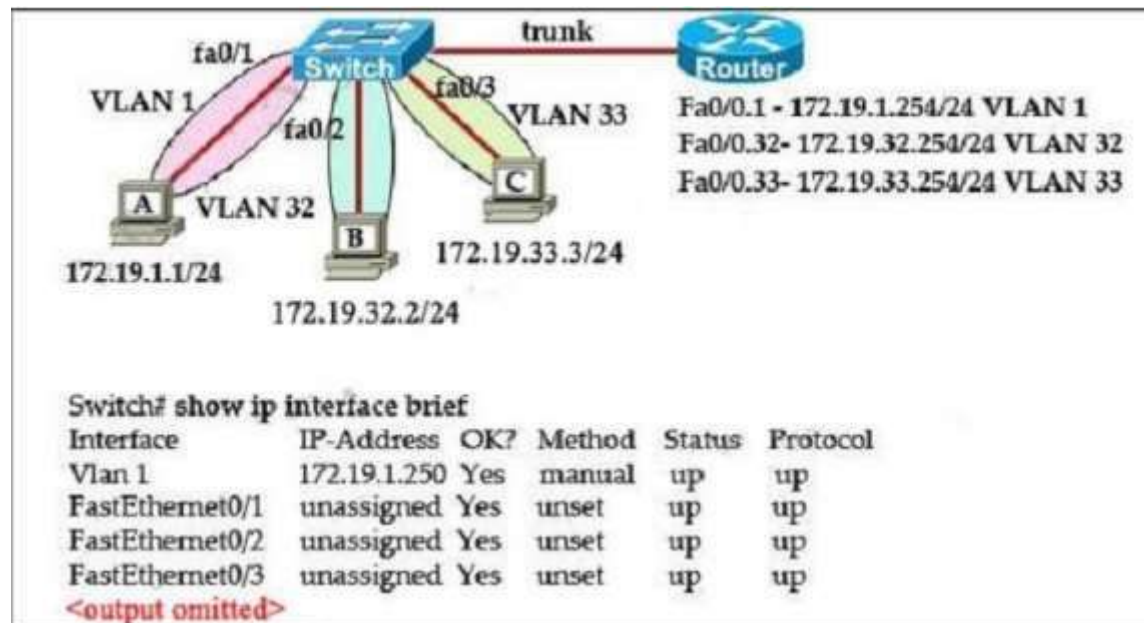
Explanation

Explanation/Reference:

QUESTION 84

Refer to the exhibit.

The network administrator normally establishes a Telnet session with the switch from host A. However, host A is unavailable. The administrator's attempt to telnet to the switch from host fails, but pings to the other two hosts are successful. What is the issue?



- A. The switch interfaces need the appropriate IP addresses assigned.
- B. Host and the switch need to be in the same subnet.
- C. The switch needs an appropriate default gateway assigned.
- D. The switch interface connected to the router is down.
- E. Host needs to be assigned an IP address in VLAN 1.

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 85

Which condition does the err-disabled status indicate on an Ethernet interface?

- A. There is a duplex mismatch.
- B. The device at the other end of the connection is powered off.
- C. The serial interface is disabled.
- D. The interface is configured with the shutdown command.

- E. Port security has disabled the interface.
- F. The interface is fully functioning.

Correct Answer: E

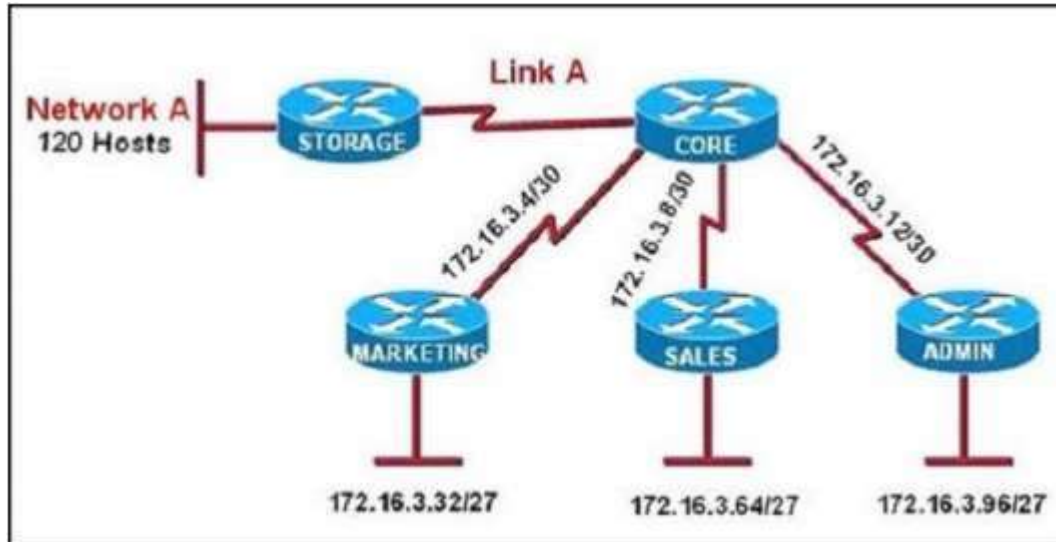
Section: (none)

Explanation

Explanation/Reference:

QUESTION 86

Refer to the exhibit



All of the routers in the network are configured with the ip subnet-zero command. Which network addresses should be used for Link A and Network A? (Choose two.)

- A. Link A 172.16.3.0/30
- B. Link A 172.16.3.112/30
- C. Network A 172.16.3.48/26
- D. Network A 172.16.3.128/25
- E. Link A 172.16.3.40/30
- F. Network A 172.16.3.192/26

Correct Answer: AD

Section: (none)

Explanation

Explanation/Reference:

QUESTION 87

Which type of device can be replaced by the use of subinterfaces for VLAN routing ?

- A. Layer 2 bridge
- B. Layer 2 switch
- C. Layer 3 switch
- D. router

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 88

Which statement about LLDP is true?

- A. It is a Cisco proprietary protocol.
- B. It is configured in global configuration mode.
- C. The LLDP update frequency is a fixed value.
- D. It runs over the transport layer.

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 89

If the primary root bridge experiences a power loss, which switch takes over?

- A. switch 0040.00.90C5
- B. switch 00E0.F90B.6BE3
- C. switch 0004.9A1A.C182
- D. switch 00E0.F726.3DC6

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 90

A network administrator is troubleshooting an EIGRP problem on a router and needs to confirm the IP addresses of the devices with which the router has established adjacency. The retransmit interval and the queue counts for the adjacent routers also need to be checked. What command will display the required information?

- A. Router# show ip eigrp neighbors
- B. Router# show ip eigrp interfaces
- C. Router# show ip eigrp adjacency
- D. Router# show ip eigrp topology

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 91

Which three statements about IPv6 prefixes are true? (Choose three.)

- A. FEC0::/10 is used for IPv6 broadcast.
- B. FC00::/7 is used in private networks.
- C. FE80::/8 is used for link-local unicast.
- D. FE80::/10 is used for link-local unicast.
- E. 2001::1/127 is used for loopback addresses.
- F. FF00::/8 is used for IPv6 multicast.

Correct Answer: BDF

Section: (none)

Explanation

Explanation/Reference:

QUESTION 92

Which command can you enter to display duplicate IP addresses that the DHCP server assigns?

- A. show ip dhcp conflict 10.0.2.12
- B. show ip dhcp database 10.0.2.12
- C. show ip dhcp server statistics
- D. show ip dhcp binding 10.0.2.12

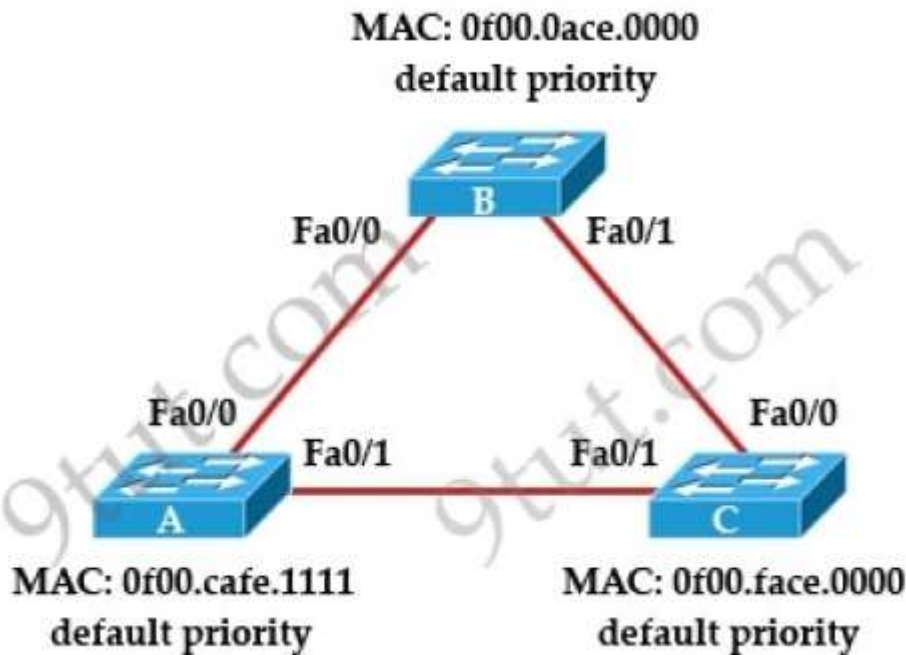
Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 93



Which three ports will be STP designated ports if all the links are operating at the same bandwidth? (Choose three.)

- A. Switch B - F0/0
- B. Switch A - Fa0/1
- C. Switch B - Fa0/1
- D. Switch C - F0/1
- E. Switch A - Fa0/0
- F. Switch C - Fa0/0

Correct Answer: ABC

Section: (none)

Explanation

Explanation/Reference:

QUESTION 94

Refer to the exhibit



The network administrator cannot connect to Switch 1 over a Telnet session, although the hosts attached to Switch1 can ping the interface Fa0/0 of the router. Given the information in the graphic and assuming that the router and Switch2 are configured properly, which of the following commands should be issued on Switch1 to correct this problem?

- A. Switch1(config)# ip default-gateway 192.168.24.1
- B. Switch1(config)# interface fa0/1Switch1(config-if)# switchport mode trunk
- C. Switch1(config)# line con0Switch1(config-line)# password ciscoSwitch1(config-line)# login
- D. Switch1(config)# interface fa0/1Switch1(config-if)# ip address 192.168.24.3 255.255.255.0
- E. Switch1(config)# interface fa0/1Switch1(config-if)# duplex fullSwitch1(config-if)# speed 100

Correct Answer: A

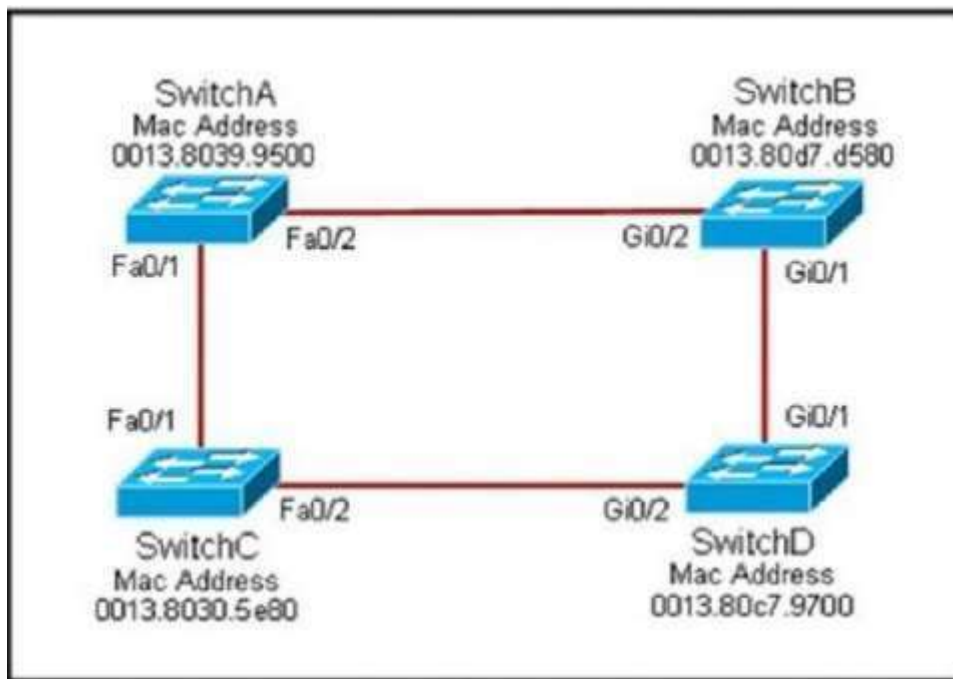
Section: (none)

Explanation

Explanation/Reference:

QUESTION 95

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

Correct Answer: ABD

Section: (none)

Explanation

Explanation/Reference:

QUESTION 96

Which feature builds a FIB and an adjacency table to expedite packet forwarding?

- A. cut through
- B. fast switching
- C. process switching
- D. Cisco Express Forwarding

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 97

Which command can you enter to verify that a 128-bit address is live and responding?

- A. traceroute
- B. telnet
- C. ping
- D. show ipv6

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 98

What are two reasons that duplex mismatches can be difficult to diagnose? (Choose two.)

- A. The interface displays a connected (up/up) state even when the duplex settings are mismatched.
- B. 1-Gbps interfaces are full-duplex by default.
- C. Full-duplex interfaces use CSMA/CD logic, so mismatches may be disguised by collisions.
- D. The symptoms of a duplex mismatch may be intermittent.
- E. Autonegotiation is disabled.

Correct Answer: AD

Section: (none)

Explanation

Explanation/Reference:

QUESTION 99

Which condition indicates that service password-encryption is enabled?

- A. The local username password is in clear text in the configuration.
- B. The enable secret is in clear text in the configuration.
- C. The local username password is encrypted in the configuration.
- D. The enable secret is encrypted in the configuration.

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 100

Which protocol advertises a virtual IP address to facilitate transparent failover of a Cisco routing device?

- A. FHRP
- B. DHCP
- C. RSMLT
- D. ESRP

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 101

What is the correct routing match to reach 172.16.1.5/32 ?

- A. 172.16.1.0/26
- B. 172.16.1.0/25
- C. 172.16.1.0/24
- D. the default route

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 102

Which layer in the OSI reference model is responsible for determining the availability of the receiving program and checking to see if enough resources exist for that communication?

- A. transport
- B. network
- C. presentation
- D. session
- E. application

Correct Answer: E

Section: (none)

Explanation

Explanation/Reference:

QUESTION 103

What is the purpose of the POST operation on a router ?

- A. determine whether additional hardware has been added
- B. locate an IOS image for booting
- C. enable a TFTP server
- D. set the configuration register

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 104

Which protocol is the Cisco proprietary implementation of FHRP ?

- A. HSRP
- B. VRRP
- C. GLBP
- D. CARP

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 105

Which three characteristics are representative of a link-state routing protocol? (Choose three.)

- A. provides common view of entire topology
- B. exchanges routing tables with neighbors
- C. calculates shortest path
- D. utilizes event-triggered updates
- E. utilizes frequent periodic updates

Correct Answer: ACD

Section: (none)

Explanation

Explanation/Reference:

QUESTION 106

Which part of the PPPoE server configuration contains the information used to assign an IP address to a PPPoE client?

- A. virtual-template interface
- B. DHCP
- C. dialer interface
- D. AAA authentication

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 107

Drag and drop the correct address space on the left to the IPv6 multicast feature or protocol on the right.	
FF02::5	All nodes of Link Local
FF02::A	All EIGRPv3 Routers
FF02::D	All OSPFv3 Designated Routers
FF02::1	All PIM Routers
FF05::2	All OSPFv3 Routers
FF02::6	All Routers of site local

A.

Drag and drop the correct address space on the left to the IPv6 multicast feature or protocol on the right.	
	FF02::1
	FF02::A
	FF02::6
	FF02::D
	FF02::5
	FF05::2

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

FF02::1 ----- All Nodes (link-local)
 FF02::5 ----- OSPFv3 Routers
 FF02::6 ----- OSPFv3 Designated Routers
 FF02::A ----- EIGRPv3 Routers

FF02::D ----- PIM Routers
FF05::2 ----- All Routers (site-local)

QUESTION 108

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

- A. RSTP significantly reduces topology reconverging 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

Correct Answer: ABD

Section: (none)

Explanation

Explanation/Reference:

QUESTION 109

What are two benefits of using NAT? (Choose two.)

- A. NAT facilitates end-to-end communication when IPsec is enabled.
- B. NAT eliminates the need to re-address all hosts that require external access.
- C. NAT conserves addresses through host MAC-level multiplexing.
- D. Dynamic NAT facilitates connections from the outside of the network.
- E. NAT accelerates the routing process because no modifications are made on the packets.
- F. NAT protects network security because private networks are not advertised.

Correct Answer: BF

Section: (none)

Explanation

Explanation/Reference:

QUESTION 110

Which two commands correctly verify whether port security has been configured on port FastEthernet 0/12 on a switch? (Choose two.)

- A. SW1#show port-secure interface FastEthernet 0/12
- B. SW1#show switchport port-secure interface FastEthernet 0/12
- C. SW1#show running-config
- D. SW1#show port-security interface FastEthernet 0/12
- E. SW1#show switchport port-security interface FastEthernet 0/12

Correct Answer: CD

Section: (none)

Explanation

Explanation/Reference:

QUESTION 111

Refer to the exhibit. Given this output for SwitchC, what should the network administrator's next action be?



```

SwitchC# show interface fa0/1
FastEthernet0/1 is up, line protocol is up (connected)
Hardware is Fast Ethernet, address is 0013.8030.5e83
MTU 1500 bytes, BW 100000 Kbit, DLY 100 usec,
    reliability 255/255, txload 14/255, rxload 14/255
Encapsulation ARPA, loopback not set
Keepalive set (10 sec)
Full-duplex, 100Mb/s, media type is 10/100BaseTX
input flow-control is off, output flow-control is unsupported
. Text omitted
5 minute input rate 364000 bits/sec, 344 packets/sec
5 minute output rate 367000 bits/sec, 338 packets/sec
 16973 packets input, 2400313 bytes, 0 no buffer
Received 1244 broadcasts (0 multicast)
 0 runs, 3 giants, 0 throttles
 741 input errors, 738 CRC, 0 frame, 0 overrun, 0 ignored
 0 watchdog, 1243 multicast, 0 pause input
 0 input packets with dribble condition detected
16420 packets output, 2375034 bytes, 0 underruns
. Text omitted
  
```

- A. Check the trunk encapsulation mode for Switch C's fa0/1 port.
- B. Check the duplex mode for Switch C's fa0/1 port.
- C. Check the duplex mode for Switch A's fa0/2 port.
- D. Check the trunk encapsulation mode for Switch A's fa0/2 port

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 112

Which statement is correct regarding the operation of DHCP ?

- A. A DHCP client uses a ping to detect address conflicts.
- B. A DHCP server uses a gratuitous ARP to detect DHCP clients.
- C. A DHCP client uses a gratuitous ARP to detect a DHCP server.
- D. If an address conflict is detected, the address is removed from the pool and an administrator must resolve the conflict.
- E. If an address conflict is detected, the address is removed from the pool for an amount of time configurable by the administrator.
- F. If an address conflict is detected, the address is removed from the pool and will not be reused until the server is rebooted.

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 113

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 114

Refer to the exhibit. Switch port FastEthernet 0/24 on ALSwitch1 will be used to create an IEEE 802.1Q-compliant trunk to another switch. Based on the output shown, what is the reason the trunk does not form, even though the proper cabling has been attached?

```

ALSwitch1# show running-config
«output omitted»
interface FastEthernet0/24 no ip address
«output omitted»
ALSwitch1# show interfaces FastEthernet0/24 switchport
Name: Fa0/24
Switchport: Enable
Administrative Mode: static access
Operation Mode: static access
Administrative Trunking Encapsulation: dot1q
Operation Trunking Encapsulation: native
Negotiation of Trunking: Off
Access Mode VLAN: 1 (default)
Trunking Native Mode VLAN: 1 (default)
Voice VLAN: none
Administrative private-vlan host-association: none
Administrative private-vlan mapping: none
Operation private-vlan: none
Trunking VLANs Enabled: ALL
Pruning VLANs Enabled: 2-1001
Capture Mode Disabled
Capture VLANs Allowed: ALL

Protected: false

Voice VLAN: none (Inactive)
Appliance trust: none

```

- A. VLANs have not been created yet.
- B. An IP address must be configured for the port.
- C. The port is currently configured for access mode.
- D. The correct encapsulation type has not been configured.
- E. The no shutdown command has not been entered for the port.

Correct Answer: C

Section: (none)

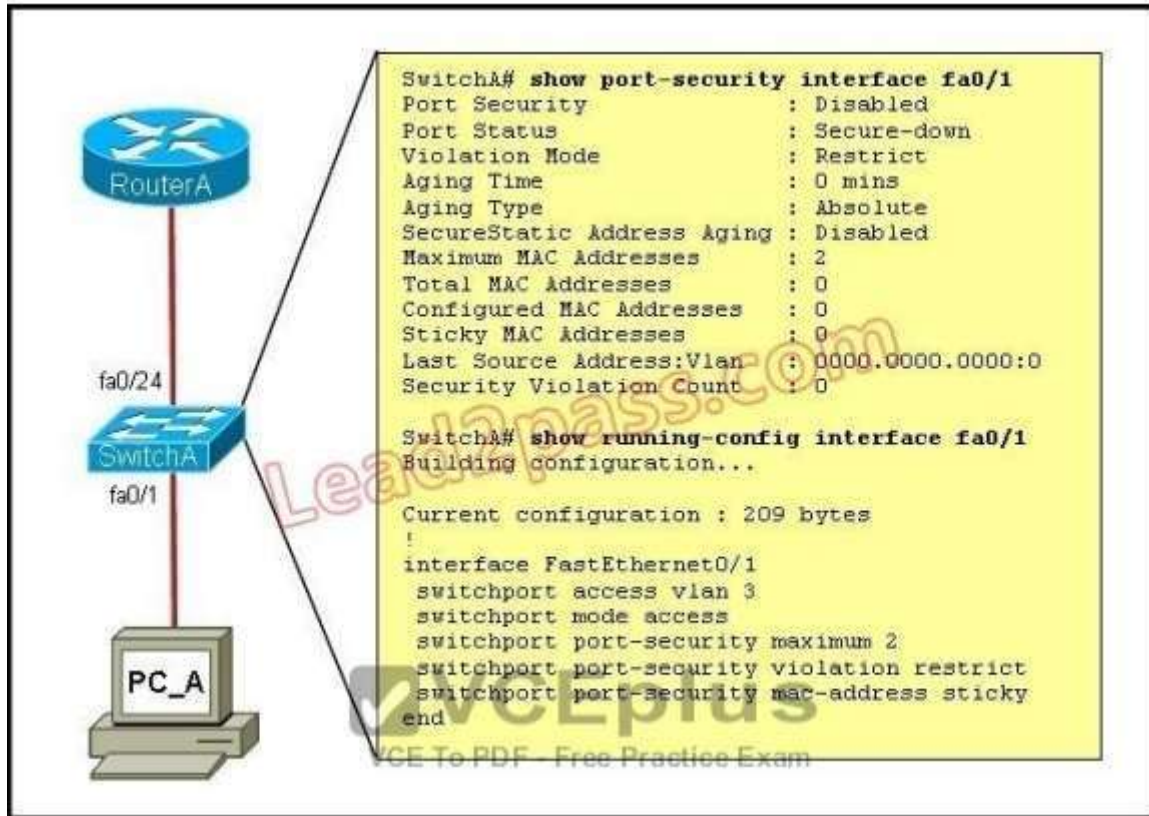
Explanation

Explanation/Reference:

QUESTION 115

Refer to the exhibit. A junior network administrator was given the task of configuring port security on SwitchA to allow only PC_A to access the switched network through port fa0/1. If any other device is detected, the port is to drop frames from this device. The administrator configured the interface and tested it with successful pings from PC_A to RouterA, and then observes the output from these two show commands. Which two of these changes are necessary for SwitchA

to meet the requirements? (Choose two.)



- A. Port security needs to be globally enabled.
- B. Port security needs to be enabled on the interface.
- C. Port security needs to be configured to shut down the interface in the event of a violation.
- D. Port security needs to be configured to allow only one learned MAC address.
- E. Port security interface counters need to be cleared before using the show command.
- F. The port security configuration needs to be saved to NVRAM before it can become active.

Correct Answer: BD

Section: (none)

Explanation

Explanation/Reference:

QUESTION 116

Which three statements about static routing are true? (Choose three.)

- A. It uses consistent route determination.
- B. It is best used for small-scale deployments.
- C. Routing is disrupted when links fail.
- D. It requires more resources than other routing methods.
- E. It is best used for large-scale deployments.
- F. Routers can use update messages to reroute when links fail.

Correct Answer: ABC

Section: (none)

Explanation

Explanation/Reference:

QUESTION 117

```
router eigrp 100
network 172.15.4.0
network 10.4.3.0
network 192.168.4.0
auto summary
```

**What are the address that will show at the show ip route if we configure the above statements?
(Choose Three.)**

- A. 10.0.0.0
- B. 10.4.3.0
- C. 172.15.4.0
- D. 172.15.0.0
- E. 192.168.4.0
- F. 192.168.0.0

Correct Answer: ADE

Section: (none)

Explanation

Explanation/Reference:

QUESTION 118

Which feature facilitates the tagging of frames on a specific VLAN ?

- A. Routing
- B. Hairpinning
- C. Encapsulation
- D. Switching

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 119

What does split horizon prevent?

- A. routing loops, link state
- B. routing loops, distance vector
- C. switching loops, STP
- D. switching loops, VTP

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 120

Which value to use in HSRP protocol election process ?

- A. interface
- B. virtual IP address
- C. priority
- D. router ID

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 121

Which of the following is needed to be enable back the role of active in HSRP ?

- A. preempt
- B. priority
- C. other options
- D. other options

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 122

Which command is used to show the interface status of a router ?

- A. show interface status
- B. show ip interface brief
- C. show ip route
- D. show interface

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 123

Which of the following privilege level is the most secured ?

- A. Level 0
- B. Level 1
- C. Level 15
- D. Level 16

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 124

Which IPV6 feature is supported in IPV4 but is not commonly used ?

- A. unicast
- B. multicast
- C. anycast
- D. broadcast

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 125

Which two statements are true about IPv6 Unique Local Addresses ? (Choose Two.)

- A. It is the counterpart of IPv4 private addresses
- B. It uses FC00::/7 as prefix
- C. wrong
- D. wrong

Correct Answer: AB

Section: (none)

Explanation

Explanation/Reference:

QUESTION 126

Which range represents the standard access list ?

- A. 99
- B. 150
- C. 299
- D. 2000

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 127

What to do when the router password was forgotten ?

- A. use default password cisco to reset
- B. access router physically
- C. use ssl/vpn
- D. Type confreg 0x2142 at the rommon 1

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 128

What is true about Cisco Discovery Protocol ?

- A. it discovers the routers, switches and gateways.
- B. it is network layer protocol
- C. it is physical and data link layer protocol
- D. it is proprietary protocol

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 129

Which of the following encrypts the traffic on a leased line ?

- A. telnet
- B. ssh
- C. vtp
- D. vpn
- E. dmvpn

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 130

How do you configure a hostname ?

- A. Router(config)#hostname R1

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 131

How do you maintain security in multiple websites?

- A. vpn
- B. dmvpn
- C. other
- D. other

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 132

Refer to the exhibit. Switch-1 needs to send data to a host with a MAC address of 00b0.d056.efa4. What will Switch-1 do with this data?

Switch-1# **show mac address-table**

Dynamic Addresses Count: 3

Secure Addresses (User-defined) Count: 0

Static Addresses (User-defined) Count: 0

System Self Addresses Count: 47

Total Mac addresses: 50

Non-static Address Table:

Destination Address	Address Type	VLAN	Destination Port
0010.0de0.e289	Dynamic	1	FastEthernet0/1
0010.7b00.1540	Dynamic	2	FastEthernet0/3
0010.7b00.1545	Dynamic	2	FastEthernet0/2

- A. Switch-1 will drop the data because it does not have an entry for that MAC address.
- B. Switch-1 will flood the data out all of its ports except the port from which the data originated.
- C. Switch-1 will send an ARP request out all its ports except the port from which the data originated.
- D. Switch-1 will forward the data to its default gateway.

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 133

What routing protocol use first-hand information from peers?

- A. link-state
- B. distance-vector
- C. path-vector
- D. other

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

<http://www.ciscopress.com/articles/article.asp?p=24090&seqNum=4>

The reason is that unlike the routing-by-rumor approach of distance vector, link state routers have firsthand information from all their peer routers. Each router originates information about itself, its directly connected links, and the state of those links (hence the name). This information is passed around from router to router, each router making a copy of it, but never changing it. The ultimate objective is that every router has identical information about the internetwork, and each router will independently calculate its own best paths.

QUESTION 134

What field is consist of 6 bytes in the field identification frame in IEEE 802.1Q ?

- A. SA
- B. DA
- C. FCS
- D. other

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 135

What is new in HSRPv2 ?

- A. preempt
- B. a greater number in hsrp group field
- C. other
- D. other

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 136

What's are true about MPLS ?

- A. It use a label to separate traffic from several costumer
- B. It use IPv4 IPv6
- C. other
- D. other

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 137

A network engineer wants to allow a temporary entry for a remote user with a specific username and password so that the user can access the entire network over the internet. Which ACL can be used?

- A. reflexive
- B. extended
- C. standard
- D. dynamic

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:
http://xgu.ru/wiki/Cisco_ACL

QUESTION 138

Which command is necessary to permit SSH or Telnet access to a cisco switch that is otherwise configured for these vty line protocols ?

- A. transport type all
- B. transport output all
- C. transport preferred all
- D. transport input all

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 139

What should be part of a comprehensive network security plan ?

- A. Allow users to develop their own approach to network security
- B. Physically secure network equipment from potential access by unauthorized individuals
- C. Encourage users to use personal information in their passwords to minimize the likelihood of passwords being forgotten
- D. Delay deployment of software patches and updates until their effect on end-user equipment is well known and widely reported
- E. Minimize network overhead by deactivating automatic antivirus client updates

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 140

Which two Cisco IOS commands, used in troubleshooting, can enable debug output to a remote location ? (Choose two)

- A. no logging console
- B. logging host ip-address
- C. terminal monitor

- D. show logging | redirect flash:output.txt
- E. snmp-server enable traps syslog

Correct Answer: BC

Section: (none)

Explanation

Explanation/Reference:

QUESTION 141

Which component of the Cisco SDN solution serves as the centralized management system ?

- A. Cisco OpenDaylight
- B. Cisco ACI
- C. Cisco APIC
- D. Cisco IWAN

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

<http://www.cisco.com/c/en/us/solutions/data-center-virtualization/application-centric-infrastructure/index.html>

Cisco Application Policy Infrastructure Controller (APIC)

Provides single-click access to all Cisco ACI fabric information, enabling network automation, programmability, and centralized management.

<http://www.cisco.com/c/en/us/products/cloud-systems-management/application-policy-infrastructure-controller-apic/index.html>

The Cisco Application Policy Infrastructure Controller (Cisco APIC) is the unifying point of automation and management for the Application Centric Infrastructure (ACI) fabric. The Cisco APIC provides centralized access to all fabric information, optimizes the application lifecycle for scale and performance, and supports flexible application provisioning across physical and virtual resources.

The Cisco APIC provides centralized access to all fabric information, optimizes the application lifecycle for scale and performance, and supports flexible application provisioning across physical and virtual resources.

Centralized application-level policy engine for physical, virtual, and cloud infrastructures

Designed for automation, programmability, and centralized management, the Cisco APIC itself exposes northbound APIs through XML and JSON. It provides both a command-line interface (CLI) and GUI which utilize the APIs to manage the fabric holistically.

Cisco APIC provides:

A single pane of glass for application-centric network policies

Fabric image management and inventory

Application, tenant, and topology monitoring

Troubleshooting

QUESTION 142

What command can you enter in config mode to create DHCP pool ?

- A. ip dhcp pool DHCP_pool
- B. ip dhcp exclude -add
- C. ip dhcp conflict logging
- D. service dhcp

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 143

Which utility can you use to determine whether a switch can send echo requests and replies?

- A. ping
- B. traceroute

- C. ssh
- D. telnet

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 144

What is the two benefits of DHCP snooping ? (Choose two)

- A. static reservation
- B. DHCP reservation
- C. prevent DHCP rouge server
- D. prevent untrusted host and servers to connect

Correct Answer: CD

Section: (none)

Explanation

Explanation/Reference:

QUESTION 145

What are the three major components of cisco network virtualization ? (Choose Three)

- A. network access control
- B. path isolation
- C. virtual network services
- D. policy enforcement

Correct Answer: ABC

Section: (none)

Explanation

Explanation/Reference:

QUESTION 146

Which feature is config by setting a variance that is at least 2 times the metric ?

- A. unequal cost load balancing
- B. path selection
- C. equal cost load balancing
- D. path count

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 147

Standard industrialized protocol of etherchannel ?

- A. LACP
- B. PAGP
- C. PRP
- D. REP

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 148

Two features of the extended ping command ? (Choose two)

- A. It can send a specific number of packet
- B. It can send packet from specified interface of IP address
- C. It can resolve the destination host name
- D. It can ping multiple host at the same time

Correct Answer: AB

Section: (none)

Explanation

Explanation/Reference:

QUESTION 149

What command is used to configure a switch as authoritative NTP server ?

- A. Switch(config)#ntp master 3
- B. Switch(config)#ntp peer IP
- C. Switch(config)#ntp server IP
- D. Switch(config)#ntp source IP

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 150

Which two statements about syslog logging are true?

- A. Syslog logging is disabled by default
- B. Messages are stored in the internal memory of device
- C. Messages can be erased when device reboots
- D. Messages are stored external to the device
- E. The size of the log file is dependent on the resources of the device.

Correct Answer: BC

Section: (none)

Explanation

Explanation/Reference:

tested on real hardware

Router2801#sh logging

Syslog logging: enabled (11 messages dropped, 1 messages rate-limited,
0 flushes, 0 overruns, xml disabled, filtering disabled)

No Active Message Discriminator.

No Inactive Message Discriminator

Console logging: level debugging, 348 messages logged, xml disabled,
filtering disabled

Monitor logging: level debugging, 0 messages logged, xml disabled,
filtering disabled

Buffer logging: level warnings, 56 messages logged, xml disabled,
filtering disabled

Logging Exception size (4096 bytes)

Count and timestamp logging messages: disabled

Persistent logging: disabled

No active filter modules.

ESM: 0 messages dropped

Trap logging: level informational, 343 message lines logged

Log Buffer (51200 bytes):

```
*May 16 08:11:45: %LINK-3-UPDOWN: Interface Virtual-Access1, changed state to up
*May 16 08:11:49: %LINK-3-UPDOWN: Interface Virtual-Access2, changed state to up
May 16 08:22:11: %LINK-3-UPDOWN: Interface Virtual-Access2, changed state to down
May 16 08:22:45: %LINK-3-UPDOWN: Interface Virtual-Access2, changed state to up
May 16 08:35:25: %LINK-3-UPDOWN: Interface Virtual-Access2, changed state to down
May 16 08:36:49: %LINK-3-UPDOWN: Interface Virtual-Access2, changed state to up
May 16 10:25:02: %LINK-3-UPDOWN: Interface Virtual-Access2, changed state to down
May 16 10:25:53: %LINK-3-UPDOWN: Interface Virtual-Access2, changed state to up
May 16 17:49:46: %LINK-3-UPDOWN: Interface Virtual-Access2, changed state to down
May 16 17:50:22: %LINK-3-UPDOWN: Interface Virtual-Access2, changed state to up
Router2801#
```

After reload:

Router2801#sh logging

Syslog logging: enabled (11 messages dropped, 1 messages rate-limited,
0 flushes, 0 overruns, xml disabled, filtering disabled)

No Active Message Discriminator.

No Inactive Message Discriminator.

Console logging: level debugging, 26 messages logged, xml disabled,
filtering disabled

Monitor logging: level debugging, 0 messages logged, xml disabled,
filtering disabled

Buffer logging: level warnings, 2 messages logged, xml disabled,
filtering disabled

Logging Exception size (4096 bytes)

Count and timestamp logging messages: disabled

Persistent logging: disabled

No active filter modules.

ESM: 0 messages dropped

Trap logging: level informational, 30 message lines logged

Log Buffer (51200 bytes):

```
*May 17 11:39:45: %LINK-3-UPDOWN: Interface Virtual-Access1, changed state to up
*May 17 11:39:49: %LINK-3-UPDOWN: Interface Virtual-Access2, changed state to up
Router2801#
```

QUESTION 151

How to enable vlans automatically across multiple switches ?

- A. Configure VLAN
- B. Configure NTP
- C. Configure each VLAN
- D. Configure VTP

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 152

Which password types are encrypted ?

- A. SSH
- B. Telnet

- C. enable secret
- D. enable password

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 153

What is the binary pattern of unique ipv6 unique local address ?

- A. 00000000
- B. 11111100
- C. 11111111
- D. 11111101

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 154

Which statement about ACLs is true ?

- A. An ACL have must at least one permit action, else it just blocks all traffic.
- B. ACLs go bottom-up through the entries looking for a match
- C. An ACL has a an implicit permit at the end of ACL.
- D. ACLs will check the packet against all entries looking for a match.

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 155

What is the cause of the Syslog output messages ?

```
*Mar 01, 00:37:57.3737: %SYS-5-CONFIG_I: Configured from console by console
%LINK-5-CHANGED: Interface FastEthernet0/1, changed state to administratively down
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/1, changed state to down
%DUAL-5-NBRCHANGE: IP-EIGRP 1: Neighbor 10.10.11.2 (FastEthernet0/1) is down: interface down
```

- A. The EIGRP neighbor on Fa0/1 went down due to a failed link.
- B. The EIGRP neighbor connected to Fa0/1 is participating in a different EIGRP process, causing the adjacency to go down.
- C. A shut command was executed on interface Fa0/1, causing the EIGRP adjacency to go down.
- D. Interface Fa0/1 has become error disabled, causing the EIGRP adjacency to go down.

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 156

What are contained in layer 2 ethernet frame ? (Choose Three.)

- A. Preamble
- B. TTL

- C. Type/length
- D. Frame check sequence
- E. version
- F. others

Correct Answer: ACD

Section: (none)

Explanation

Explanation/Reference:

QUESTION 157

Describe the best way to troubleshoot and isolate a network problem ?

- A. Create an action plan
- B. Implement an action plan
- C. Gather facts
- D. others

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/bts/5-0/troubleshooting/guide/troshoot/01tg01.html?bookSearch=true

Step 2 Gather the facts that you need to help isolate possible causes.

QUESTION 158

Under normal operations, cisco recommends that you configure switch ports on which vlan ?

- A. on the default vlan
- B. on the management vlan
- C. on the native vlan
- D. on any vlan except the default vlan

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

<http://www.cisco.com/c/en/us/support/docs/switches/catalyst-6500-series-switches/24330-185.html>

Note: There is a potential security consideration with dot1q that the implicit tagging of the native VLAN causes. The transmission of frames from one VLAN to another without a router can be possible. Refer to the Intrusion Detection FAQ leavingcisco.com for further details. The workaround is to use a VLAN ID for the native VLAN of the trunk that is not used for end-user access. In order to achieve this, the majority of Cisco customers simply leave VLAN 1 as the native VLAN on a trunk and assign access ports to VLANs other than VLAN 1.

QUESTION 159

In which byte of an IP packet can traffic be marked ?

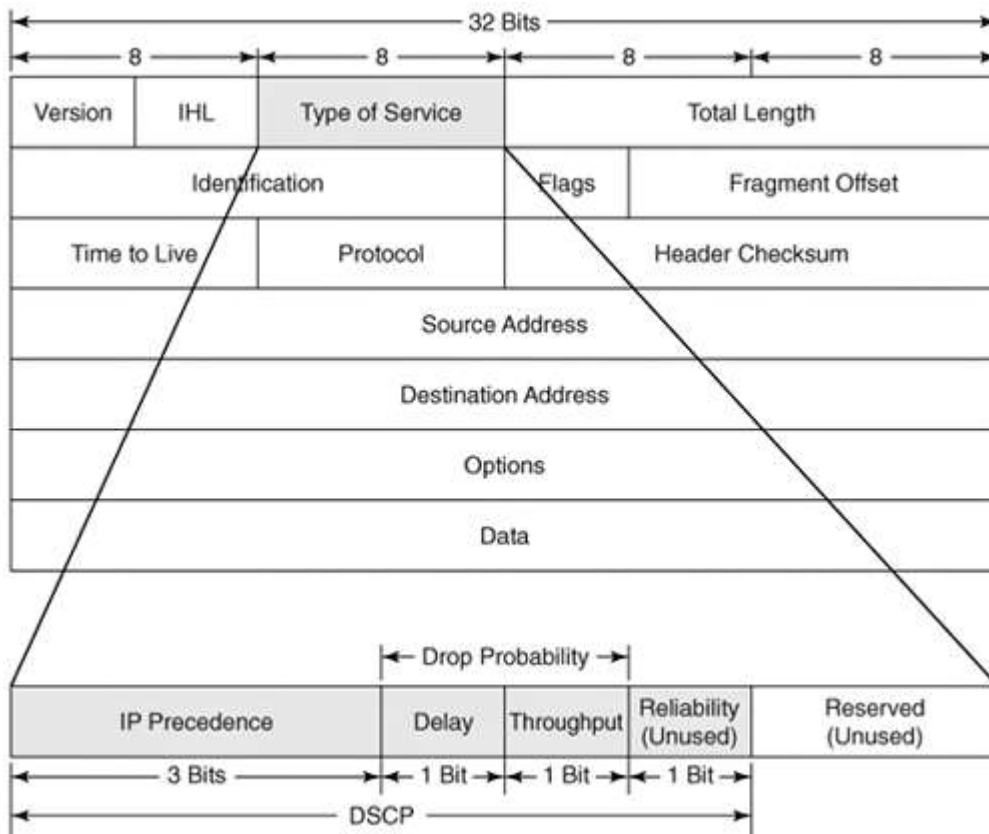
- A. the QoS byte
- B. the CoS byte
- C. the ToS byte
- D. the DSCP byte

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:



QUESTION 160

Which command can you enter to route all traffic that is destined to 192.168.0.0/20 to a specific interface ?

- A. ip route 192.168.0.0 255.255.240.0 gi 0/1
- B. ip route 192.168.0.0 255.255.255.0 gi 0/1
- C. ip route 0.0.0.0 0.0.0.0 gi 0/1
- D. ip route 0.0.0.0 255.255.255.0 gi 0/1

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 161

Which two protocol can detect native vlan mismatch errors? (Choose two.)

- A. CDP
- B. VTP
- C. DTP
- D. STP
- E. PAGP

Correct Answer: AD

Section: (none)

Explanation

Explanation/Reference:

A

Oct 5 23:29:16: %CDP-4-NATIVE_VLAN_MISMATCH: Native VLAN mismatch discovered on GigabitEthernet11/43 (512), with WS-C2950-12 FastEthernet0/6 (1)

D

<http://blog.ine.com/2008/07/17/pvst-explained/>

Case 1: Change the native VLAN on SW1 connection to R3:

```
SW1:
interface FastEthernet 1/3
 switchport trunk native vlan 2
```

Rack1SW2#

%SPANTREE-2-RECV_PVID_ERR: Received BPDU with inconsistent peer vlan id 2 on FastEthernet1/3 VLAN1.

%SPANTREE-2-BLOCK_PVID_PEER: Blocking FastEthernet1/3 on VLAN2. Inconsistent peer vlan.PVST+: restarted the forward delay timer for FastEthernet1/3

%SPANTREE-2-BLOCK_PVID_LOCAL: Blocking FastEthernet1/3 on VLAN1. Inconsistent local vlan.PVST+: restarted the forward delay timer for FastEthernet1/3

Note that SW2 detects untagged packet with VLAN ID 2, which does not correspond to the locally configured default native VLAN 1. The corresponding port is put in «inconsistent» state. The reason SW2 detects this condition (and not SW1) is because SW1 sending SSTP BPDUs and SW2 is not (it receives superior BPDUs). As soon as native VLAN is converted back to «1» on SW1, consistency is restored:

QUESTION 162

Which three options are switchport config that can always avoid duplex mismatch error between the switches? (Choose Three.)

- A. set both side on auto-negotiation.
- B. set both sides on half-duplex
- C. set one side auto and other side half-duplex
- D. set both side of connection to full-duplex
- E. set one side auto and other side on full-duplex
- F. set one side full-duplex and other side half-duplex

Correct Answer: ABD

Section: (none)

Explanation

Explanation/Reference:

<http://www.pathsolutions.com/network-enemy-1-duplex-mismatch/>

QUESTION 163

What are two benefits of Private IPv4 Addresses? (Choose two.)

- A. they can be implemented without requiring admin to coordinate with IANA
- B. they are managed by IANA
- C. increase the flexibility of network design
- D. provide network isolation from the internet
- E. they are routable over internet

Correct Answer: AD

Section: (none)

Explanation

Explanation/Reference:

<http://smallbusiness.chron.com/advantages-disadvantages-using-private-ip-address-space-46424.html>

QUESTION 164

How many bits represent network id in a IPv6 address ?

- A. 32
- B. 48
- C. 64
- D. 128

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

<http://networkengineering.stackexchange.com/questions/30836/calculate-networking-bits-for-ipv6>

64 bits for Network ID and 64 bits for Interface ID

64+64=128

QUESTION 165

?????(An image on exhibit)

An interface which we have to determine from the routing the route learned by which routing protocol?

- A. EIGRP
- B. OSPF
- C. RIP
- D. BGP

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 166

Which WAN topology is most appropriate for a centrally located server farm with several satellite branches ?

- A. star
- B. hub and spoke
- C. point-to-point
- D. full mesh

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

In a Hub-and-spoke Site-to-Site Wide Area Network (WAN) network topology, one physical site act as Hub (Example, Main Office), while other physical sites act as spokes. Spoke sites are connected to each other via Hub site. In Hub-and-spoke Wide Area Network (WAN) topology, the network communication between two spokes always travels through the hub.

QUESTION 167

Which function allows EIGRP peers to receive notice of implementing topology changes?

- A. successors
- B. advertised changes
- C. goodbye messages
- D. expiration of the hold timer

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 168

If you configure syslog messages without specifying the logging trap level, which log messages will the router send ?

- A. informational messages only
- B. warning and error conditions only
- C. normal but significant conditions only
- D. error conditions only
- E. all levels except debugging

Correct Answer: E

Section: (none)

Explanation

Explanation/Reference:

QUESTION 169

Which three options are benefits of using TACACS+ on a device? (Choose three)

- A. It ensures that user activity is untraceable.
- B. It provides a secure accounting facility on the device.
- C. device-administration packets are encrypted in their entirety.
- D. It allows the user to remotely access devices from other vendors.
- E. It allows the users to be authenticated against a remote server.
- F. It supports access-level authorization for commands.

Correct Answer: CEF

Section: (none)

Explanation

Explanation/Reference:

http://tacacs.net/docs/TACACS_Advantages.pdf

QUESTION 170

What layer of the OSI Model is included in TCP/IP Model's INTERNET layer ?

- A. Application
- B. Session
- C. Data Link
- D. Presentation
- E. Network

Correct Answer: E

Section: (none)

Explanation

Explanation/Reference:

QUESTION 171

Which two of these are characteristics of the 802.1Q protocol? (Choose two.)

- A. It is used exclusively for tagging VLAN frames and does not address network reconvergence following switched network topology changes.
- B. It modifies the 802.3 frame header, and thus requires that the FCS be recomputed.
- C. It is a Layer 2 messaging protocol which maintains VLAN configurations across networks.
- D. It includes an 8-bit field which specifies the priority of a frame.
- E. It is a trunking protocol capable of carrying untagged frames.

Correct Answer: BE

Section: (none)

Explanation

Explanation/Reference:

QUESTION 172

Which two features can dynamically assign IPv6 addresses? (Choose two.)

- A. IPv6 stateless autoconfiguration
- B. DHCP
- C. NHRP
- D. IPv6 stateful autoconfiguration
- E. ISATAP tunneling

Correct Answer: AD

Section: (none)

Explanation

Explanation/Reference:

rfc4862 in which wrote:

Appendix C. Changes since RFC 2462

Major changes that can affect existing implementations:

- o Avoided the wording of “stateful configuration”, which is known to be quite confusing, and simply used “DHCPv6” wherever appropriate.

In Obsolete RFC 2462:

IPv6 defines both a stateful and stateless address autoconfiguration mechanism.

...

In the stateful autoconfiguration model, hosts obtain interface addresses and/or configuration information and parameters from a server.

QUESTION 173

A security administrator wants to profile endpoints and gain visibility into attempted authentications. Which 802.1x mode allows these actions ?

- A. Monitor mode
- B. High-Security mode
- C. Low-impact mode
- D. Closed mode

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 174

How to verify strong and secured SSH connection ?

- A. `ssh -v 1 -l admin 10.1.1.1`
- B. `ssh -v 2 -l admin 10.1.1.1`
- C. `ssh -l admin 10.1.1.1`
- D. `ssh v 2 admin 10.1.1.1`

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 175

How many usable host are there per subnet if you have the address of 192.168.10.0 with a subnet mask of 255.255.255.240 ?

- A. 4
- B. 8
- C. 16
- D. 14

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 176

What interconnection cable can you use when you use a MDI connection ?

- A. cut-through
- B. straight-through
- C. crossover
- D. rollover

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 177

Which cisco platform can verify ACLs ?

- A. Cisco Prime Infrastructure
- B. Cisco Wireless LAN Controller
- C. Cisco APIC-EM
- D. Cisco IOS-XE

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 178

In order to comply with new auditing standards, a security administrator must be able to correlate system security alert logs directly with the employee who triggers the alert. Which of the following should the security administrator implement in order to meet this requirement?

- A. Access control lists on file servers
- B. Elimination of shared accounts
- C. Group-based privileges for accounts
- D. Periodic user account access reviews

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 179

When you deploy multilink PPP on your network, where must you configure the group IP Address on each device ?

- A. In the global config
- B. Under serial interface
- C. Under the routing protocol
- D. Under the multilink interface

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 180

If you want multiple hosts on a network, where do you configure the setting ?

- A. in the IP protocol
- B. in the multicast interface

- C. in the serial interface
- D. in the global configuration

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 181

Which option is the benefit of implementing an intelligent DNS for a cloud computing solution ?

- A. It reduces the need for a backup data center.
- B. It can redirect user requests to locations that are using fewer network resources.
- C. It enables the ISP to maintain DNS records automatically.
- D. It eliminates the need for a GSS.

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 182

Which statement about the IP SLAs ICMP Echo operation is true?

- A. The frequency of the operation is specified in milliseconds.
- B. It is used to identify the best source interface from which to send traffic.
- C. It is configured in enable mode.
- D. It is used to determine the frequency of ICMP packets.

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 183

Which action can change the order of entries in a named access-list ?

- A. removing an entry
- B. opening the access-list in notepad
- C. adding an entry
- D. resequencing

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 184

How does a router handle an incoming packet whose destination network is missing from the routing table ?

- A. it broadcast the packet to each interface on the router
- B. it discards the packet
- C. it broadcasts the packet to each network on the router
- D. it routes the packet to the default route

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

Change from "it discards the packet" to "it routes the packet to the default route" because there is new question Which definition of default route is true? with answer "A route used when a destination route is missing."

QUESTION 185

Which two components are used to identify a neighbor in a BGP configuration? (Choose two.)

- A. autonomous system number
- B. version number
- C. router ID
- D. subnet mask
- E. IP address

Correct Answer: AE

Section: (none)

Explanation

Explanation/Reference:

QUESTION 186

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.

Correct Answer: ABF

Section: (none)

Explanation

Explanation/Reference:

<http://www.cisco.com/c/en/us/support/docs/ip/hot-standby-router-protocol-hsrp/10583-62.html#topic5>
"The active router sources hello packets from its configured IP address and the HSRP virtual MAC address. The standby router sources hellos from its configured IP address and the burned-in MAC address (BIA)."
<http://www.cisco.com/c/en/us/support/docs/ip/hot-standby-router-protocol-hsrp/10583-62.html#topic14>
"By default, these timers are set to 3 and 10 seconds, respectively..."
<http://www.cisco.com/c/en/us/support/docs/switches/catalyst-6000-series-switches/29545-168.html#q1>
Load Sharing with HSRP
<http://www.cisco.com/c/en/us/support/docs/ip/hot-standby-router-protocol-hsrp/13781-7.html#conf>
"...has a 256 unique HSRP group ID limit."
"...the allowed group ID range (0-255). ... MSFC2A (Supervisor Engine 32) can use any number of group IDs from that range."

QUESTION 187

Which two options describe benefits of aggregated chassis technology (choose 2) ?

- A. it reduces management overhead.
- B. switches can be located anywhere regardless of there physical location.
- C. it requires only 1 IP add per VLAN.
- D. it requires only 3 IP add per VLAN.
- E. it supports HSRP VRRP GLBP.
- F. it support redundant configuration files.

Correct Answer: AC

Section: (none)

Explanation

Explanation/Reference:

QUESTION 188

How to trouble DNS issue (choose two) ?

- A. Ping a public website IP address.
- B. Ping the DNS Server.
- C. Determine whether a DHCP address has been assigned.
- D. Determine whether the hardware address is correct.
- E. Determine whether the name servers have been configured.

Correct Answer: BE

Section: (none)

Explanation

Explanation/Reference:

<http://www.cisco.com/en/US/docs/internetnetworking/troubleshooting/guide/tr1907.html#wp1021264>

Ping the destination by name

perform a DNS lookup on the destination

QUESTION 189

Which utility can you use to identify redundant or shadow rules ?

- A. The ACL trace tool in Cisco APIC-EM.
- B. The ACL analysis tool in Cisco APIC-EM.
- C. The Cisco APIC-EM automation scheduler.
- D. The Cisco IWAN application.

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 190

What does traffic shaping do to reduce congestion in a network?

- A. buffers and queues packets.
- B. buffers without queuing packets.
- C. queues without buffering packets.
- D. drops packets.

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 191

Which 2 statements about extended traceroute command is true?

- A. it can send packets from specified interface or ip add.
- B. it can use a specified TTL value.
- C. it can validate the reply data.
- D. it can use a specified TOS.
- E. it can repeated automatically to a specified interval.

Correct Answer: AB

Section: (none)

Explanation

Explanation/Reference:

http://www.cisco.com/c/en/us/support/docs/ip/routing-information-protocol-rip/13730-ext-pingtrace.html#ext_troute

“This table lists the traceroute command field descriptions:

Source address: The interface or IP address of the router to use as a source address for the probes. The router normally picks the IP address of the outbound interface to use.

Minimum Time to Live [1]: The TTL value for the first probes. The default is 1, but it can be set to a higher value to suppress the display of known hops.

Maximum Time to Live [30]: The largest TTL value that can be used. The default is 30. The traceroute command terminates when the destination is reached or when this value is reached.

QUESTION 192

Which command can you enter to determine the addresses that have been assigned on a DHCP Server?

- A. Show ip DHCP database.
- B. Show ip DHCP pool.
- C. Show ip DHCP binding.
- D. Show ip DHCP server statistic.

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

<http://www.aubrett.com/InformationTechnology/RoutingandSwitching/Cisco/CiscoRouters/DHCPBindings.aspx>

“Router#show ip dhcp binding

Bindings from all pools not associated with VRF:

IP address Client-ID/ Lease expiration Type

10.16.173.0 24d9.2141.0ddd Jan 12 2013 03:42 AM Automatic”

QUESTION 193

Which statement about SNMPv2 is true ?

- A. Its privacy algorithms use MD5 encryption by default.
- B. it requires passwords to be encrypted.
- C. Its authentication and privacy algorithms are enable without default values.
- D. It requires passwords at least eight characters en length.

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

http://www.cisco.com/c/en/us/td/docs/ios/12_2/configfun/configuration/guide/ffun_c/fcf014.html#wp1010901

“Model___Level___Authentication___Encryption___What Happens

v2c___noAuthNoPriv___Community String___No___Uses a community string match for authentication.”

So B & D must be wrong, because there is no “password” in SNMPv2. A is wrong because there is no encryption in SNMPv2.

QUESTION 194

Which symptom most commonly indicates that 2 connecting interface are configured with a duplex mismatch?

- A. an int with up/down state.
- B. an int with down/down state.
- C. late collisions on the interface.
- D. the spanning tree process shutting down.

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 195**Which VTP mode can not make a change to vlan?**

- A. Server.
- B. Client.
- C. Transparent.
- D. Off

Correct Answer: B**Section: (none)****Explanation****Explanation/Reference:**

VTP Client

- VTP clients function the same way as VTP servers, but you cannot create, change, or delete VLANs on a VTP client.
- A VTP client only stores the VLAN information for the entire domain while the switch is on.
- A switch reset deletes the VLAN information.
- You must configure VTP client mode on a switch.

QUESTION 196**Which function does IP SLA ICMP ECHO operation perform to assist with troubleshooting?**

- A. one way jitter measurement.
- B. congestion detection.
- C. hop-by-hop response time.
- D. packet-loss detection.

Correct Answer: D**Section: (none)****Explanation****Explanation/Reference:**

http://www.cisco.com/c/en/us/td/docs/ios-xml/ios/ipsla/configuration/15-mt/sla-15-mt-book/sla_icmp_pathjitter.html

QUESTION 197**Which mode are in PAgP? (choose two)**

- A. Auto.
- B. Desirable.
- C. Active.
- D. Passive.
- E. On.

Correct Answer: AB**Section: (none)****Explanation****Explanation/Reference:**

<http://www.omniseu.com/cisco-certified-network-associate-ccna/etherchannel-pagp-and-lacp-modes.php>

QUESTION 198**In an Ethernet network, under what two scenarios can devices transmit? (Choose two.)**

- A. when they receive a special token.
- B. when there is a carrier.
- C. when they detect no other devices are sending.
- D. when the server grants access.
- E. when the medium is idle.

Correct Answer: CE**Section: (none)****Explanation**

Explanation/Reference:

QUESTION 199

Which two protocols are used by bridges and/or switches to prevent loops in a layer 2 network? (Choose two.)

- A. 802.1d
- B. VTP
- C. 802.1q
- D. SAP
- E. STP

Correct Answer: AE

Section: (none)

Explanation

Explanation/Reference:

QUESTION 200

At which layer of the OSI model does PPP perform?

- A. Layer 2
- B. Layer 3
- C. Layer 4
- D. Layer 5
- E. Layer 1

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 201

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 202

Which IPv6 header field is equivalent to the TTL?

- A. Scan Timer.
- B. TTD.
- C. Flow Label.
- D. Hop Limit.
- E. Hop Count.

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

Time To Live (TTL)/Hop Limit (8 bits)

<http://ipv6.com/articles/general/IPv6-Header.htm>

QUESTION 203

which port security mode can assist with troubleshooting by keeping count of violations?

- A. access.
- B. protect.
- C. restrict.
- D. shutdown.

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 204

which 2 optns are requirements for configuring ripv2 for ipv4 (choose 2) ?

- A. enabling RIP authentication.
- B. connecting RIP to a WAN Interface.
- C. enabling auto route sumamrization.
- D. allowing unicast updates for RIP.
- E. enabling RIP on the router.

Correct Answer: DE

Section: (none)

Explanation

Explanation/Reference:

http://www.cisco.com/c/en/us/td/docs/ios/12_2/ip/configuration/guide/fipr_c/1cfrip.html#wp1000889

“Enabling RIP (Required)

Allowing Unicast Updates for RIP (Required)”

RIP Version 1 and Version 2 have the same basic requirements!

QUESTION 205

which configuration command can u apply to a hsrp router so that its local interface becomes active if all other routers in the group fail?

- A. standby 1 preempt
- B. no additional config is required
- C. standby 1 priority 250
- D. standby 1 track ethernet

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 206

which 2 statement about EIGRP on IPv6 device is true ?

- A. It is configured on the interface .
- B. It is globally configured .
- C. If is configured using a network statement .
- D. It is vendor agnostic.

E. It supports a shutdown feature.

Correct Answer: AE

Section: (none)

Explanation

Explanation/Reference:

<http://www.cisco.com/c/en/us/support/docs/ip/enhanced-interior-gateway-routing-protocol-eigrp/113267-eigrp-ipv6-00.html>

QUESTION 207

which command can you enter to troubleshoot the failure of address assignment ?

- A. sh ip dhcp database
- B. sh ip dhcp pool
- C. sh ip dhcp import
- D. sh ip dhcp server statistics

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 208

which three technical services support cloud computing ?

- A. network-monitored power sources
- B. layer 3 network routing
- C. ip localization
- D. redundant connections
- E. VPN connectivity
- F. extended SAN services

Correct Answer: DEF

Section: (none)

Explanation

Explanation/Reference:

QUESTION 209

which two steps must you perform to enable router- on- stick on a switch ?

- A. connect the router to a trunk port
- B. config the subint number exactly the same as the matching VLAN
- C. config full duplex
- D. configure an ip route to the vlan destn net
- E. assign the access port to the vlan

Correct Answer: AE

Section: (none)

Explanation

Explanation/Reference:

QUESTION 210

which add prefix does OSPFv3 use when multiple IPv6 address are configured on a single interface ?

- A. all prefix on the interface
- B. the prefix that the administrator configure for OSPFv3 use

- C. the lowest prefix on the interface
- D. the highest prefix on the interface

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

http://www.cisco.com/c/en/us/td/docs/ios-xml/ios/iproute_ospf/configuration/15-sy/iro-15-sy-book/ip6-routeospfv3.html#GUID-05F3F09C-FE3E-41D6-9845-111FB17AD030

"In IPv6, you can configure many address prefixes on an interface. In OSPFv3, all address prefixes on an interface are included by default. You cannot select some address prefixes to be imported into OSPFv3; either all address prefixes on an interface are imported, or no address prefixes on an interface are imported."

QUESTION 211

which IP configuration does the CIDR notation 192.168.1.1/25 refer ?

- A. 192.168.1.1 255.255.255.64
- B. 192.168.1.1 255.255.255.1
- C. 192.168.1.1 255.255.255.32
- D. 192.168.1.1 255.255.255.256
- E. 192.168.1.1 255.255.255.128

Correct Answer: E

Section: (none)

Explanation

Explanation/Reference:

QUESTION 212

CIDR notation (255.255.255.252) / notation ?

- A. 30
- B. 31
- C. 32
- D. 33

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 213

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.

Correct Answer: BE

Section: (none)

Explanation

Explanation/Reference:

QUESTION 214

What is known as —one-to-nearest addressing in IPv6 ?

- A. global unicast
- B. anycast
- C. multicast
- D. unspecified address

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 215

When a device learns multiple routes to a specific network, it installs the route with :

- A. Longest bit Match (highest subnet Mask)
- B. lowest AD
- C. lowest metric
- D. equal load balancing

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

<http://www.ciscopress.com/articles/article.asp?p=2180208&seqNum=9>

QUESTION 216

Requirement to configure DHCP binding (2 options)

- A. DHCP pool
- B. ip address
- C. Hardware address
- D. other option

Correct Answer: BC

Section: (none)

Explanation

Explanation/Reference:

QUESTION 217

how to see dhcp conflict ?

- A. show ip dhcp pool
- B. show dhcp database
- C. show ip dhcp conflict
- D. Other Option.

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

Router# show ip dhcp conflict

IP address	Detection method	Detection time
172.16.1.32	Ping	Feb 16 1998 12:28 PM
172.16.1.64	Gratuitous ARP	Feb 23 1998 08:12 AM

QUESTION 218

What type of MAC address is aged automatically by the switch?

- A. Dynamic
- B. Static
- C. Auto
- D. one more option

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 219

Which major component of the network virtualization architecture isolate users according to policy?

- A. policy enforcement
- B. network access control
- C. network services virtualization
- D. path isolation

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

Network access control and segmentation of classes of users:

Users are authenticated and either allowed or denied into a logical partition. Users are segmented into employees, contractors and consultants, and guests, with respective access to IT assets. This component identifies users who are authorized to access the network and then places them into the appropriate logical partition.

QUESTION 220

Which two statements about firewalls are true ?

- A. They can be used with an intrusion prevention system.
- B. They can limit unauthorized user access to protect data.
- C. Each wireless access point requires its own firewall.
- D. They must be placed only at locations where the private network connects to the internet.
- E. They can prevent attacks from the internet only.

Correct Answer: AB

Section: (none)

Explanation

Explanation/Reference:

QUESTION 221

Which two statements about data VLANs on access ports are true ? (Choose two)

- A. They can be configured as trunk ports.
- B. Two or more VLANs can be configured on the interface.
- C. 802.1Q encapsulation must be configured on the interface.
- D. Exactly one VLAN can be configured on the interface.
- E. They can be configured as host ports.

Correct Answer: DE

Section: (none)

Explanation

Explanation/Reference:

QUESTION 222

Where does the configuration reside when a helper address is configured to support DHCP ?

- A. on the switch trunk interface.
- B. on the router closest to the client.
- C. on the router closest to the server.
- D. on every router along the path.

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 223

Which command can you enter to configure an IPV6 floating static route?

- A. Router(config)# ipv6 route static resolve default
- B. Router(config)# ipv6 route::/0 serial0/1
- C. Router(config)# ipv6 route FE80:0202::/32 serial 0/1 201
- D. Router(config)# ipv6 route FE80:0202::/32 serial 0/1 1

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 224

How does NAT overloading provide one-to-many address translation?

- A. It uses a pool of addresses
- B. It converts IPV4 addresses to unused IPv6 Addresses
- C. assigns a unique TCP/UDP port to each session
- D. It uses virtual MAC Address and Virtual IP Addresses

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 225

Which three options are types of Layer 2 network attack ? (Choose three)

- A. Spoofing attacks
- B. Vlan Hopping
- C. botnet attacks
- D. DDOS attacks
- E. ARP Attacks
- F. Brute force attacks

Correct Answer: ABE

Section: (none)

Explanation

Explanation/Reference:

QUESTION 226

What does split-horizon do?

- A. Prevent routing loop in distance vector protocol
- B. Prevent switching loop in distance vector protocol

- C. Prevent switching loop in link-state protocol
- D. Prevent routing loop in link-state protocol

Correct Answer: A

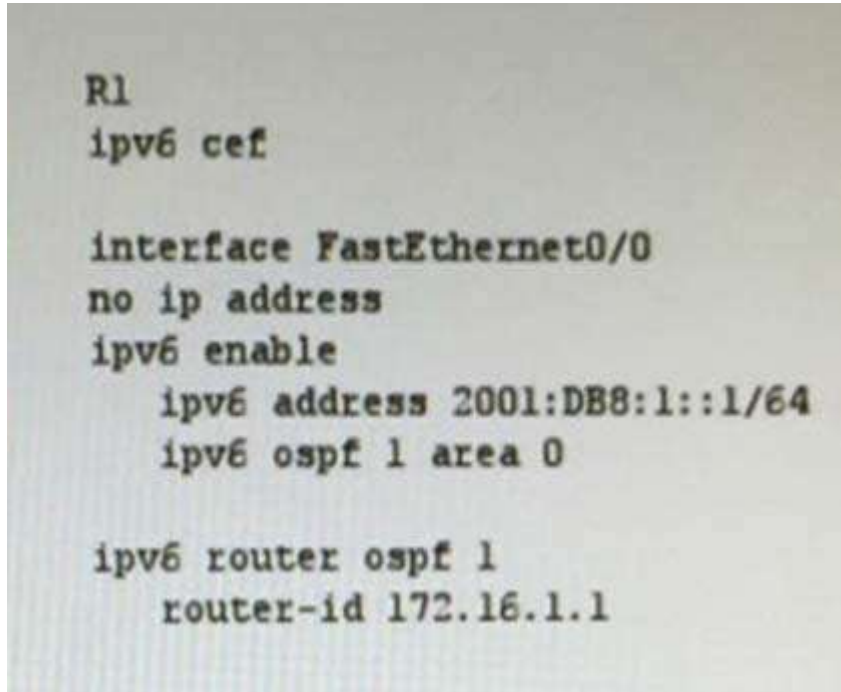
Section: (none)

Explanation

Explanation/Reference:

QUESTION 227

Refer to the exhibit.



```
R1
ipv6 cef

interface FastEthernet0/0
no ip address
ipv6 enable
    ipv6 address 2001:DB8:1::1/64
    ipv6 ospf 1 area 0

ipv6 router ospf 1
    router-id 172.16.1.1
```

After you apply the given configuration to R1, you notice that it failed to enable OSPF Which action can you take to correct the problem?

- A. Configure a loopback interface on R1
- B. Enable IPv6 unicast routing on R1.
- C. Configure an IPv4 address on interface FO/0.
- D. Configure an autonomous system number on OSPF.

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

http://www.cisco.com/c/en/us/td/docs/ios-xml/ios/iproute_ospf/configuration/15-sy/iro-15-sy-book/ip6-route-ospfv3.html

Prerequisites for IPv6 Routing: OSPFv3

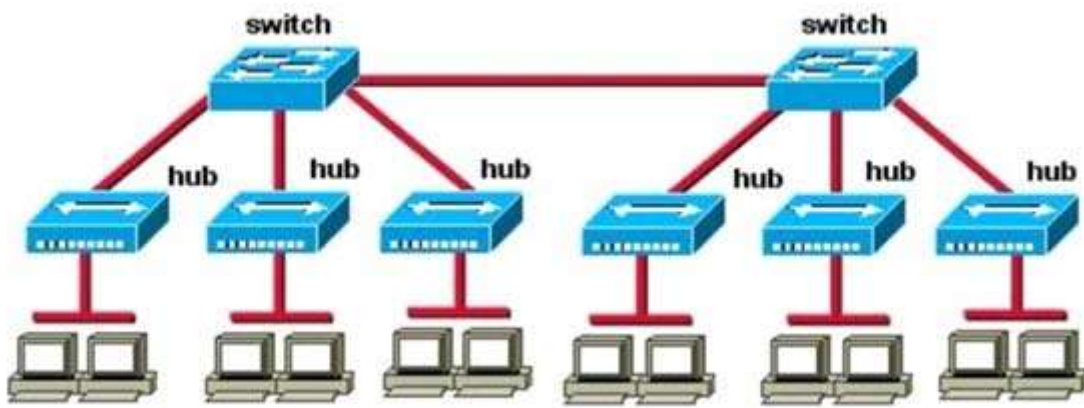
Complete the OSPFv3 network strategy and planning for your IPv6 network. For example, you must decide whether multiple areas are required.

Enable IPv6 unicast routing.

Enable IPv6 on the interface.

QUESTION 228

How many broadcast domains are shown in the graphic assuming only the default VLAN is configured on the switches?



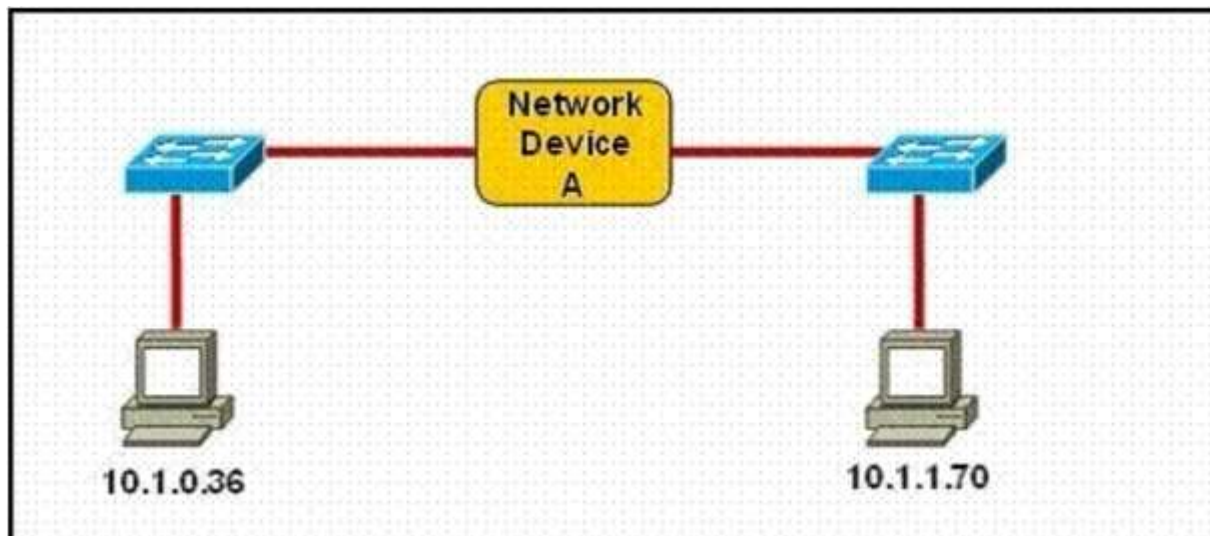
- A. one
- B. two
- C. six
- D. twelve

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 229

Which three statements correctly describe Network Device A? (Choose three.)



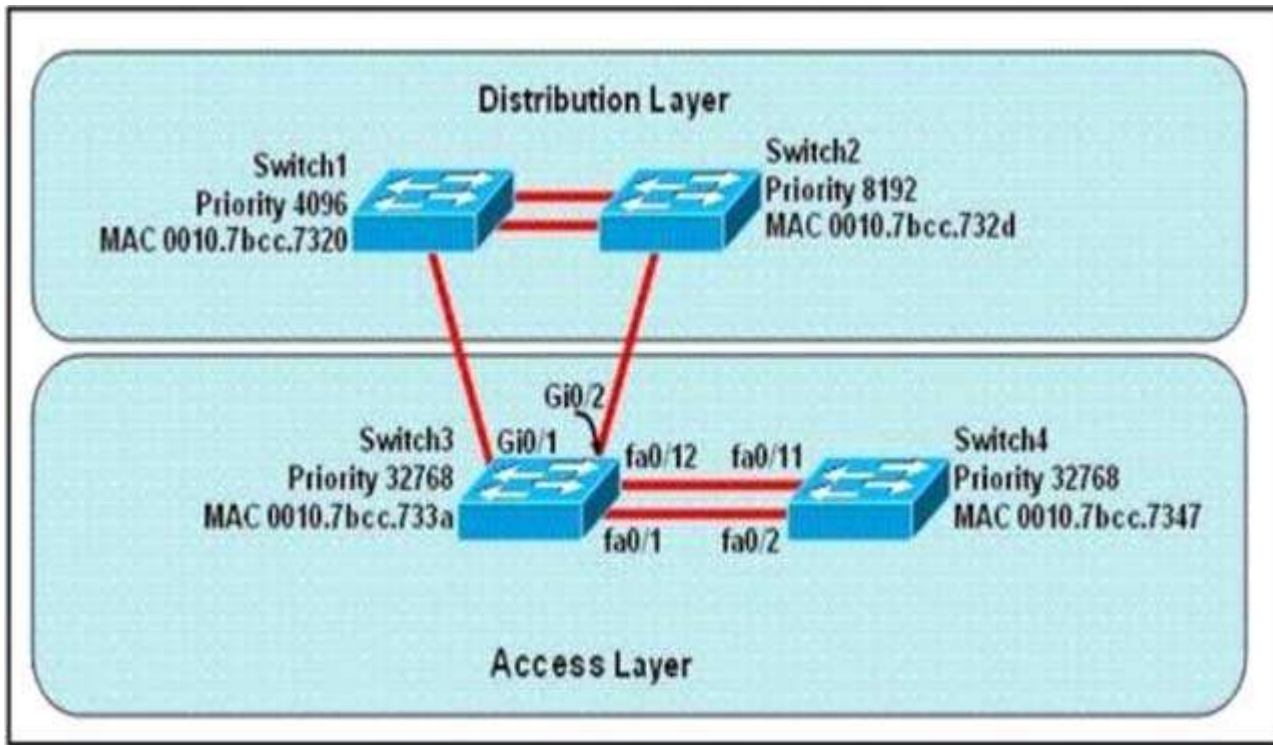
- A. With a network wide mask of 255.255.255.128, each interface does not require an IP address.
- B. With a network wide mask of 255.255.255.128, each interface does require an IP address on a unique IP subnet.
- C. With a network wide mask of 255.255.255.0, must be a Layer 2 device for the PCs to communicate with each other.
- D. With a network wide mask of 255.255.255.0, must be a Layer 3 device for the PCs to communicate with each other.
- E. With a network wide mask of 255.255.254.0, each interface does not require an IP address.

Correct Answer: BDE
Section: (none)
Explanation

Explanation/Reference:

QUESTION 230

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:

In this question, we only care about the Access Layer switches (Switch3 & 4). Switch 3 has a lower bridge ID than Switch 4 (because the MAC of Switch3 is smaller than that of Switch4) so both ports of Switch3 will be in forwarding state. The alternative port will surely belong to Switch4.

Switch4 will need to block one of its ports to avoid a bridging loop between the two switches. But how does Switch4 select its blocked port? Well, the answer is based on the BPDUs it receives from Switch3. A BPDU is superior to another if it has:

1. A lower Root Bridge ID
2. A lower path cost to the Root
3. A lower Sending Bridge ID
4. A lower Sending Port ID

These four parameters are examined in order. In this specific case, all the BPDUs sent by Switch3 have the same Root Bridge ID, the same path cost to the Root and the same Sending Bridge ID. The only parameter left to select the best one is the Sending Port ID (Port ID = port priority + port index). In this case the port priorities are equal because they use the default value, so Switch4 will compare port index values, which are unique to each port on the switch, and because Fa0/12 is inferior to Fa0/1, Switch4 will select the port connected with Fa0/1 (of Switch3) as its root port and block the other port -> Port fa0/11 of Switch4 will be blocked (discarding role).

QUESTION 231

Why is flash memory erased prior to upgrading the IOS image from the TFTP server?


```

Router# copy ftp flash
Address or name of remote host []? 192.168.2.167
Source filename []? cl600-k8osy-mz.123-16a.bin
Destination filename [cl600-k8osy-mz.123-16a.bin]?
Accessing tftp://192.168.2.167/cl600-k8osy-mz.123-16a.bin...
Erase flash: before copying? [confirm]
Erasing the flash filesystem will remove all files! Continue? [confirm]
Erasing device...
.....
..... ..erased
Erase of flash: complete
Loading cl600-k8osy-mz.123-16a.bin from 192.168.2.167 (via Ethernet0):
!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!
!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!
!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!
!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!
[OK - 6888962/13777920 bytes]

Verifying checksum... OK (0x7BF3)
6888962 bytes copied in 209.920 secs (32961 bytes/sec)
Router#

```

- A. The router cannot verify that the Cisco IOS image currently in flash is valid.
- B. Flash memory on Cisco routers can contain only a single IOS image.
- C. Erasing current flash content is requested during the copy dialog.
- D. In order for the router to use the new image as the default, it must be the only IOS image in flash.

Correct Answer: C

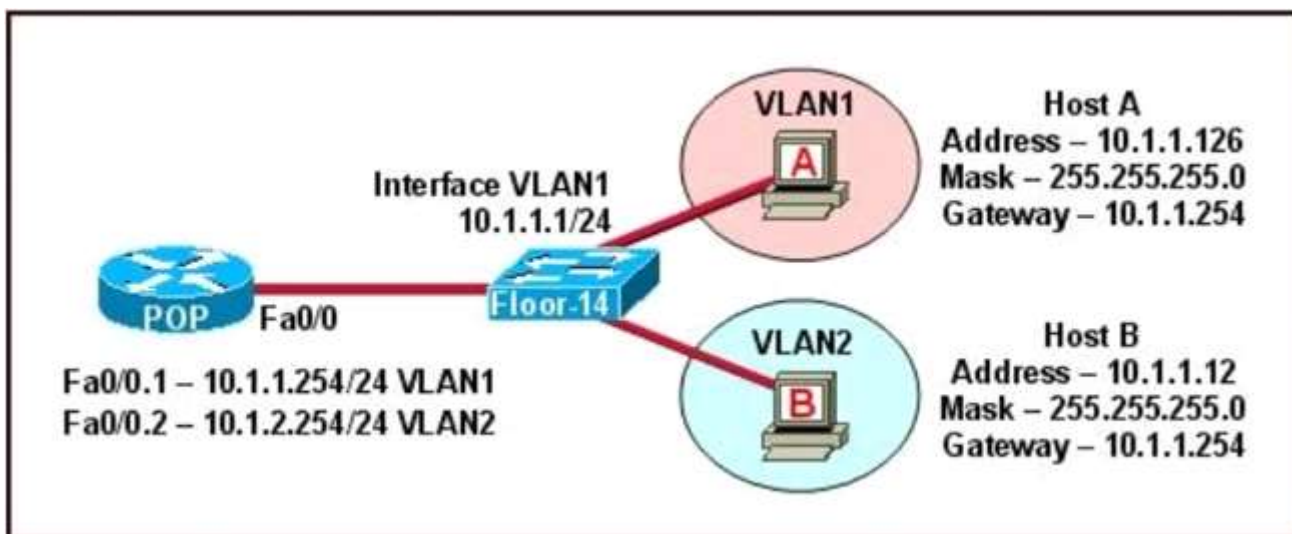
Section: (none)

Explanation

Explanation/Reference:

QUESTION 232

The network shown in the diagram is experiencing connectivity problems. Which of the following will correct the problems? (Choose two.)



- A. Configure the gateway on Host A as 10.1.1.1
- B. Configure the gateway on Host B as 10.1.2.254
- C. Configure the IP address of Host A as 10.1.2.2
- D. Configure the IP address of Host B as 10.1.2.2

- E. Configure the masks on both hosts to be 255.255.255.224
- F. Configure the masks on both hosts to be 255.255.255.240

Correct Answer: BD

Section: (none)

Explanation

Explanation/Reference:

QUESTION 233

Which utility can you use to identify the cause of a traffic-flow blockage between the two devices in a network?

- A. ACL path analysis tool in APIC-EM
- B. I WAN application
- C. ACL analysis tool in APIC-EM
- D. APIC-EM automation scheduler

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

Previously was path analysis, but I think its ACL analysis

QUESTION 234

Which IEEE mechanism is responsible for the authentication of devices when they attempt to connect to a local network?

- A. 802.1x
- B. 802.11
- C. 802.2x
- D. 802.3x

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

IEEE 802.1X is an IEEE Standard for port-based Network Access Control (PNAC). It is part of the IEEE 802.1 group of networking protocols. It provides an authentication mechanism to devices wishing to attach to a LAN or WLAN

QUESTION 235

When a router is unable to find a known route in the routing table, how does it handle the packet?

- A. It discards the packet
- B. It sends the packet over the route with the best metric
- C. It sends the packet to the next hop address
- D. It sends the packet to the gateway of last resort

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 236

If router R1 knows a static route to a destination network and then learns about the same destination network through a dynamic routing protocol, how does R1 respond?

- A. It refuses to advertise the dynamic route to other neighbors
- B. It sends a withdrawal signal to the neighboring router
- C. It disables the routing protocol
- D. It prefers the static route

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

By default the administrative distance of a static route is 1, meaning it will be preferred over all dynamic routing protocols. If you want to have the dynamic routing protocol used and have the static route be used only as a backup, you need to increase the AD of the static route so that it is higher than the dynamic routing protocol.

QUESTION 237

Which two statements about floating static routes are true? (Choose two)

- A. They are routes to the exact /32 destination address
- B. They are used when a route to the destination network is missing
- C. They have a higher administrative distance than the default static route administrative distance
- D. They are used as back-up routes when the primary route goes down
- E. They are dynamic routes that are learned from a server

Correct Answer: CD

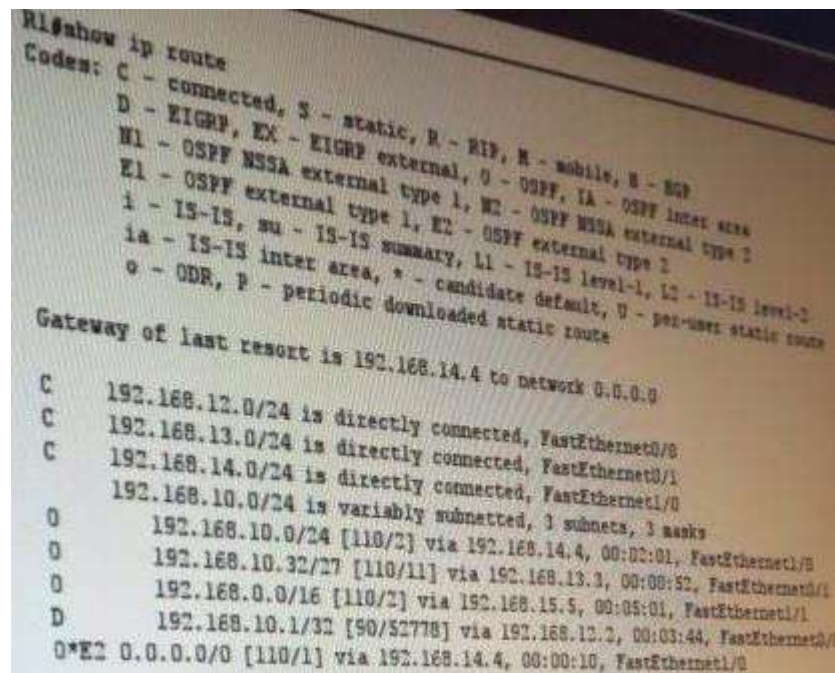
Section: (none)

Explanation

Explanation/Reference:

QUESTION 238

Refer to the exhibit. If R1 receives a packet destined to 172.16.1.1, to which IP address does it send the packet ?



- A. 192.168.14.4
- B. 192.168.12.2
- C. 192.168.13.3
- D. 192.168.15.5

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

It can't find the address 172.16.1.1 so it will be directed to the Gate of last resort 192.168.14.4

QUESTION 239

What is the danger of the permit any entry in a NAT access list?

- A. It can lead to overloaded resources on the router.
- B. It can cause too many addresses to be assigned to the same interface.
- C. It can disable the overload command.
- D. It prevents the correct translation of IP addresses on the inside network.

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 240

How does a DHCP server dynamically assign IP addresses to hosts ?

- A. Addresses are permanently assigned so that the host uses the same address at all times.
- B. Addresses are assigned for a fixed period of time.
- C. Addresses are leased to hosts. A host will usually keep the same address by periodically contacting the DHCP server to renew the lease.
- D. Addresses are allocated after a negotiation between the server and the host to determine the length of the agreement.

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

The DHCP lifecycle consists of the following:

Release: The client may decide at any time that it no longer wishes to use the IP address it was assigned, and may terminate the lease, releasing the IP address.

QUESTION 241

Refer to the exhibit. What two results would occur if the hub were to be replaced with a switch that is configured with one Ethernet VLAN? (Choose two.)



- A. The number of collision domains would remain the same.
- B. The number of collision domains would decrease.
- C. The number of collision domains would increase.
- D. The number of broadcast domains would remain the same.
- E. The number of broadcast domains would decrease.
- F. The number of broadcast domains would increase.

Correct Answer: CD

Section: (none)

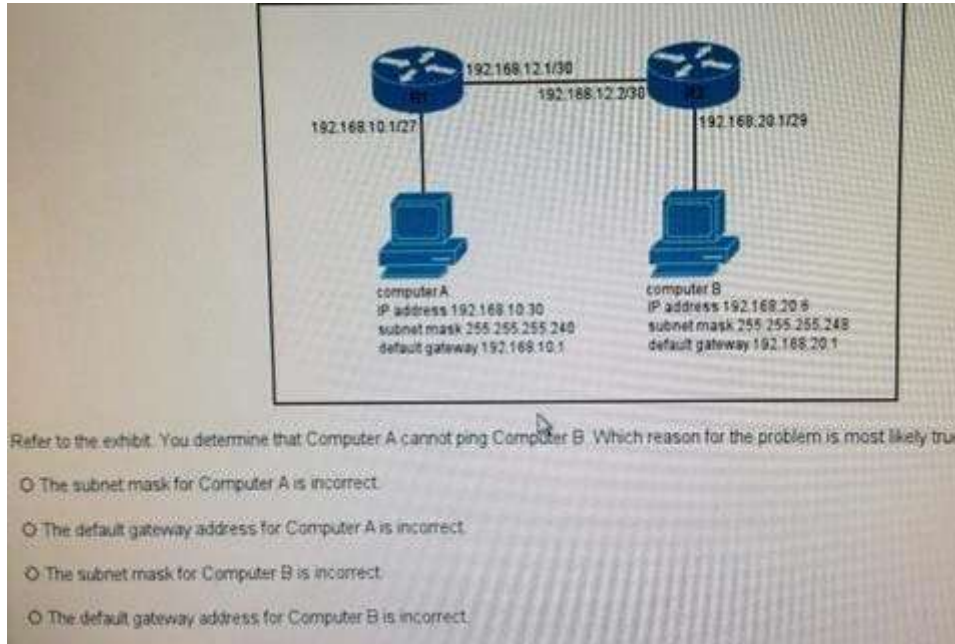
Explanation

Explanation/Reference:

QUESTION 242

Refer to the exhibit, you determine that Computer A cannot ping Computer

Which reason for the problem is most likely true?



- A. The Subnet mask for Computer A is incorrect.
- B. The default gateway address for Computer A is incorrect.
- C. The subnet mask for computer B is incorrect.
- D. The default gateway address for computer B is incorrect.

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

255.255.255.224 = /27

QUESTION 243

Which effect of the passive-interface command on R1 is true?

Which effect of the **passive-interface** command on R1 is true?

R1

```
interface FastEthernet0/0
  description site id:14254489
  ip address 172.16.0.1 255.255.0.0
```

```
interface FastEthernet0/1
  description site id:14254489
  ip address 172.17.0.1 255.255.0.0
```

```
router rip
  passive-interface FastEthernet0/0
  network 172.16.0.0
  network 172.17.0.0
  version 2
```

- ☒ It prevents interface Fa0/0 from sending updates.
- ☐ Interface Fa0/0 operates in RIPv1 mode.
- ☐ It removes the 172.16.0.0 network from all updates on all interfaces on R1.
- ☐ It removes the 172.17.0.0 network from all updates on all interfaces on R1.

- A. It prevents interface Fa0/0 from sending updates.
- B. Interface Fa 0/0 operates in RIPv1 mode.
- C. It removes the 172.16.0.0 network from all updates on all interfaces on R1.
- D. It removes the 172.17.0.0 network from all updates on all interfaces on R1.

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

With most routing protocols, the passive-interface command restricts outgoing advertisements only. But, when used with Enhanced Interior Gateway Routing Protocol (EIGRP), the effect is slightly different.

QUESTION 244

Which three encapsulation layers in the OSI model are combined into the TCP/IP application layer? (Choose three)

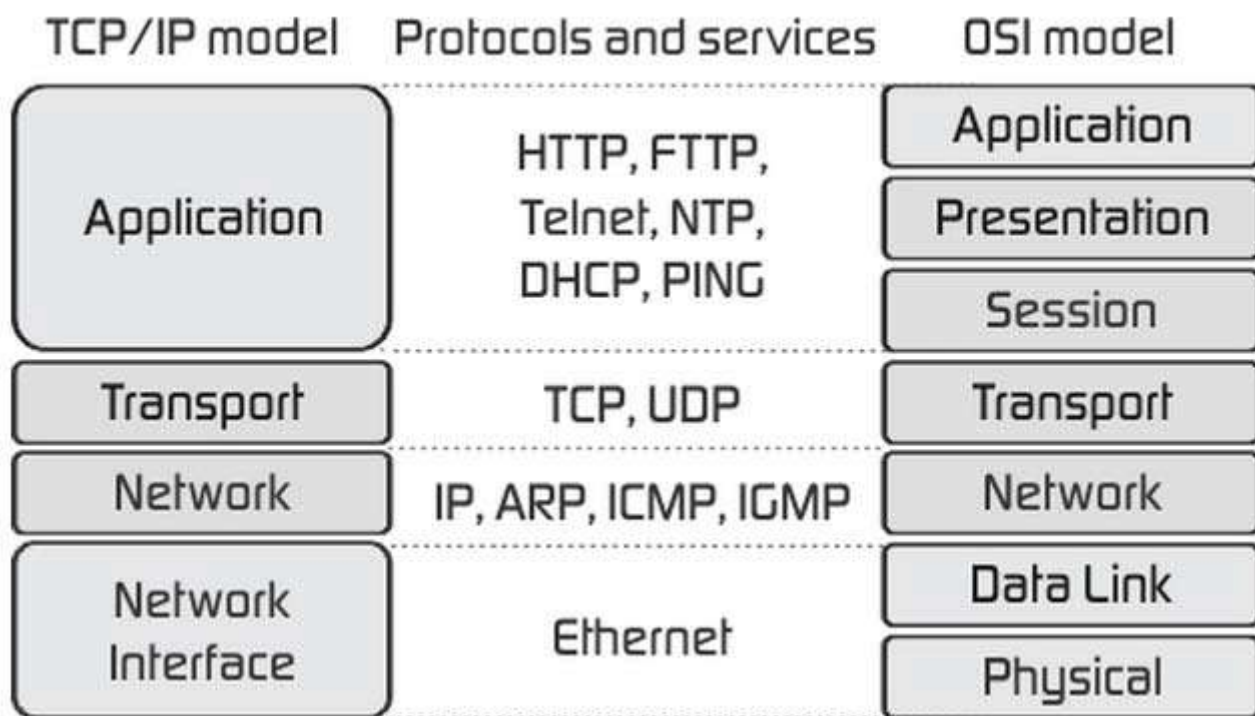
- A. Session
- B. transport
- C. presentation
- D. application
- E. data-link
- F. network

Correct Answer: ACD

Section: (none)

Explanation

Explanation/Reference:



QUESTION 245

When is the most appropriate time to escalate an issue that you troubleshooting?

- A. When you lack the proper to resolve the issue.
- B. When a more urgent issue that requires your intervention is detected.
- C. When you have gathered all information about an issue.
- D. When you have been unable to resolve the issue after 30 min.

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 246

Which two command can you enter to display the current time sources statistics on devices ? (Choose TWO)

- A. Show ntp associations.
- B. Show clock details.
- C. Show clock.
- D. Show time.
- E. Show ntp status.

Correct Answer: AE

Section: (none)

Explanation

Explanation/Reference:

```

VPN-ASA# show ntp associations
      address      ref clock      st  when  poll reach  delay  offset  disp
*-10.0.0.3        127.127.7.1      8   23    64    7    45.1  -87.11  3948.2
 * master (syncd), # master (unsyncd), + selected, - candidate, ~ configured
VPN-ASA#
VPN-ASA# show ntp status
Clock is synchronized stratum 9, reference is 10.0.0.3
nominal freq is 99.9984 Hz, actual freq is 99.9984 Hz, precision is 2**6
reference time is d683a633.7dcebed8 (12:53:07.491 UTC Fri Jan 17 2014)
clock offset is -87.1116 msec, root delay is 45.06 msec
root dispersion is 4038.29 msec, peer dispersion is 3948.15 msec
VPN-ASA#

```

QUESTION 247

When you enable PortFast on a switch port, the port immediately transitions to which state?

- A. Blocking
- B. Forwarding
- C. Learning
- D. Listening

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

PortFast causes a switch or trunk port to enter the spanning tree forwarding state immediately, bypassing the listening and learning states. You can use PortFast on switch or trunk ports that are connected to a single workstation, switch, or server to allow those devices to connect to the network immediately, instead of waiting for the port to transition from the listening and learning states to the forwarding state.

QUESTION 248

Which path does a router choose when it receives a packet with multiple possible paths to the destination over different routing protocols?

- A. the path with both the lowest administrative distance and the highest metric
- B. the path with the lowest administrative distance
- C. the path with the lowest metric
- D. the path with both the lowest administrative distance and lowest metric

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 249

Which command is used to know the duplex speed of serial link?

- A. show line
- B. show interface
- C. show protocol
- D. show run

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 250

What command is used to configure a switch as authoritative NTP server ?

- A. switch(config)#ntp master 3

- B. switch(config)#ntp peer 193.168.2.2
- C. switch(config)#ntp server 193.168.2.2
- D. switch(config)#ntp source 193.168.2.2

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 251

Which address class includes network 191.168.0.1/27?

- A. Class C
- B. Class B
- C. Class D
- D. Class A

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 252

On which type of port can switches interconnect for multi-VLAN communication?

- A. interface port
- B. access port
- C. switch port
- D. trunk port

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 253

Refer to the exhibit. If R1 sends traffic to 192.168.101.45 the traffic is sent through which interface?

```

R1#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 192.168.14.4 to network 0.0.0.0

C    192.168.12.0/24 is directly connected, FastEthernet0/0
C    192.168.13.0/24 is directly connected, FastEthernet0/1
C    192.168.14.0/24 is directly connected, FastEthernet1/0
     192.168.10.0/24 is variably subnetted, 3 subnets, 3 masks
O     192.168.10.0/24 [110/2] via 192.168.14.4, 00:02:01, FastEthernet1/0
O     192.168.10.32/27 [110/1] via 192.168.13.3, 00:00:52, FastEthernet0/1
O     192.168.0.0/16 [110/2] via 192.168.15.5, 00:05:01, FastEthernet1/1
D     192.168.10.1/32 [90/52778] via 192.168.12.2, 00:03:44, FastEthernet0/0
O*E2 0.0.0.0/0 [110/1] via 192.168.14.4, 00:00:10, FastEthernet1/0

```

- A. FastEthernet0/1
- B. FastEthernet0/0
- C. FastEthernet1/0
- D. FastEthernet1/1

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 254

Which IPV6 function serves the same purpose as ARP entry verification on an IPv4 network?

- A. interface ip address verification
- B. MAC address table verification
- C. neighbor discovery verification
- D. Routing table entry verification

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 255

Which HSRP feature was new in HSRPv2?

- A. VLAN group numbers that are greater than 255
- B. Virtual MAC addresses
- C. tracking
- D. preemption

Correct Answer: A

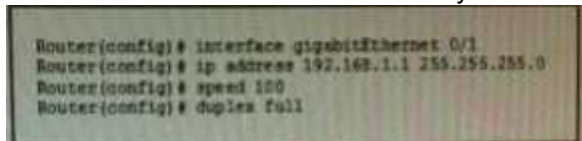
Section: (none)

Explanation

Explanation/Reference:

QUESTION 256

Refer to exhibit. Which command can you enter to verify link speed and duplex setting on the interface?



```
Router(config)# interface gigabitEthernet 0/1
Router(config)# ip address 192.168.1.1 255.255.255.0
Router(config)# speed 100
Router(config)# duplex full
```

- A. router#show ip protocols
- B. router#show startup-config
- C. router#show line
- D. router#show interface gig 0/1

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 257

Which two statements about unique local IPv6 addresses are true?

- A. They are identical to IPv4 private addresses.
- B. They are defined by RFC 1884
- C. They use the prefix FEC0::/10
- D. They use the prefix FC00::/7
- E. They can be routed on the IPv6 global internet.

Correct Answer: AD

Section: (none)

Explanation

Explanation/Reference:**QUESTION 258**

Which DTP switch port mode allows the port to create a trunk link if the neighboring port is in trunk mode, dynamic desirable mode, or desirable auto mode?

- A. trunk
- B. access
- C. dynamic desirable
- D. dynamic auto

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

<http://bradhedlund.com/2007/11/27/switchport-configurations-explained/>

QUESTION 259

When you troubleshoot an IPv4 connectivity issue on a router, which three router configuration checks you must perform?

- A. Verify that the router interface IP address is correct.
- B. Verify that the DNS is configured correctly.
- C. Verify that the router and the host use the same subnet mask.
- D. Verify that the router firmware is up-to-date.
- E. Verify that a default route is configured.
- F. Verify that the route appears in the Routing table

Correct Answer: ACF

Section: (none)

Explanation

Explanation/Reference:**QUESTION 260**

Configuration of which option is required on a Cisco switch for the Cisco IP phone to work?

- A. PortFast on the interface
- B. the interface as an access port to allow the voice VLAN ID
- C. a voice VLAN ID in interface and global configuration mode
- D. Cisco Discovery Protocol in global configuration mode

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

Configure the Switch Port to Carry Both Voice and Data Traffic When you connect an IP phone to a switch using a trunk link, it can cause high CPU utilization in the switches. As all the VLANs for a particular interface are trunked to the phone, it increases the number of STP instances the switch has to manage. This increases the CPU utilization. Trunking also causes unnecessary broadcast / multicast / unknown unicast traffic to hit the phone link. In order to avoid this, remove the trunk configuration and keep the voice and access VLAN configured along with Quality of Service (QoS). Technically, it is still a trunk, but it is called a Multi-VLAN Access Port (MVAP). Because voice and data traffic can travel through the same port, you should specify a different VLAN for each type of traffic. You can configure a switch port to forward voice and data traffic on different VLANs. Configure IP phone ports with a voice VLAN configuration. This configuration creates a pseudo trunk, but does not require you to manually prune the unnecessary VLANs. The voice VLAN feature enables access ports to carry IP voice traffic from an IP phone. The voice VLAN feature is disabled by default. The Port Fast feature is automatically enabled when voice VLAN is configured. When you disable voice VLAN, the Port Fast feature is not automatically disabled

QUESTION 261

Which method does a connected trunk port use to tag VLAN traffic?

- A. IEEE 802 1w
- B. IEEE 802 1D
- C. IEEE 802 1Q
- D. IEEE 802 1p

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 262

Which RFC was created to alleviate the depletion of IPv4 public addresses?

- A. RFC 4193
- B. RFC 1519
- C. RFC 1518
- D. RFC 1918

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 263

What is the default lease time for a DHCP binding?

- A. 24 hours
- B. 12 hours
- C. 48 hours
- D. 36 hours

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

By default, each IP address assigned by a DHCP Server comes with a one- day lease, which is the amount of time that the address is valid. To change the lease value for an IP address, use the following command in DHCP pool configuration mode:

QUESTION 264

Which NAT type is used to translate a single inside address to a single outside address?

- A. dynamic NAT
- B. NAT overload
- C. PAT
- D. static NAT

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

Network address translation (NAT) is the process of modifying IP address information in IP packet headers while in transit across a traffic routing device. There are two different types of NAT: NAT PAT

QUESTION 265

Which network topology allows all traffic to flow through a central hub?

- A. bus
- B. star
- C. mesh

D. ring

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 266

Which statement about a router on a stick is true?

- A. Its data plane router traffic for a single VLAN over two or more switches.
- B. It uses multiple subinterfaces of a single interface to encapsulate traffic for different VLANs on the same subnet
- C. It requires the native VLAN to be disabled.
- D. It uses multiple subinterfaces of a single interface to encapsulate traffic for different VLANs.

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

<https://www.freeccnaworkbook.com/workbooks/ccna/configuring-inter-vlan-routing-router-on-a-stick>

QUESTION 267

By default, how many MAC addresses are permitted to be learned on a switch port with port security enabled?

- A. 8
- B. 2
- C. 1
- D. 0

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 268

Which device allows users to connect to the network using a single or double radio?

- A. access point
- B. switch
- C. wireless controller
- D. firewall

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 269

When enabled, which feature prevents routing protocols from sending hello messages on an interface?

- A. virtual links
- B. passive-interface
- C. directed neighbors
- D. OSPF areas

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

You can use the passive-interface command in order to control the advertisement of routing information. The command enables the suppression of routing updates over some interfaces while it allows updates to be exchanged normally over other interfaces. With most routing protocols, the passive-interface command restricts outgoing advertisements only.

But, when used with Enhanced Interior Gateway Routing Protocol (EIGRP), the effect is slightly different. This document demonstrates that use of the passive-interface command in EIGRP suppresses the exchange of hello packets between two routers, which results in the loss of their neighbor relationship. This stops not only routing updates from being advertised, but it also suppresses incoming routing updates. This document also discusses the configuration required in order to allow the suppression of outgoing routing updates, while it also allows incoming routing updates to be learned normally from the neighbor

QUESTION 270

Refer to the exhibit. Which statement describes the effect of this configuration?

```
Router# configure terminal
Router (config)# vlan 10
Router (config-vlan)# do show vlan
```

- A. The VLAN 10 VTP configuration is displayed
- B. VLAN 10 spanning-tree output is displayed
- C. The VLAN 10 configuration is saved when the router exits VLAN configuration mode
- D. VLAN 10 is added to the VLAN database

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 271

Which route source code represents the routing protocol with a default administrative distance of 90 in the routing table?

- A. S
- B. E
- C. D
- D. R
- E. O

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

Default Administrative distance of EIGRP protocol is 90 then answer is C.

QUESTION 272

Which statement about native VLAN traffic is true?

- A. Cisco Discovery Protocol traffic travels on the native VLAN by default
- B. Traffic on the native VLAN is tagged with 1 by default
- C. Control plane traffic is blocked on the native VLAN.
- D. The native VLAN is typically disabled for security reasons

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 273

Which statement about unicast frame forwarding on a switch is true?

- A. The TCAM table stores destination MAC addresses
- B. If the destination MAC address is unknown, the frame is flooded to every port that is configured in the same VLAN except on the port that it was received on.
- C. The CAM table is used to determine whether traffic is permitted or denied on a switch
- D. The source address is used to determine the switch port to which a frame is forwarded

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 274

Which component of the routing table ranks routing protocols according to their preferences?

- A. administrative distance
- B. next hop
- C. metric
- D. routing protocol code

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

Administrative distance - This is the measure of trustworthiness of the source of the route. If a router learns about a destination from more than one routing protocol, administrative distance is compared and the preference is given to the routes with lower administrative distance. In other words, it is the believability of the source of the route

QUESTION 275

Which switch would STP choose to become the root bridge in the selection process?

- A. 32768: 11-22-33-44-55-66
- B. 32768: 22-33-44-55-66-77
- C. 32769: 11-22-33-44-55-65
- D. 32769: 22-33-44-55-66-78

Correct Answer: A

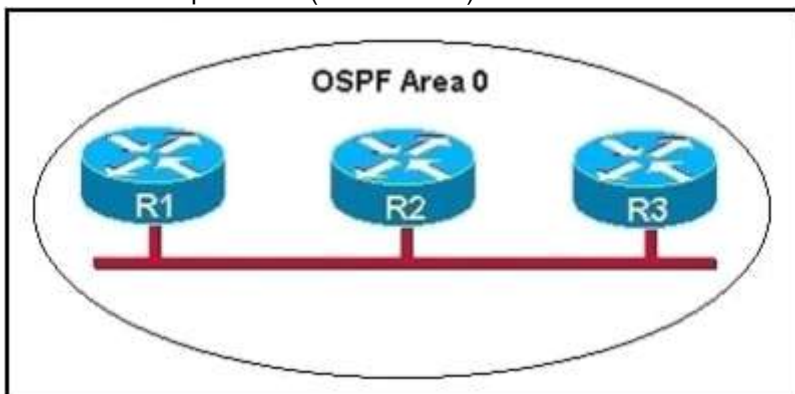
Section: (none)

Explanation

Explanation/Reference:

QUESTION 276

Refer to the graphic. 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.

Correct Answer: DF

Section: (none)

Explanation

Explanation/Reference:

QUESTION 277

For what two purposes does the Ethernet protocol use physical addresses? (Choose two.)

- A. to uniquely identify devices at Layer 2
- B. to allow communication with devices on a different network
- C. to differentiate a Layer 2 frame from a Layer 3 packet
- D. to establish a priority system to determine which device gets to transmit first
- E. to allow communication between different devices on the same network
- F. to allow detection of a remote device when its physical address is unknown

Correct Answer: AE

Section: (none)

Explanation

Explanation/Reference:

QUESTION 278

2 authentication type of MLPPP

- A. PEAP
- B. LEAP
- C. PAP
- D. CHAP
- E. TACACS+

Correct Answer: CD

Section: (none)

Explanation

Explanation/Reference:

QUESTION 279

What is the effect of the overload keyword in a static NAT translation configuration?

- A. It enables port address translation.
- B. It enables the use of a secondary pool of IP addresses when the first pool is depleted
- C. It enables the inside interface to receive traffic.
- D. It enables the outside interface to forward traffic.

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

<http://www.firewall.cx/networking-topics/network-address-translation-nat/233-nat-overload-part-1.html>

QUESTION 280

What are the requirements for running VTP (choose two)

- A. VTP domain names must be different
- B. VTP domain names must be the same
- C. VTP server must have the highest revision numbers
- D. All devices need to have the same VTP version

Correct Answer: BC

Section: (none)

Explanation

Explanation/Reference:

http://www.cisco.com/c/en/us/td/docs/switches/lan/catalyst3560/software/release/12-2_52_se/configuration/guide/3560scg/swvtp.html

" Follow these guidelines when deciding which VTP version to implement:

- All switches in a VTP domain must have the same domain name, but they do not need to run the same VTP version.
- A VTP version 2-capable switch can operate in the same VTP domain as a switch running VTP version 1 if version 2 is disabled on the version 2-capable switch (version 2 is disabled by default). "

QUESTION 281

What is the use of IPv4 private space (choose two)

- A. connect applications together
- B. save global address space
- C. something about NAT
- D. allow intra-company communication

Correct Answer: BD

Section: (none)

Explanation

Explanation/Reference:

QUESTION 282

Assuming a subnet mask of 255.255.248.0, three of the following addresses are valid host addresses. Which are these addresses? (Choose three.)

- A. 172.16.9.0
- B. 172.16.8.0
- C. 172.16.31.0
- D. 172.16.20.0

Correct Answer: ACD

Section: (none)

Explanation

Explanation/Reference:

QUESTION 283

Which type does a port become when it receives the best BPDU on a bridge?

- A. The designated port
- B. The backup port
- C. The alternate port
- D. The root port

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 284

Which value can you modify to configure a specific interface as the preferred forwarding interface?

- A. The interface number

- B. The port priority
- C. The VLAN priority
- D. The hello time

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 285

Which statement about VLAN configuration is true?

- A. The switch must be in VTP server or transparent mode before you can configure a VLAN
- B. The switch must be in config-vlan mode before you configure an extended VLAN
- C. Dynamic inter-VLAN routing is supported on VLAN2 through VLAN 4064`
- D. A switch in VTP transparent mode save the VLAN databases to the running configuration only

Correct Answer: A

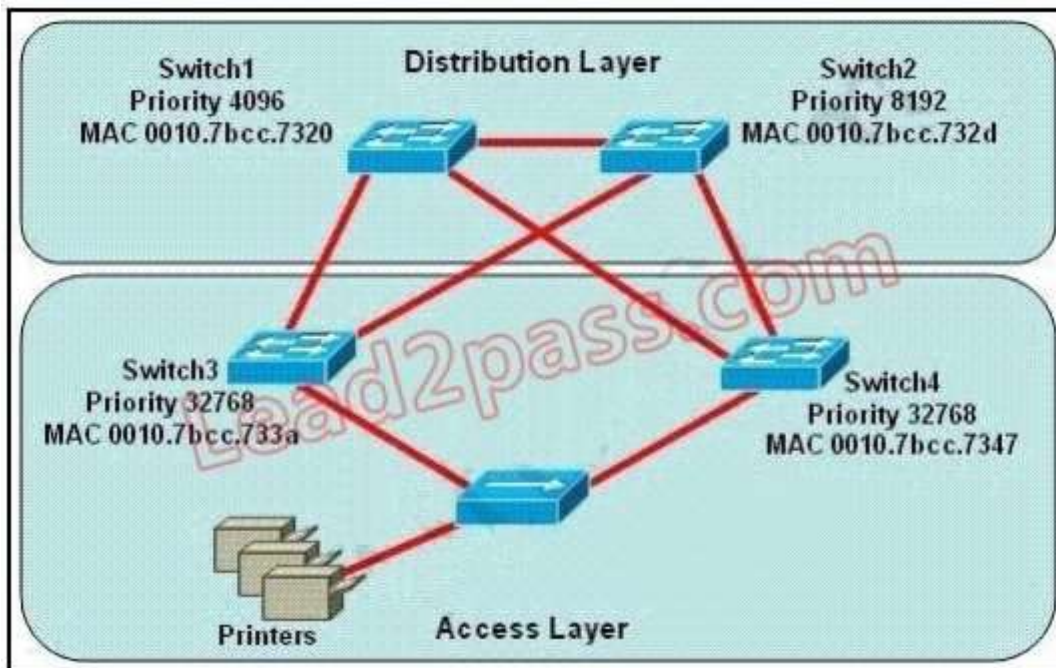
Section: (none)

Explanation

Explanation/Reference:

QUESTION 286

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 287

In which two situations should you use out-of-band management?

- A. when a network device fails to forward packets
- B. when you require ROMMON access
- C. when management applications need concurrent access to the device
- D. when you require administrator access from multiple locations
- E. when the control plane fails to respond

Correct Answer: AB

Section: (none)

Explanation

Explanation/Reference:

QUESTION 288

Which command can you enter to configure a local username with an encrypted password and EXEC mode user privileges?

- A. Router(config)#username jdone privilege 1 password 7 08314D5D1A48
- B. Router(config)#username jdone privilege 1 password 7 PASSWORD1
- C. Router(config)#username jdone privilege 15 password 0 08314D5D1A48
- D. Router(config)#username jdone privilege 15 password 0 PASSWORD1

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 289

What happens when an 802.11a node broadcasts within the range of an 802.11g access point?

- A. The access point transmits, but the node is unable to receive.
- B. A connection occurs.
- C. Both the node and the access point are unable to transmit.
- D. The node transmits, but the access point is unable to receive.

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 290

Which value is indicated by the next hop in a routing table?

- A. preference of the route source
- B. IP address of the remote router for forwarding the packets
- C. how the route was learned
- D. exit interface IP address for forwarding the packets

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 291

Which statement about the inside interface configuration in a NAT deployment is true?

- A. It is defined globally
- B. It identifies the location of source addresses for outgoing packets to be translated using access or route maps.
- C. It must be configured if static NAT is used

D. It identifies the public IP address that traffic will use to reach the internet.

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 292

Which option is the default switch port port-security violation mode?

- A. shutdown
- B. protect
- C. shutdown vlan
- D. restrict

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 293

Which entity assigns IPv6 addresses to end users?

- A. ICANN
- B. APNIC
- C. RIR
- D. ISPs

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 294

which value indicate the distance from the ntp authoritative time source?

- A. priority
- B. location
- C. layer
- D. stratum

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 295

Which NTP type designates a router without an external reference clock as an authoritative time source?

- A. server
- B. peer
- C. master
- D. client

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 296

Which 3 feature are represented by A letter in AAA? (Choose Three)

- A. authorization
- B. accounting
- C. authentication
- D. accountability
- E. accessibility
- F. authority

Correct Answer: ABC

Section: (none)

Explanation

Explanation/Reference:

QUESTION 297

Which of the following are the valid numbers of standard ACL (choosse 2)

- A. 50
- B. 1550
- C. 150
- D. 1250
- E. 2050

Correct Answer: AB

Section: (none)

Explanation

Explanation/Reference:

QUESTION 298

When you deploy multilink PPP on your network, where must you configure the group IP Address on each device?

- A. in the global config
- B. Under serial interface
- C. Under the routing protocol
- D. Under the multilink interface

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 299

What are two statement for SSH?

- A. use port 22
- B. unsecured
- C. encrypted
- D. most common remote-access method
- E. operate at transport

Correct Answer: AC

Section: (none)

Explanation

Explanation/Reference:

QUESTION 300

If a route is not present in the routing table for a particular destination, what would the router do?

- A. Default route
- B. Flood
- C. Drop
- D. No Answer

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 301

Host is able to ping a web server but it is not able to do HTTP request.

- A. ACL blocking port 23
- B. ACL blocking All ports
- C. ACL blocking port 80
- D. ACL blocking port 443
- E. None of the above

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 302

Which NTP command configures the local devices as an NTP reference clock source?

- A. NTP Peer
- B. NTP Broadcast
- C. NTP Master
- D. NTP Server

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 303

Which item represents the standard IP ACL?

- A. Access-list 110 permit any any
- B. Access-list 50 deny 192.168.1.1 0.0.0.255
- C. Access list 101 deny tcp any host 192.168.1.1
- D. Access-list 2500 deny tcp any host 192.168.1.1 eq 22

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 304

Which command can you enter to verify that a 128-bit address is live and responding?

- A. Traceroute
- B. telnet
- C. ping
- D. ping ipv6

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 305

Where information about untrusted hosts are stored?

- A. CAM table
- B. Trunk table
- C. MAC table
- D. binding database

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

Builds and maintains the DHCP snooping binding database, which contains information about untrusted hosts with leased IP addresses.

QUESTION 306

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.

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

The PVST+ provides Layer 2 load-balancing for the VLAN on which it runs. You can create different logical topologies by using the VLANs on your network to ensure that all of your links are used but that no one link is oversubscribed. Each instance of PVST+ on a VLAN has a single root switch. This root switch propagates the spanning-tree information associated with that VLAN to all other switches in the network. Because each switch has the same information about the network, this process ensures that the network topology is maintained and optimized per VLAN.

QUESTION 307

Which statement about VLAN operation on Cisco Catalyst switches is true?

- A. When a packet is received from an 802.1Q trunk, the VLAN ID can be determined from the source MAC address and the MAC address table.
- B. Unknown unicast frames are retransmitted only to the ports that belong to the same VLAN.
- C. Broadcast and multicast frames are retransmitted to ports that are configured on different VLAN.
- D. Ports between switches should be configured in access mode so that VLANs can span across the ports.

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

Each VLAN resides in its own broadcast domain, so incoming frames with unknown destinations are only transmitted to ports that reside in the same VLAN as the incoming frame.

QUESTION 308

Three switches are connected to one another via trunk ports. Assuming the default switch configuration,

which switch is elected as the root bridge for the spanning-tree instance of VLAN 1?

- A. the switch with the highest MAC address
- B. the switch with the lowest MAC address
- C. the switch with the highest IP address
- D. the switch with the lowest IP address

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

Each switch in your network will have a Bridge ID Priority value, more commonly referred to as a BID. This BID is a combination of a default priority value and the switch's MAC address, with the priority value listed first. The lowest BID will win the election process.

For example, if a Cisco switch has the default priority value of 32,768 and a MAC address of 11-22-33-44-55-66, the BID would be 32768:11-22-33-44-55-66. Therefore, if the switch priority is left at the default, the MAC address is the deciding factor in the root bridge election.

QUESTION 309

Which two options are primary responsibilities of the APIC-EM controller? (Choose two.)

- A. It automates network actions between different device types.
- B. It provides robust asset management.
- C. It tracks license usage and Cisco IOS versions.
- D. It automates network actions between legacy equipment.
- E. It makes network functions programmable.

Correct Answer: AE

Section: (none)

Explanation

Explanation/Reference:

<http://www.cisco.com/c/en/us/products/cloud-systems-management/application-policy-infrastructure-controller-enterprise-module/index.html>

Automate network configuration and setup
Deploy network devices faster
Automate device deployment and provisioning across the enterprise.

Provide a programmable network
Enable developers to create new applications that use the network to fuel business growth.

QUESTION 310

Which command can be used from a PC to verify the connectivity between hosts that connect through a switch in the same LAN?

- A. ping address
- B. tracet address
- C. traceroute address
- D. arp address

Correct Answer: A

Section: (none)

Explanation

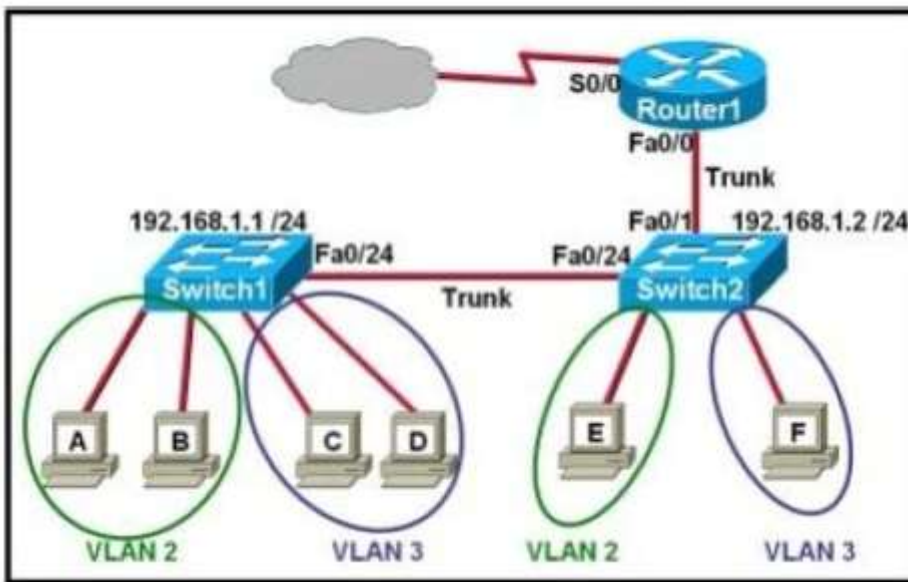
Explanation/Reference:

ICMP pings are used to verify connectivity between two IP hosts. Traceroute is used to verify the router hop path traffic will take but in this case since the hosts are in the same LAN there will be no router hops involved.

QUESTION 311

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:

In order for multiple VLANs to connect to a single physical interface on a Cisco router, subinterfaces must be used, one for each VLAN. This is known as the router on a stick configuration. Also, for any trunk to be formed, both ends of the trunk must agree on the encapsulation type, so each one must be configured for 802.1q or ISL.

QUESTION 312

What value is primarily used to determine which port becomes the root port on each nonroot switch in a spanning-tree topology?

- A. path cost
- B. lowest port MAC address
- C. VTP revision number
- D. highest port priority number
- E. port priority number and MAC address

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

The path cost to the root bridge is the most important value to determine which port will become the root port on each non-root switch. In particular, the port with lowest cost to the root bridge will become root port (on non-root switch).

QUESTION 313

Refer to the exhibit.

If RTRO1 as configured as shown, which three addresses will be received by other routers that are running EIGRP on the network? (Choose three.)

```
RTR01(config #router eigrp 103
RTR01(config-router)#network 10.4.3.0
RTR01(config-router)#network 172.16.4.0
RTR01(config-router)#network 192.168.2.0
RTR01(config-router)#auto-summary
```

- A. 172.16.4.0
- B. 10.0.0.0
- C. 172.16.0.0
- D. 192.168.2.0
- E. 192.168.0.0
- F. 10.4.3.0

Correct Answer: BCD

Section: (none)

Explanation

Explanation/Reference:

QUESTION 314

Which two statements about TACACS+ are true? (Choose two.)

- A. It can run on a UNIX server.
- B. It authenticates against the user database on the local device.
- C. It is more secure than AAA authentication.
- D. It is enabled on Cisco routers by default.
- E. It uses a managed database.

Correct Answer: AE

Section: (none)

Explanation

Explanation/Reference:

http://tacacs.net/docs/TACACS_Advantages.pdf

Many IT departments choose to use AAA (Authentication, Authorization and Accounting) protocols RADIUS or TACACS+ to address these issues.

<http://www.cisco.com/c/en/us/support/docs/security-vpn/terminal-access-controller-access-control-system-tacacs-/13865-tacplus.pdf>

This document describes how to configure a Cisco router for authentication with the TACACS+ that runs on UNIX. TACACS+ does not offer as many features as the commercially available Cisco Secure ACS for Windows or Cisco Secure ACS UNIX.

TACACS+ software previously provided by Cisco Systems has been discontinued and is no longer supported by Cisco Systems.

QUESTION 315

Which command enables RSTP on a switch?

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

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

Rapid Spanning Tree Protocol (RSTP) is an enhancement of the original STP 802.1D protocol. The RSTP

802.1w protocol is an IEEE open implementation. Cisco has its own proprietary implementation of RSTP, that includes the benefits of its Per-VLAN spanning tree protocols, called Rapid-PVST+. To activate the Rapid-PVST+ protocol: switch(config)#spanning-tree mode rapid-pvst

QUESTION 316

A switch is configured with all ports assigned to VLAN 2 with full duplex FastEthernet to segment existing departmental traffic. What is the effect of adding switch ports to a new VLAN on the switch?

- A. More collision domains will be created.
- B. IP address utilization will be more efficient.
- C. More bandwidth will be required than was needed previously.
- D. An additional broadcast domain will be created.

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 317

VLAN 3 is not yet configured on your switch. What happens if you set the switchport access vlan 3 command in interface configuration mode?

- A. The command is rejected.
- B. The port turns amber.
- C. The command is accepted and the respective VLAN is added to vlan.dat.
- D. The command is accepted and you must configure the VLAN manually.

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

The "switchport access vlan 3" will put that interface as belonging to VLAN 3 while also updated the VLAN database automatically to include VLAN 3.

QUESTION 318

Cisco Catalyst switches CAT1 and CAT2 have a connection between them using ports FA0/13. An 802.1Q trunk is configured between the two switches. On CAT1, VLAN 10 is chosen as native, but on CAT2 the native VLAN is not specified. What will happen in this scenario?

- A. 802.1Q giants frames could saturate the link.
- B. VLAN 10 on CAT1 and VLAN 1 on CAT2 will send untagged frames.
- C. A native VLAN mismatch error message will appear.
- D. VLAN 10 on CAT1 and VLAN 1 on CAT2 will send tagged frames.

Correct Answer: C

Section: (none)

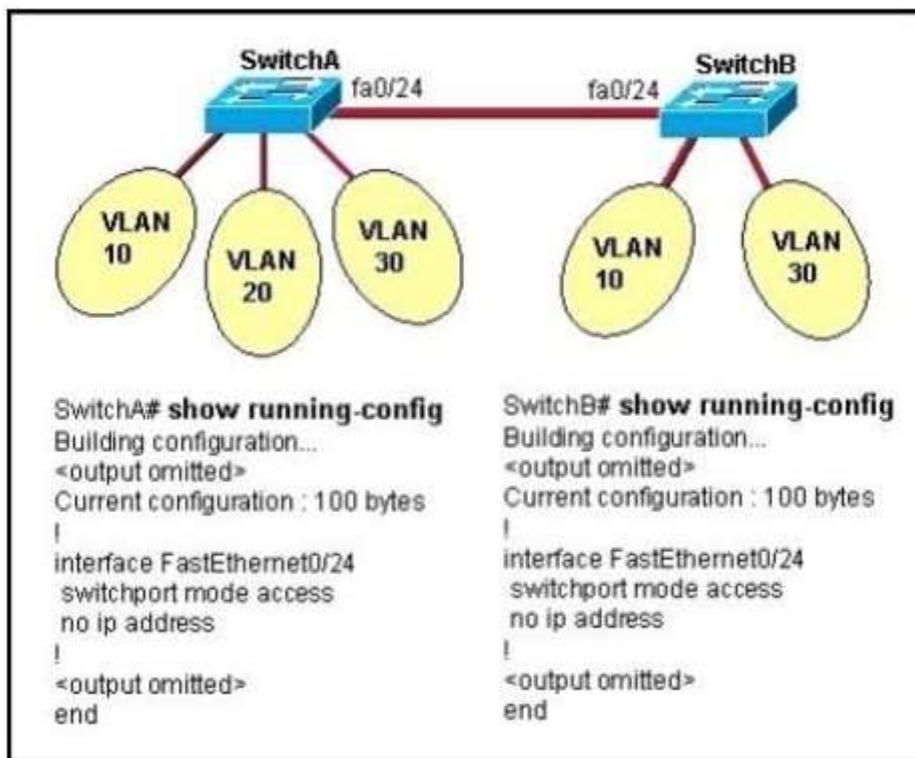
Explanation

Explanation/Reference:

A "native VLAN mismatch" error will appear by CDP if there is a native VLAN mismatch on an 802.1Q link. "VLAN mismatch" can cause traffic from one vlan to leak into another vlan.

QUESTION 319

Refer to the exhibit



All switch ports are assigned to the correct VLANs, but none of the hosts connected to SwitchA can communicate with hosts in the same VLAN connected to SwitchB. Based on the output shown, what is the most likely problem?

- A. The access link needs to be configured in multiple VLANs.
- B. The link between the switches is configured in the wrong VLAN.
- C. The link between the switches needs to be configured as a trunk.
- D. VTP is not configured to carry VLAN information between the switches.
- E. Switch IP addresses must be configured in order for traffic to be forwarded between the switches.

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

In order to pass traffic from VLANs on different switches, the connections between the switches must be configured as trunk ports.

QUESTION 320

What is the function of the command `switchport trunk native vlan 999` on a Cisco Catalyst switch?

- A. It creates a VLAN 999 interface.
- B. It designates VLAN 999 for untagged traffic.
- C. It blocks VLAN 999 traffic from passing on the trunk.
- D. It designates VLAN 999 as the default for all unknown tagged traffic.

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

Configuring the Native VLAN for Untagged Traffic A trunk port configured with 802.1Q tagging can receive both tagged and untagged traffic. By default, the switch forwards untagged traffic in the native VLAN configured for the port. The native VLAN is VLAN 1 by default.

QUESTION 321

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

Section: (none)

Explanation

Explanation/Reference:

<http://www.cisco.com/c/en/us/support/docs/ip/open-shortest-path-first-ospf/7039-1.html#t6>

OSPF Cost

The cost (also called metric) of an interface in OSPF is an indication of the overhead required to send packets across a certain interface. The cost of an interface is inversely proportional to the bandwidth of that interface. A higher bandwidth indicates a lower cost. There is more overhead (higher cost) and time delays involved in crossing a 56k serial line than crossing a 10M ethernet line. The formula used to calculate the cost is:

$\text{cost} = 100000000 / \text{bandwidth in bps}$

For example, it will cost $10^8 / 10^7 = 10$ to cross a 10M Ethernet line and will cost $10^8 / 1544000 = 64$ to cross a T1 line.

By default, the cost of an interface is calculated based on the bandwidth; you can force the cost of an interface with the `ip ospf cost <value> interface subconfiguration mode` command.

QUESTION 322

Which command shows your active Telnet connections?

- A. show cdp neighbors
- B. show session
- C. show users
- D. show vty logins

Correct Answer: B

Section: (none)

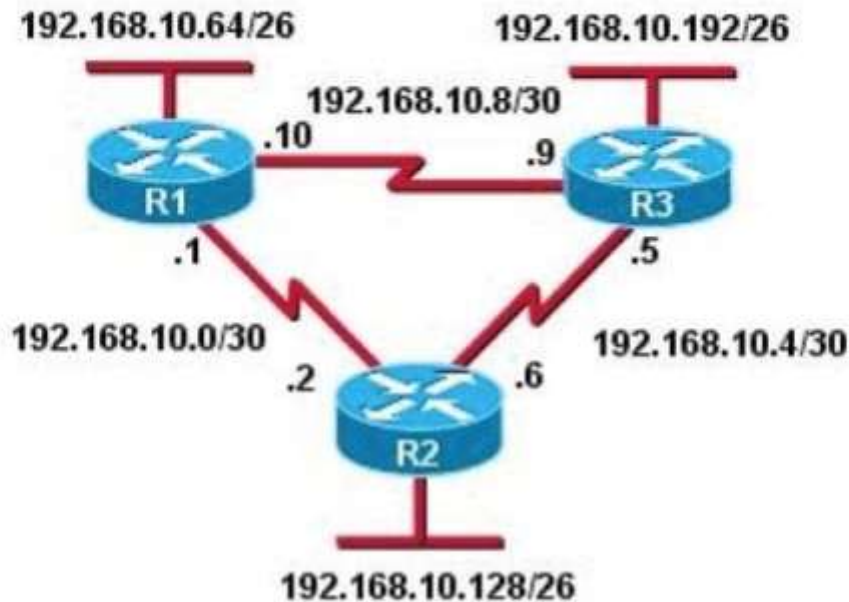
Explanation

Explanation/Reference:

The "show users" shows telnet/ssh connections to your router while "show sessions" shows telnet/ssh connections from your router (to other devices). The question asks about "your active Telnet connections", meaning connections from your router

QUESTION 323

Refer to the exhibit.



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
  
```

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?

- 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 324

Refer to the exhibit. You have discovered that computers on the 192.168.10.0/24 network can ping their default gateway, but they cannot connect to any resources on a remote network. Which reason for the problem is most likely true?

```
R1
interface Loopback0
 ip address 172.16.1.1 255.255.255.255

interface FastEthernet0/0
 ip address 192.168.12.1 255.255.255.0

interface FastEthernet0/1
 ip address 192.168.10.1 255.255.255.0

router ospf 1
 router-id 172.16.1.1
 network 172.16.1.1 0.0.0.0 area 0
 network 192.168.10.0.0.0.255 area 0
```

- A. The 192.168.12.0/24 network is missing from OSPF.
- B. The OSPF process ID is incorrect.
- C. The OSPF area number is incorrect.
- D. An ARP table entry is missing for 192.168.10.0.
- E. A VLAN number is incorrect for 192.168.10.0.

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 325

Which WAN topology provides a direct connection from each site to all other sites on the network?

- A. single-homed
- B. full mesh
- C. point-to-point
- D. hub-and-spoke

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 326

Which two passwords must be supplied in order to connect by Telnet to a properly secured Cisco switch and make changes to the device configuration? (Choose two.)

- A. tty password
- B. enable secret password
- C. vty password
- D. aux password
- E. console password
- F. username password

Correct Answer: BC

Section: (none)

Explanation

Explanation/Reference:

QUESTION 327

Refer to the exhibit. Which user-mode password has just been set?

```
Router#config1
Router(config)#line vty 0 4
Router(config-line)#password c1 sc0
Router(config-line)#login
```

- A. Telnet
- B. Auxiliary
- C. SSH
- D. Console

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 328

Which component of a routing table entry represents the subnet mask?

- A. Routing protocol code
- B. Prefix
- C. metric
- D. Network mask

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

IP Routing Table Entry Types

An entry in the IP routing table contains the following information in the order presented:

Network ID. The network ID or destination corresponding to the route. The network ID can be class-based, subnet, or supernet network ID, or an IP address for a host route.

Network Mask. The mask that is used to match a destination IP address to the network ID.

Next Hop. The IP address of the next hop.

Interface. An indication of which network interface is used to forward the IP packet.

Metric. A number used to indicate the cost of the route so the best route among possible multiple routes to the same destination can be selected. A common use of the metric is to indicate the number of hops (routers crossed) to the network ID.

Routing table entries can be used to store the following types of routes:

Directly Attached Network IDs. Routes for network IDs that are directly attached. For directly attached networks, the Next Hop field can be blank or contain the IP address of the interface on that network. **Remote Network IDs.** Routes for network IDs that are not directly attached but are available across other routers. For remote networks, the Next Hop field is the IP address of a local router in between the forwarding node and the remote network.

Host Routes. A route to a specific IP address. Host routes allow routing to occur on a per-IP address basis. For host routes, the network ID is the IP address of the specified host and the network mask is 255.255.255.255.

Default Route. The default route is designed to be used when a more specific network ID or host route is not found. The default route network ID is 0.0.0.0 with the network mask of 0.0.0.0.

QUESTION 329

How can you disable DTP on a switch port?

- A. Configure the switch port as a trunk.
- B. Add an interface on the switch to a channel group.
- C. Change the operational mode to static access
- D. Change the administrative mode to access

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 330

How is the redundancy represented in ntp master?

- A. N:1
- B. N+1
- C. 1:N

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

NTP redundancy

<http://sflanders.net/2015/02/09/time-hard-proper-ntp-configuration/>

QUESTION 331

Which command you enter on a switch to display the ip address associated with connected devices?

- A. Show cdp neighbors detail
- B. Show cdp neighbor
- C. Show cdp interface
- D. Show cdp traffic

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 332

Which technology can enable multiple vlan to communicate with one another ?

- A. Intra-vlan routing using a layer 3 switch
- B. Inter-vlan routing using a layer 3 switch
- C. Inter-vlan routing using a layer 2 switch
- D. Intra-vlan routing using router on a stick

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 333

Which protocol is a Cisco proprietary implementation of STP?

- A. CST
- B. RSTP
- C. MSTP
- D. PVST+

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 334

Which Type of ipv6 unicast ip address is reachable across the internet ?

- A. Unique Local

- B. Compatible
- C. Link local
- D. Global

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 335

interface Loopback0

ip address 172.16.1.33 255.255.255.224

router bgp 999

neighbor 10.1.5.2 remote-as 65001

Refer to the exhibit . Which Command do you enter so that R1 advertises the loopback0 interface to the BGP Peers?

- A. Network 172.16.1.32 mask 255.255.255.224
- B. Network 172.16.1.0 0.0.0.255
- C. Network 172.16.1.32 255.255.255.224
- D. Network 172.16.1.33 mask 255.255.255.224
- E. Network 172.16.1.32 mask 0.0.0.31
- F. Network 172.16.1.32 0.0.0.31

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 336

Which networking Technology is currently recognized as the standard for computer networking?

- A. System network architecture
- B. Transmission control protocol/Internet protocol
- C. Open system Interconnect
- D. Open network architecture

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 337

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

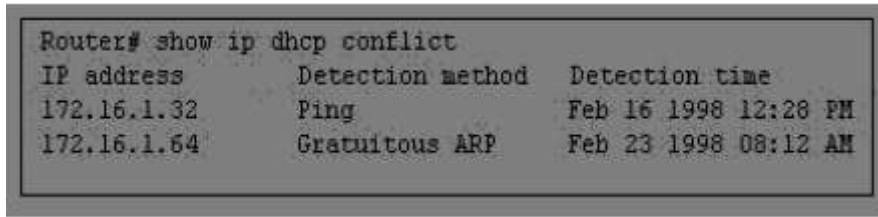
Explanation/Reference:

Explanation:

Since static routing is a manual process, it can be argued that it is more secure (and more prone to human errors) since the network administrator will need to make changes to the routing table directly. Also, in stub networks where there is only a single uplink connection, the load is reduced as stub routers just need a single static default route, instead of many routes that all have the same next hop IP address.

QUESTION 338

Refer to the exhibit.



```
Router# show ip dhcp conflict
```

IP address	Detection method	Detection time
172.16.1.32	Ping	Feb 16 1998 12:28 PM
172.16.1.64	Gratuitous ARP	Feb 23 1998 08:12 AM

Which rule does the DHCP server use when there is an IP address conflict?

- A. The address is removed from the pool until the conflict is resolved.
- B. The address remains in the pool until the conflict is resolved.
- C. Only the IP detected by Gratuitous ARP is removed from the pool.
- D. Only the IP detected by Ping is removed from the pool.
- E. The IP will be shown, even after the conflict is resolved.

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

Explanation:

An address conflict occurs when two hosts use the same IP address. During address assignment, DHCP checks for conflicts using ping and gratuitous ARP. If a conflict is detected, the address is removed from the pool. The address will not be assigned until the administrator resolves the conflict.

QUESTION 339

Which two tasks does the Dynamic Host Configuration Protocol perform? (Choose two.)

- A. Set the IP gateway to be used by the network.
- B. Perform host discovery used DHCPDISCOVER message.
- C. Configure IP address parameters from DHCP server to a host.
- D. Provide an easy management of layer 3 devices.
- E. Monitor IP performance using the DHCP server.
- F. Assign and renew IP address from the default pool.

Correct Answer: CF

Section: (none)

Explanation

Explanation/Reference:

Explanation:

The Dynamic Host Configuration Protocol (DHCP) is a network protocol used to configure devices that are connected to a network (known as hosts) so they can communicate on that network using the Internet Protocol (IP). It involves clients and a server operating in a client-server model. DHCP servers assigns IP addresses from a pool of addresses and also assigns other parameters such as DNS and default gateways to hosts.

QUESTION 340

Which definition of default route is true?

- A. A route that is manually configured.
- B. A route used when a destination route is missing.
- C. A route to the exact /32 destination address
- D. Dynamic route learned from the server.

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 341

Which value must the device send as its username when using CHAP to authenticate with the remote peer site id:17604704 over a PPP link?

- A. The automatically generated user name
- B. The local host name
- C. The user name defined by the administrator
- D. The host name of the remote device.

Correct Answer: B

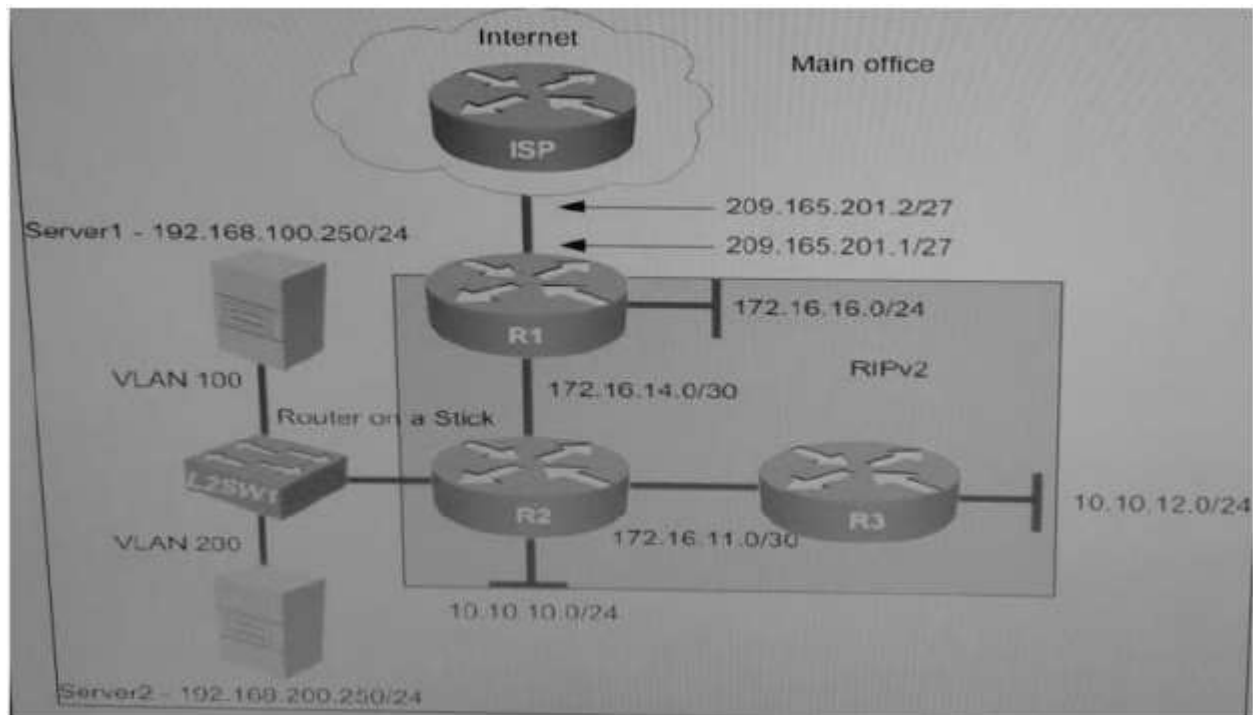
Section: (none)

Explanation

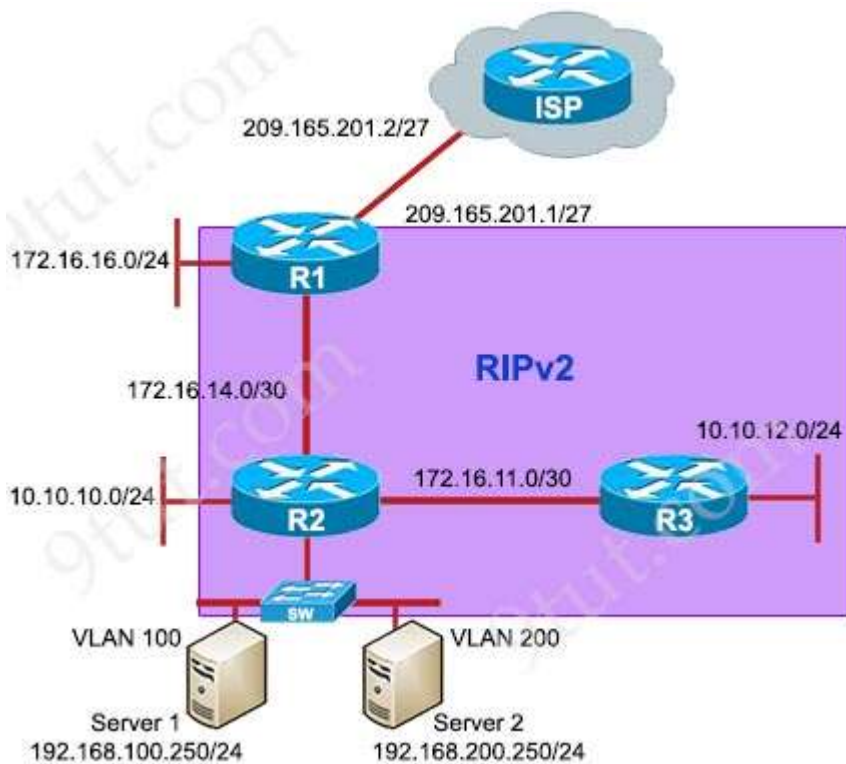
Explanation/Reference:

<http://www.cisco.com/c/en/us/support/docs/wan/point-to-point-protocol-ppp/10241-ppp-callin-hostname.html>

QUESTION 1



Refer to the topology below and answer the questions using “show” commands.



Question 1

Server1 and Server2 are unable to communicate with the rest of the network. Your initial check with system administrators shows that IP address settings are correctly configured on the server side. What could be an issue?

- A. The VLAN encapsulation is misconfigured on the router subinterfaces.
- B. The Router is missing subinterface configuration.
- C. The Trunk is not configured on the L2SW1 switch.
- D. The IP address is misconfigured on the primary router interface.

Correct Answer: A

Section: (none)

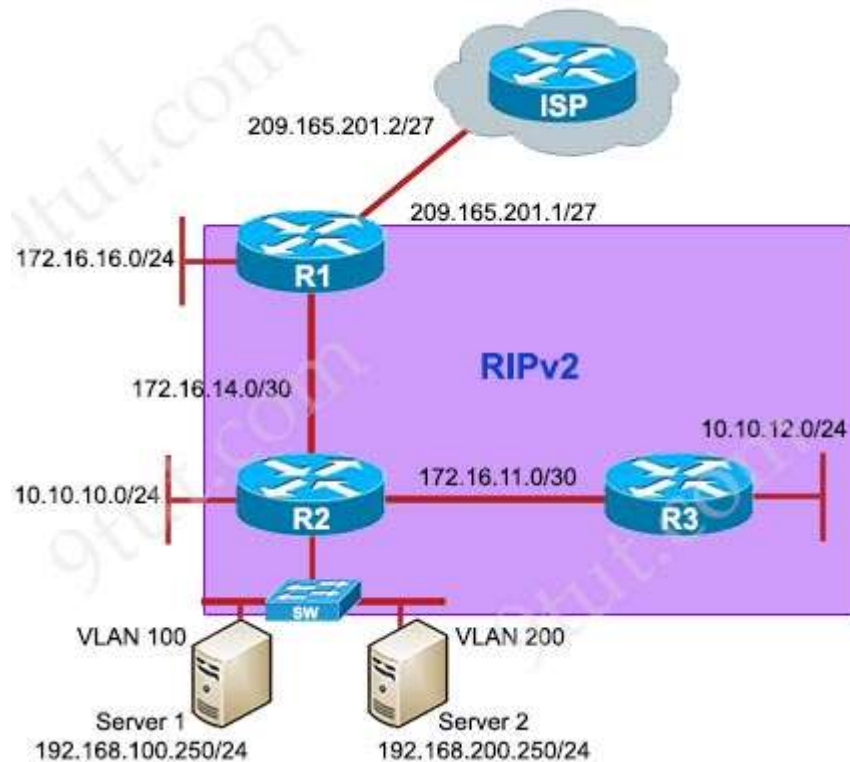
Explanation

Explanation/Reference:

R2 - show running-config

QUESTION 2

Refer to the topology below and answer the questions using “show” commands.

**Question 2**

Users in the main office complain that they are unable to reach internet sites. You observe that internet traffic that is destined towards ISP router is not forwarded correctly on Router R1. What could be an issue?

Ping to Internet server shows the following results from R1:

```
R1#ping 209.165.200.225
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 209.165.200.225, timeout is 2 seconds:
.....
Success rate is 0 percent (0/5)
```

- A. The next hop router address for the default route is incorrectly configured.
- B. Default route pointing to ISP router is not configured on Router R1.
- C. Default route pointing to ISP router is configured with AD of 225.
- D. Router R1 configured as DHCP client is not receiving default route via DHCP from ISP router.

Correct Answer: B

Section: (none)

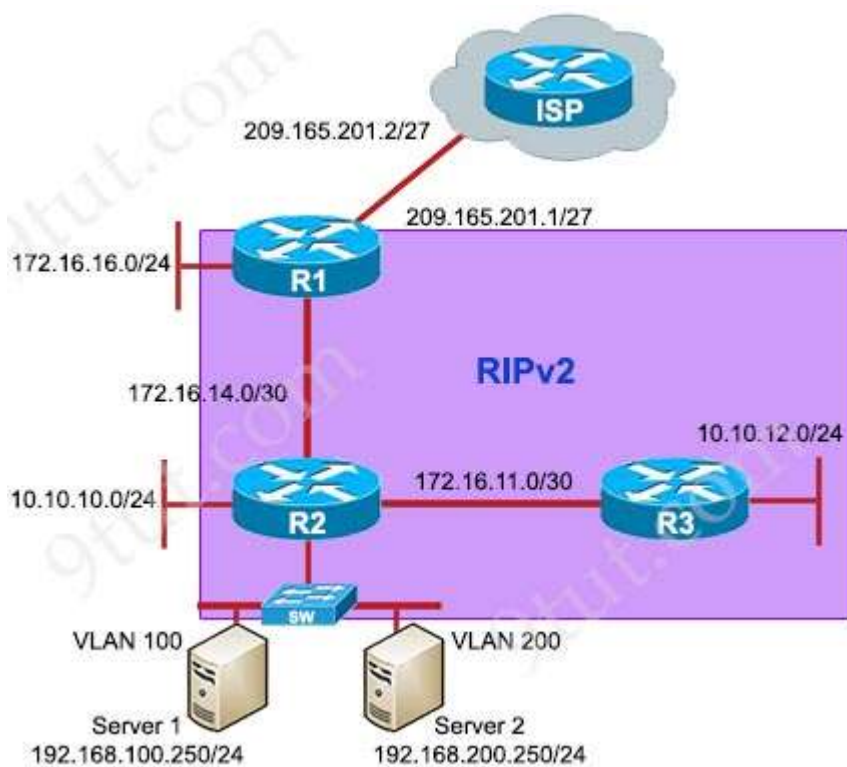
Explanation

Explanation/Reference:

R1 - ping 209.165.200.225
 R1 - show ip route
 R1 - show running-config

QUESTION 3

Refer to the topology below and answer the questions using “show” commands.



Question 3

Examine R2 configuration, the traffic that is destined to R3 LAN network sourced from Router R2 is forwarded to R1 instead R3. What could be an issue?

```
R2#traceroute 10.10.12.1 source 10.10.10.1
Type escape sequence to abort.
Tracing the route to 10.10.12.1
VRF info: (vrf in name/id, vrf out name/id)
 1 172.16.14.1 0 msec 1 msec 0 msec
 2 172.16.14.1 !H !H *
R2#
```

- A. RIPv2 enabled on R3, but R3 LAN network that is not advertised into RIPv2 domain.
- B. RIPv2 routing updates are suppressed between R2 and R3 using passive interface feature.
- C. RIPv2 not enabled on R3.
- D. No issue that is identified; this behavior is normal since default route propagated into RIPv2 domain by Router R1.

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

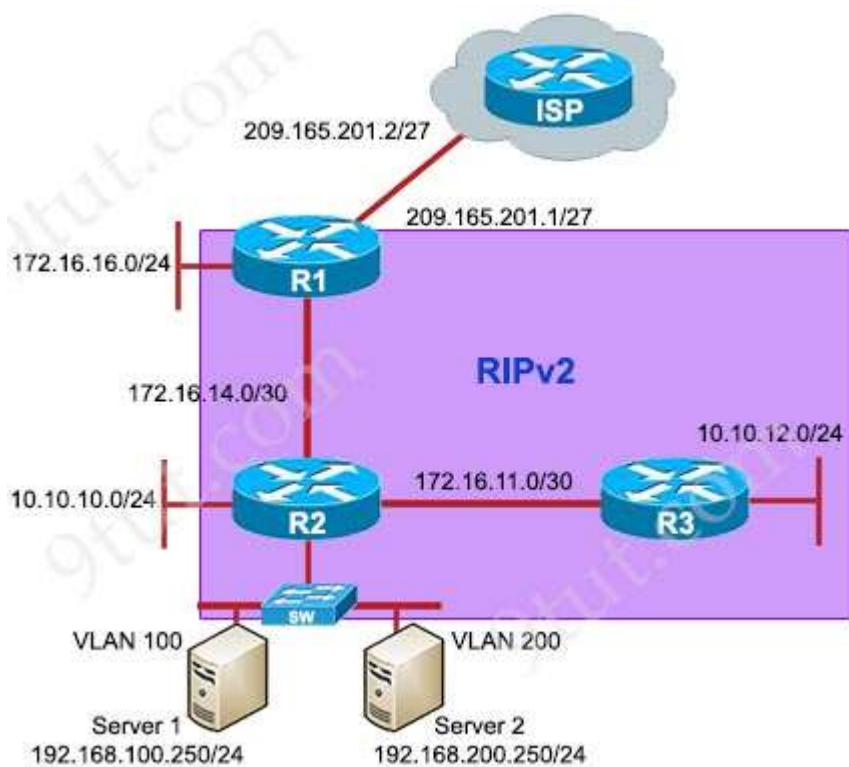
R2 - traceroute 10.10.12.1 source 10.10.10.1

R2 - show ip route

R3 - show running-config

QUESTION 4

Refer to the topology below and answer the questions using "show" commands.



Question 4

What is the correct statement below after examining the R1 routing table?

- A. Traffic that is destined to 10.10.10.0/24 from R1 LAN network uses static route instead RIPv2 because the static route AD that is configured is less than the AD of RIPv2
- B. Traffic that is destined to 10.10.10.0/24 from R1 LAN network uses RIPv2 instead of static route because the static route AD that is configured is higher than the AD of RIPv2
- C. Traffic that is destined to 10.10.10.0/24 from R1 LAN network uses static route instead of RIPv2 but the traffic is forwarded to the ISP instead of the internal network
- D. Traffic that is destined to 10.10.10.0/24 from R1 LAN network uses RIPv2 instead of static route because the static route AD that is configured is 255

Correct Answer: B

Section: (none)

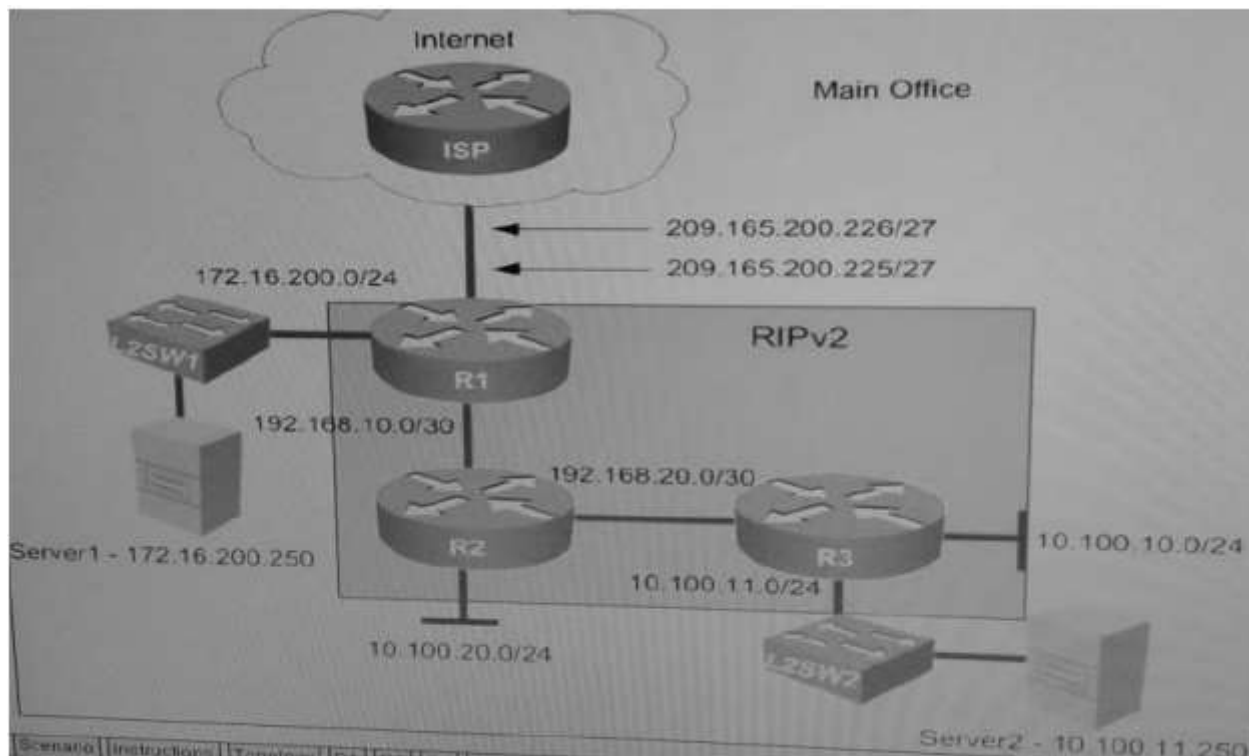
Explanation

Explanation/Reference:

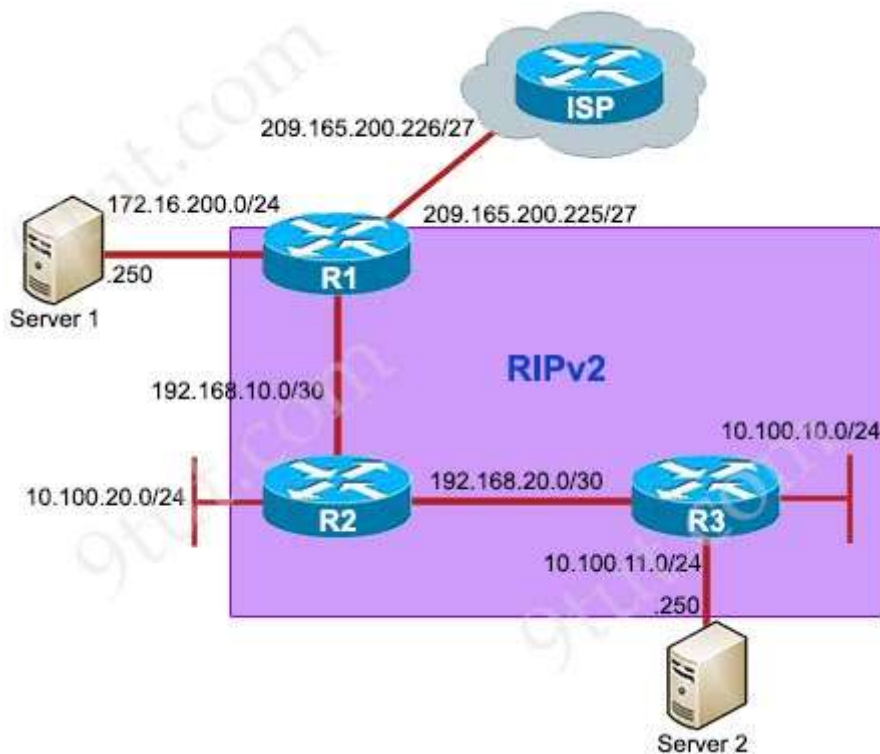
R1 - show ip route

R1 - show running-config

QUESTION 5



Refer to the topology below and answer the questions.



Question 1

Examine the DHCP configuration between R2 and R3, R2 is configured as the DHCP server and R3 as the client. What is the reason R3 is not receiving the IP address via DHCP?

- A. On R3, DHCP is not enabled on the interface that is connected to R2.
- B. On R3, the interface that is connected to R2 is in shutdown condition.
- C. On R2, the interface that is connected to R3 is in shutdown condition.
- D. On R2, the network statement in the DHCP pool configuration is incorrectly configured.

Correct Answer: A

Section: (none)

Explanation

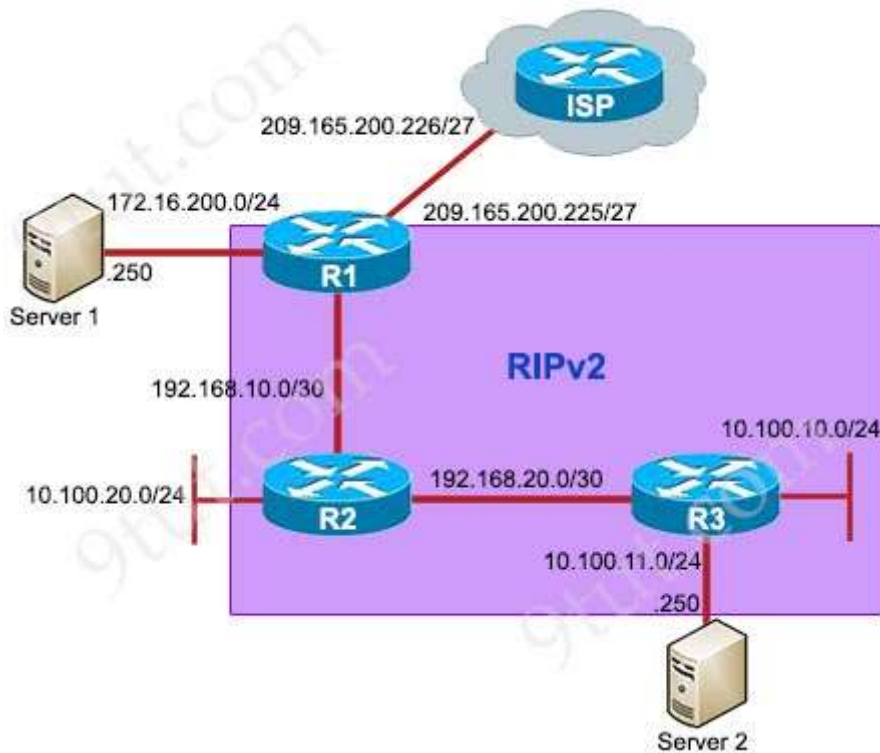
Explanation/Reference:

R3 - show run

R3 - show ip interface brief

QUESTION 6

Refer to the topology below and answer the questions.



Question 2

R1 router clock is synchronized with ISP router. R2 is supposed to receive NTP updates from R1. But you observe that R2 clock is not synchronized with R1. What is the reason R2 is not receiving NTP updates from R1?

- A. R1 router Ethernet interface that is connected to R2 is placed in shutdown condition.
- B. R2 router Ethernet interface that is connected to R1 is placed in shutdown condition.
- C. The NTP server command not configured on R2 router.
- D. The IP address that is used in the NTP configuration on R2 router is incorrect.

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

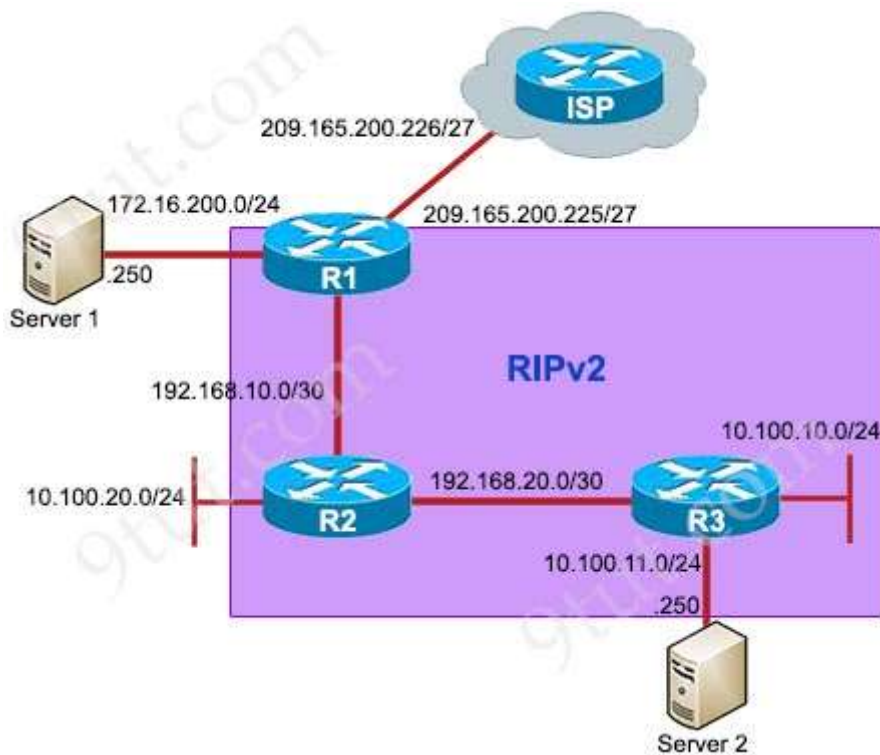
R1 - show ip interface brief

R2 - show ip interface brief

R2 - show running-config

QUESTION 7

Refer to the topology below and answer the questions.



Question 3

Why applications that are installed on PC's in R2 LAN network 10.100.20.0/24 are unable to communicate with Server1?

- A. A standard ACL statement that is configured on R1 is blocking the traffic sourced from R2 LAN network.
- B. A standard ACL statement that is configured on R1 is blocking the traffic sourced from Server1 network.
- C. A standard ACL statement that is configured on R2 is blocking the traffic sourced from Server1 network.
- D. A standard ACL statement that is configured on R2 is blocking the traffic sourced from R2 LAN network.

Correct Answer: C

Section: (none)

Explanation

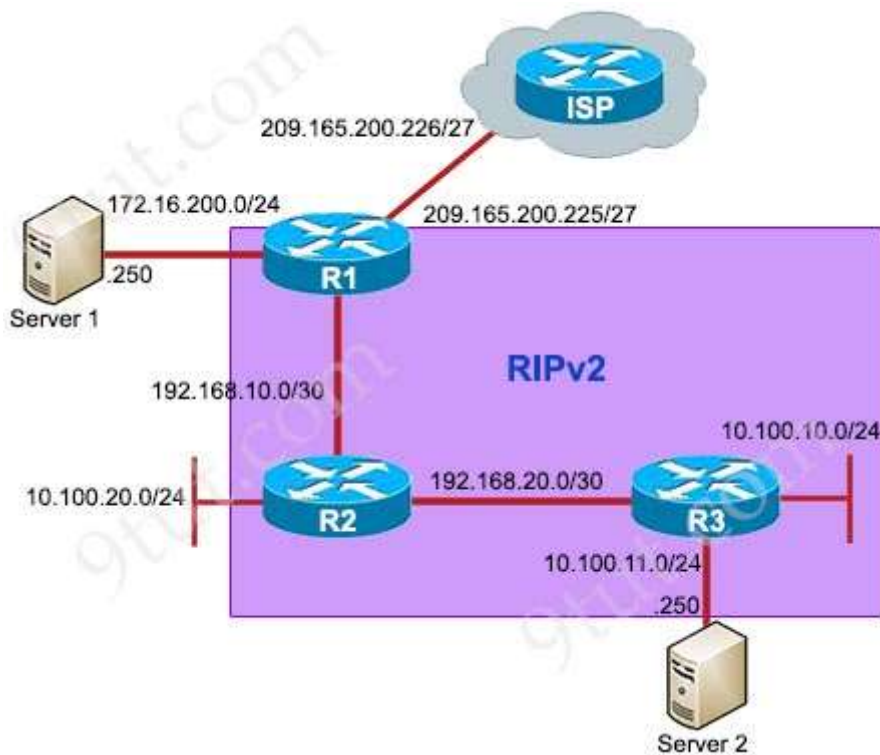
Explanation/Reference:

R1 - ping 172.16.200.250

R2 - sh run

QUESTION 8

Refer to the topology below and answer the questions.



Question 4

Users complain that they are unable to reach internet sites. You are troubleshooting internet connectivity problem at main office. Which statement correctly identifies the problem on Router R1?

- A. NAT configurations on the interfaces are incorrectly configured.
- B. NAT translation statement incorrectly configured.
- C. Interesting traffic for NAT ACL is incorrectly configured.
- D. Only static NAT translation configured from the server, missing Dynamic NAT or Dynamic NAT overloading for internal networks.

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

R1 - show running-config

QUESTION 9

The topology below is running EIGRP. You are required to troubleshoot and resolve the EIGRP issues between the various routers. Use the appropriate show commands to troubleshoot the issues.



Question 1

The loopback interfaces on R4 with the IP addresses of 10.4.4.4/32, 10.4.4.5/32 and 10.4.4.6/32 are not appearing in the routing table of R5. Why are the interfaces missing?

- A. The interfaces are shutdown, so they are not being advertised.

- B. R4 has been incorrectly configured to be in another AS, so it does not peer with R5.
- C. Automatic summarization is enabled, so only the 10.0.0.0 network is displayed.
- D. The loopback addresses haven't been advertised, and the network command is missing on R4

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

R4 - sh run

R5 - sh run

Maybe answer D (another version)

QUESTION 10

The topology below is running EIGRP. You are required to troubleshoot and resolve the EIGRP issues between the various routers. Use the appropriate show commands to troubleshoot the issues.



Question 2

Which path does traffic take from R1 to R5?

- A. The traffic goes through R2.
- B. The traffic goes through R3.
- C. The traffic is equally load-balanced over R2 and R3.
- D. The traffic is unequally load-balanced over R2 and R3.

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

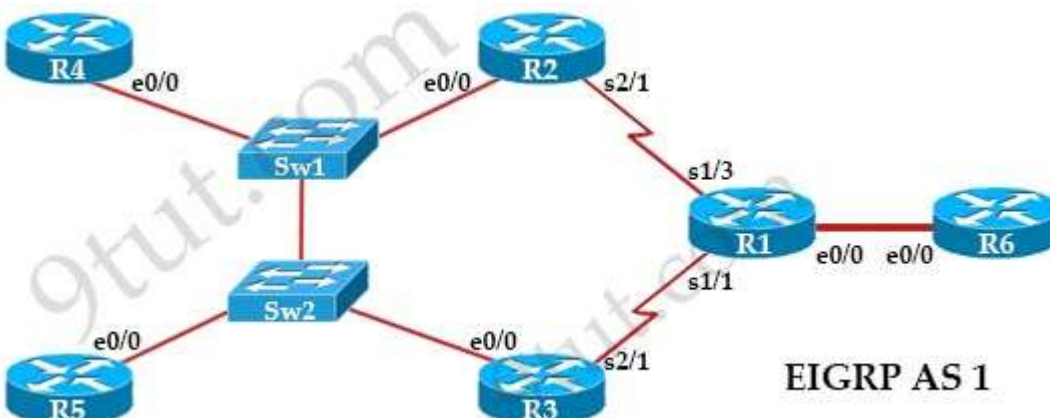
R5 - sh run

R1 - show ip route

Maybe answer C (another version)

QUESTION 11

The topology below is running EIGRP. You are required to troubleshoot and resolve the EIGRP issues between the various routers. Use the appropriate show commands to troubleshoot the issues.



Question 3

Router R6 does not form an EIGRP neighbor relationship correctly with router R1. What is the cause for this misconfiguration?

- A. The K values mismatch.
- B. The AS does not match.
- C. The network command is missing.
- D. The passive-interface command is enabled.

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

R6 - sh run

Maybe answer A (another version)

R1 - sh run

QUESTION 12

The topology below is running EIGRP. You are required to troubleshoot and resolve the EIGRP issues between the various routers. Use the appropriate show commands to troubleshoot the issues.



Question 4

Study the following output taken on R1:

```
R1#ping 10.5.5.55 source 10.1.1.1
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 10.5.5.55, timeout is 2 seconds:
Packet sent with a source address of 10.1.1.1
.....
Success rate is 0 percent (0/5)
```

Why are the pings failing?

- A. The network statement is missing on R5.
- B. The loopback interface is shut down on R5.
- C. The network statement is missing on R1.
- D. The IP address that is configured on the Lo1 interface on R5 is incorrect.

Correct Answer: C

Section: (none)

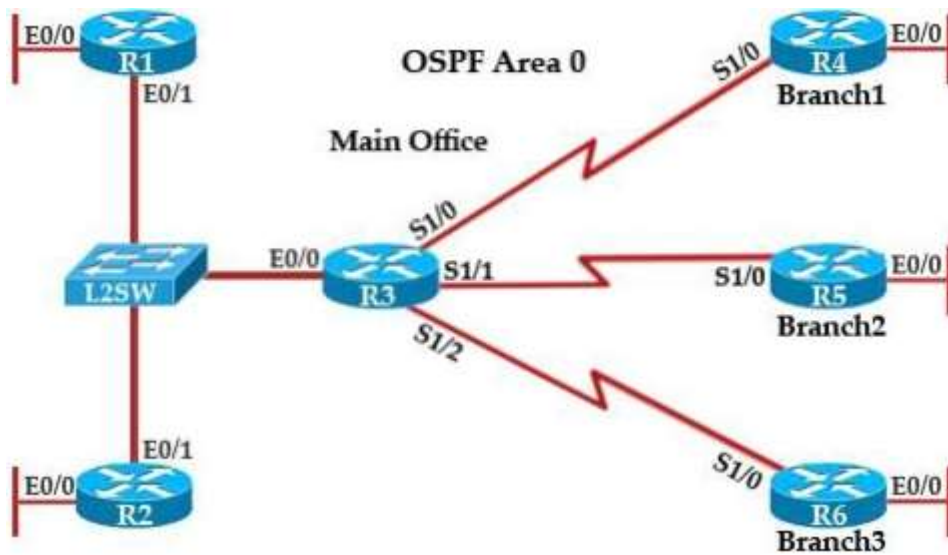
Explanation

Explanation/Reference:

R1 - sh run

QUESTION 13

Refer to the topology. Your company has decided to connect the main office with three other remote branch offices using point-to-point serial links. You are required to troubleshoot and resolve OSPF neighbor adjacency issues between the main office and the routers located in the remote branch offices.



Question 1

An OSPF neighbor adjacency is not formed between R3 in the main office and R4 in the Branch1 office. What is causing the problem?

- A. There is an area ID mismatch.
- B. There is a Layer 2 issue; an encapsulation mismatch on serial links.
- C. There is an OSPF hello and dead interval mismatch.
- D. The R3 router ID is configured on R4.

Correct Answer: A

Section: (none)

Explanation

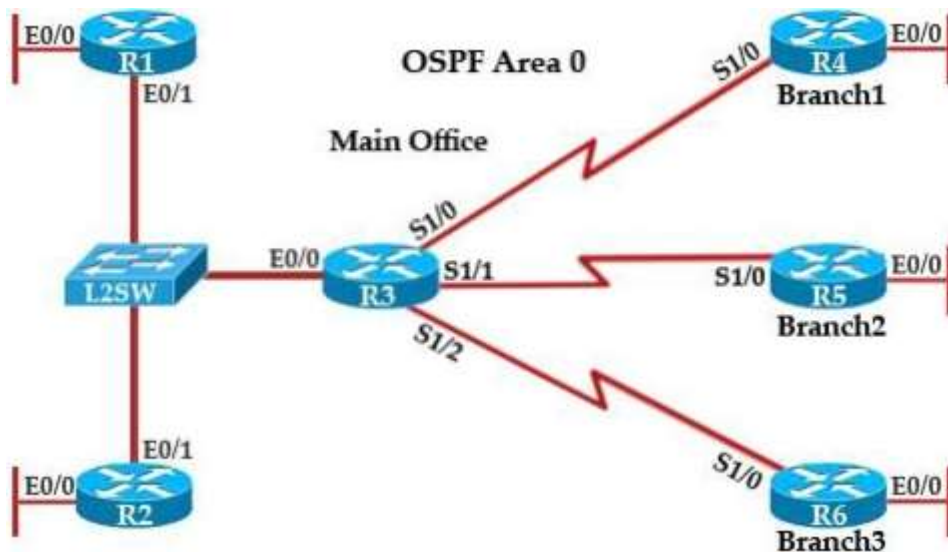
Explanation/Reference:

R3 - sh run

R4 - sh run

QUESTION 14

Refer to the topology. Your company has decided to connect the main office with three other remote branch offices using point-to-point serial links. You are required to troubleshoot and resolve OSPF neighbor adjacency issues between the main office and the routers located in the remote branch offices.



Question 2

An OSPF neighbor adjacency is not formed between R3 in the main office and R5 in the Branch2 office. What is causing the problem?

- A. There is an area ID mismatch.

- B. There is a PPP authentication issue; a password mismatch.
- C. There is an OSPF hello and dead interval mismatch.
- D. There is a missing network command in the OSPF process on R5.

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

R3 - sh run

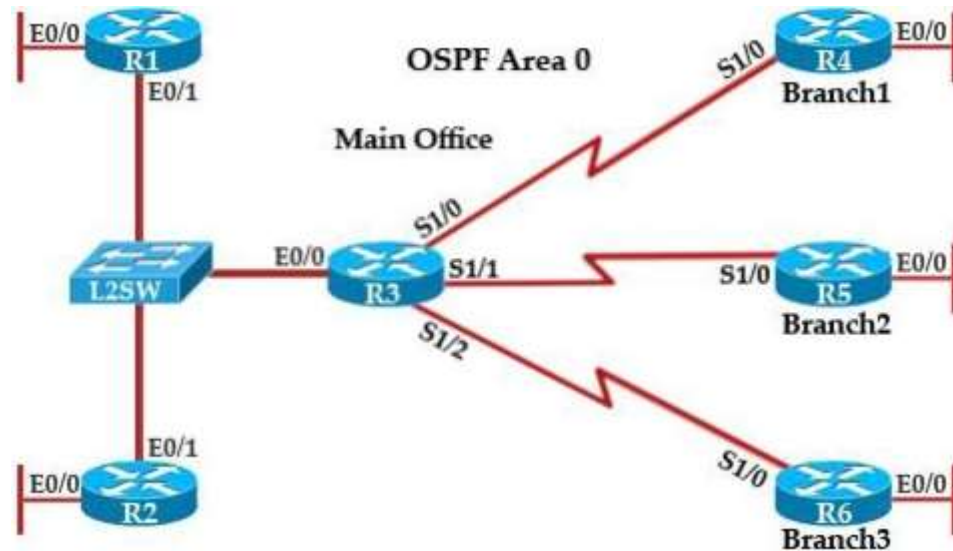
R5 - sh run

R3 - sh ip ospf int s1/1

R5 - sh ip ospf int s1/0

QUESTION 15

Refer to the topology. Your company has decided to connect the main office with three other remote branch offices using point-to-point serial links. You are required to troubleshoot and resolve OSPF neighbor adjacency issues between the main office and the routers located in the remote branch offices.



Question 3

R1 does not form an OSPF neighbor adjacency with R2. Which option would fix the issue?

- A. R1 ethernet0/1 is shutdown. Configure no shutdown command.
- B. R1 ethernet0/1 configured with a non-default OSPF hello interval of 25; configure no ip ospf hello-interval 25
- C. R2 ethernet0/1 and R3 ethernet0/0 are configured with a non-default OSPF hello interval of 25; configure no ip ospf hello-interval 25
- D. Enable OSPF for R1 ethernet0/1; configure ip ospf 1 area 0 command under ethernet0/1

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

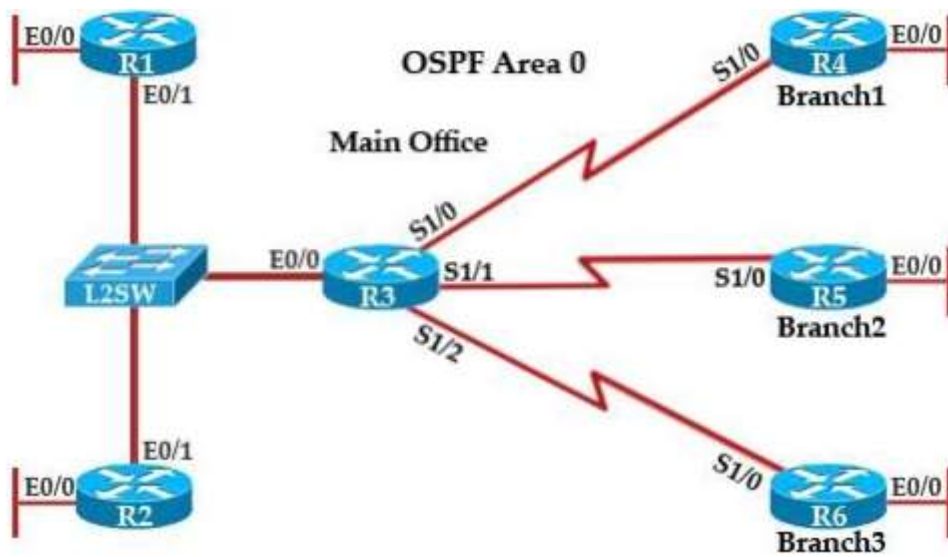
R1 - sh run

R2 - sh run

Maybe answer A (another version)

QUESTION 16

Refer to the topology. Your company has decided to connect the main office with three other remote branch offices using point-to-point serial links. You are required to troubleshoot and resolve OSPF neighbor adjacency issues between the main office and the routers located in the remote branch offices.



Question 4

An OSPF neighbor adjacency is not formed between R3 in the main office and R6 in the Branch3 office. What is causing the problem?

- A. There is an area ID mismatch.
- B. There is a PPP authentication issue; the username is not configured on R3 and R6.
- C. There is an OSPF hello and dead interval mismatch.
- D. The R3 router ID is configured on R6.

Correct Answer: D

Section: (none)

Explanation

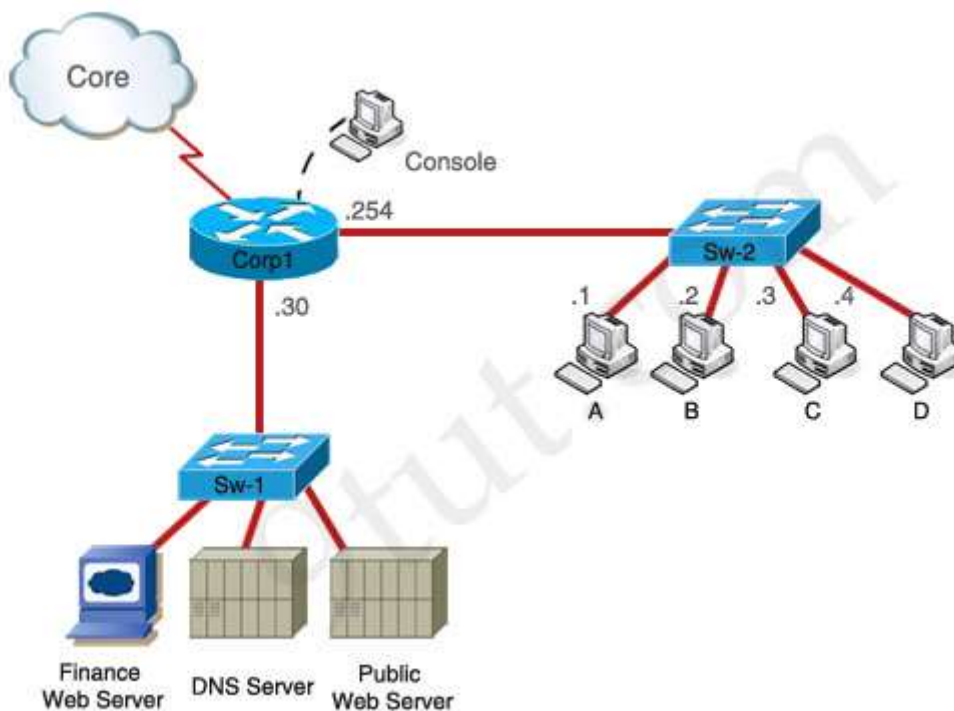
Explanation/Reference:

R3 - sh run

R6 - sh run

Maybe only one router has the "ppp authentication chap", still answer D

QUESTION 17



Question

Security is being added to the Corp1 router. The user on host C should be able to use a web browser to access financial information from the Finance Web Server. No other hosts from the LAN nor the Core should be able to use a web browser to access this server. Since there are multiple resources for

the corporation at this location including other resources on the Finance Web Server, all other traffic should be allowed.

The task is to create and apply a numbered access-list with no more than three statements that will allow ONLY host C web access to the Finance Web Server. No other hosts will have web access to the Finance Web Server. All other traffic is permitted.

Access to the router CLI can be gained by clicking on the appropriate host.

All passwords have been temporarily set to "cisco".

The Core connection uses an IP address of 198.18.196.65

The computers in the Hosts LAN have been assigned addresses of 192.168.33.1 – 192.168.33.254

Host A 192.168.33.1

Host B 192.168.33.2

Host C 192.168.33.3

Host D 192.168.33.4

The servers in the Server LAN have been assigned addresses of 172.22.242.17 – 172.22.242.30

The Finance Web Server is assigned an IP address of 172.22.242.23.

The Public Web Server is assigned an IP address of 172.22.242.17

- A. Corp1>enable
- B. Corp1#show running-config
- C. Corp1#configure terminal
- D. **Corp1(config)#access-list 100 permit tcp host 192.168.33.3 host 172.22.242.23 eq 80**
- E. **Corp1(config)#access-list 100 deny tcp any host 172.22.242.23 eq 80**
- F. Corp1(config)#access-list 100 permit ip any any
- G. Corp1(config)#interface fa0/1
- H. Corp1(config-if)#ip access-group 100 out
- I. Corp1(config-if)#end
- J. Corp1#copy running-config startup-config

Correct Answer:

Section: (none)

Explanation

Explanation/Reference:

Modification 1 (Mod 1):

Permit host B from accessing finance server

access-list 100 permit ip host 192.168.33.2 host 172.22.242.23

Deny host B from accessing other servers (not the whole network)

access-list 100 deny ip host 192.168.33.2 172.22.242.16 0.0.0.15

Modification 2 (Mod 2):

Only allow Host C to to access the financial server

access-list 100 permit ip host 192.168.33.3 host 172.22.242.23

Not allow anyone else in any way communicate with the financial server

access-list 100 deny ip any host 172.22.242.23

Modification 3 (Mod 3):

– Host C should be able to use a web browser(HTTP)to access the Finance Web Server

access-list 100 permit tcp host 192.168.33.3 host 172.22.242.23 eq 80

– Other types of access from host C to the Finance Web Server should be blocked

– All access from hosts in the Core or local LAN to the Finance Web Server should be blocked

access-list 100 deny ip any host 172.22.242.23

Modification 4 (Mod 4):

Host C should be able to use a web browser to access the financial web server

access-list 100 permit tcp host 192.168.33.3 host 172.22.242.23 eq 80

Other types of access from host C to the finance web server should be blocked

access-list 100 deny ip host 192.168.33.3 host 172.22.242.23