

Sections

- 1. Network Fundamentals
- 2. LAN Switching Technologies
- 3. Routing Technologies
- 4. WAN Technologies
- 5. Infrastructure Services
- 6. Infrastructure Security
- 7. Infrastructure Management

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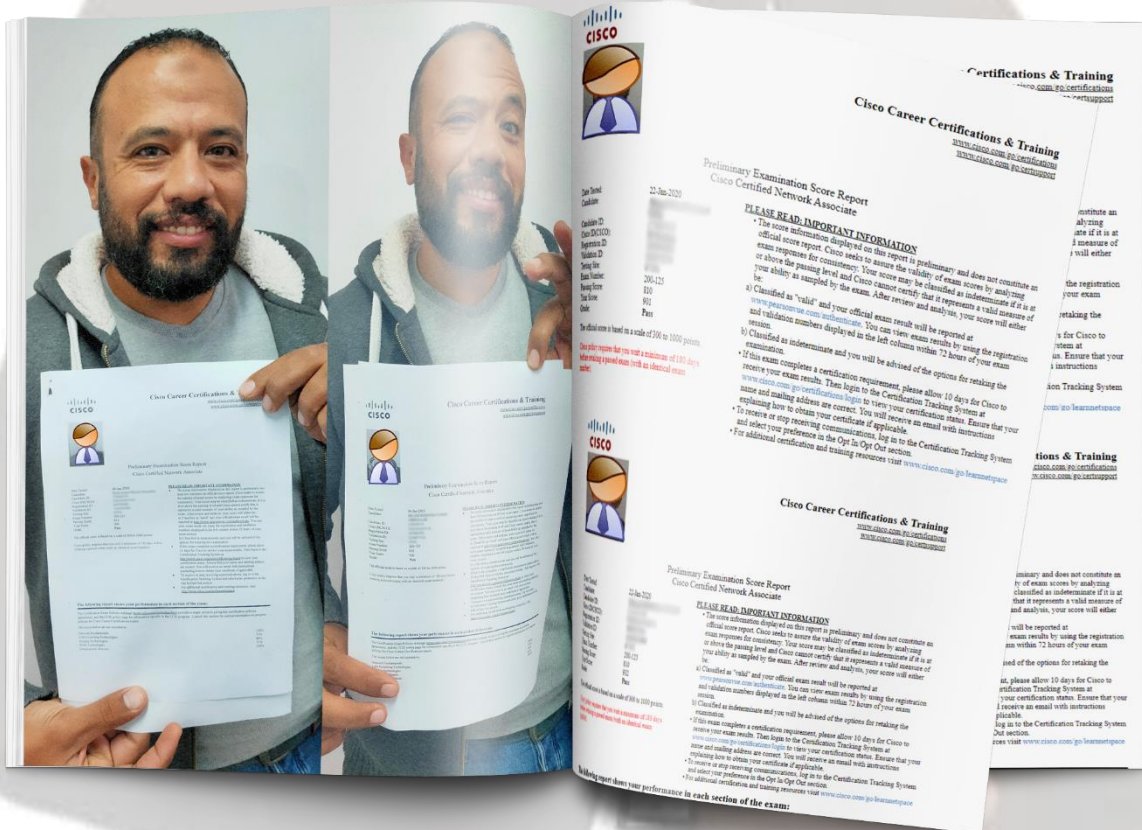
File Version: 6060

QUESTIONS : 267

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QUESTION 1

Which two functions describe benefits of aggregated chassis technology? (Choose two.)

- A. It supports redundant configuration files.
- B. It reduces management overhead.**
- C. It requires only three IP addresses per VLAN.
- D. It requires only one IP address per VLAN.**
- E. It supports HSRP, VRRP, and GLBP.
- F. Switches can be located anywhere regardless of their physical distance from one another.

Correct Answer: B D

QUESTION 2

Which type of device should you use to preserve IP addresses on your network?

- A. intrusion prevention device
- B. firewall**
- C. WLAN controller
- D. load balancer

Correct Answer: B

QUESTION 3

In a CDP environment, what happens when the CDP interface on an adjacent device is configured without an IP address?

- A. CDP operates normally, but it cannot provide any information for that neighbor.
- B. CDP operates normally, but it cannot provide IP address information for that neighbor.**
- C. CDP uses the IP address of another interface for that neighbor.
- D. CDP becomes inoperable on that neighbor.

Correct Answer: B

QUESTION 4

```
interface GigabitEthernet0/0
  no ip address
  ip virtual-reassembly
  ip tcp adjust-mss 1452
  pppoe enable
  pppoe-client dial-pool-number 1
interface Dialer1
  ip address negotiated
  encapsulation ppp
  dialer pool 1
  dialer-group 1
  ppp pap sent-username cisco password cisco123
  ppp chap password cisco123
ip route 0.0.0.0 0.0.0.0 Dialer1
```

Which two configuration lines must you add to the Dialer1 interface configuration to enable the two interfaces to establish a PPPoE connection? (Choose two)

- A. ppp enable group
- B. ppp chap hostname cisco
- C. no cdp enable
- D. ppp authentication pap chap callin
- E. ip unnumbered GigabitEthernet0/0

Correct Answer: B D

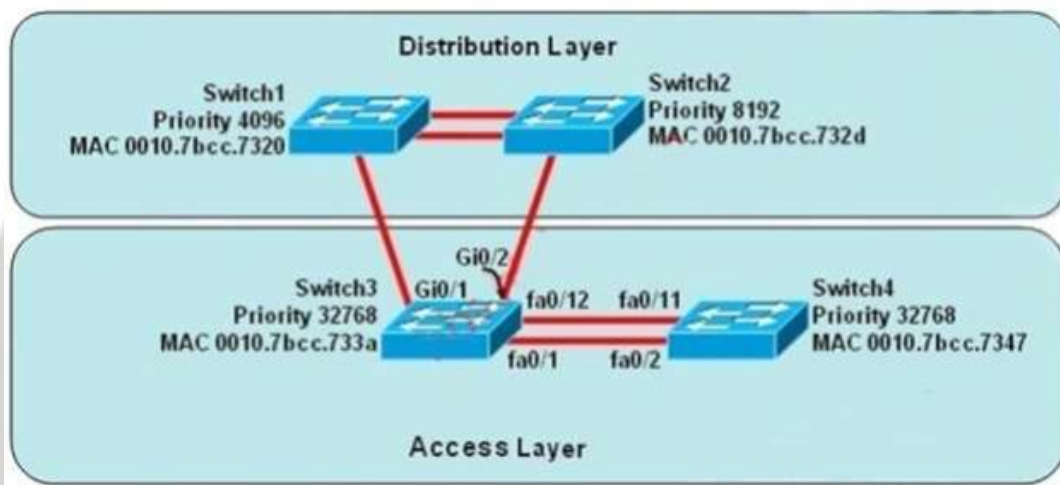
QUESTION 5

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

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

Correct Answer: BE

QUESTION 6



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

- A. Switch3, port fa0/1
- B. Switch3, port fa0/12
- C. Switch4, port fa0/11
- D. Switch4, port fa0/2
- E. Switch3, port Gi0/1
- F. Switch3, port Gi0/2

Correct Answer: C

QUESTION 7

```
Port Security : Enabled
Port Status: : Secure-shutdown
Violation Mode : Shutdown
Aging Time : 0 mins
Aging Type : Absolute
SecureStaticAddress Aging : Disabled
Maximum MAC Addresses : 2
Total MAC Addresses : 2
Configured MAC Addresses : 0
Sticky MAC Addresses : 2
Last Source Address:Vlan : 0001.0fAA.33BB:1
Security Violation Count : 1
```

Refer to the exhibit. Which two statements about the interface that generated the output are true? (Choose two.)

A. The interface dynamically learned two secure MAC addresses.

B. A syslog message is generated when the maximum number of secure MAC addresses is reached on the interface.

C. Two secure MAC address are manually configured on the interface.

D. The interface is error-disabled.

E. An SNMP trap is generated when the maximum number of secure MAC addresses is reached on the interface.

Correct Answer: AD

QUESTION 8

Which two statements about MPLS are true? (Choose two)

- A. All connections are full mesh with full redundancy
- B. It uses point-to-point physical circuits to provide logical full-mesh connections to the service provider
- C. Because it is a mature technology it requires less skill to administer
- D. It provides easily scalable bandwidth to support newer connectivity options for numerous remote sites.
- E. It requires a hub in a large data center with a fast connection to the service provider

Correct Answer: BD

QUESTION 9

Which value must you configure on a device before EIGRP for IPv6 can start running?

- A. public IP address
- B. loopback interface
- C. router ID
- D. process ID

Correct Answer: C

QUESTION 10

You are implementing WAN access for an enterprise network while running applications that require a fully meshed network, which two design standards are appropriate for such an environment? (Choose two.)

- A. a dedicated WAN distribution layer, to consolidate connectivity to remote sites
- B. a centralized DMVPN solution, to simplify connectivity for the enterprise
- C. multiple MPLS VPN connections with static routing
- D. a collapsed core and distribution layer, to minimize costs
- E. multiple MPLS VPN connections with dynamic routing

Correct Answer: B E

QUESTION 11

How many bits in length is a VLAN identifier?

- A. 16
- B. 32
- C. 48
- D. 64

Correct Answer: B

QUESTION 12

```
R1#show ip route | b Gateway

Gateway of last resort is 10.111.34.105 to network 0.0.0.0

B* 0.0.0.0/0 [20/0] via 10.111.34.105, 2w6d
   10.0.0.0/8 is variably subnetted, 9 subnets, 3 masks
   C   10.43.76.0/25 is directly connected, GigabitEthernet0/0
   L   10.43.76.125/32 is directly connected, GigabitEthernet0/0
   C   10.48.151.196/30 is directly connected, FastEthernet0/2/0
   L   10.48.151.197/32 is directly connected, FastEthernet0/2/0
   C   10.111.34.104/30 is directly connected, Serial0/0/0
   L   10.111.34.106/32 is directly connected, Serial0/0/0
   D   10.111.34.108/30
       [90/2181120] via 10.48.151.198, 2w6d, FastEthernet0/2/0
   C   10.111.248.26/32 is directly connected, Loopback0
   D   10.111.248.27/32
       [90/156160] via 10.48.151.198, 2w6d, FastEthernet0/2/0
```

Which two facts about the routing table are true? (Choose two)

- A. Nine different networks are within the 10.0.0.0/8 range.
- B. The router uses interface GigabitEthernet0/0 to reach host address 10.111.35.106
- C. Three different networks are within the 10.0.0.0/8 range.
- D. The router uses interface Serial0/0/0/0 to reach network 192.168.1.0/24
- E. The router uses interface Serial 0/0/0 to reach host address 10.43.76.123

Answer: A D

QUESTION 13

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

QUESTION 14

Which two protocols does the internet layer in the TCP/IP model encapsulate? (Choose two)

- A. DNS
- B. TCP
- C. SMTP
- D. ARP**
- E. Icmp**

Correct Answer: D,E

QUESTION 15

Which two statements about the tunnel mode ipv6ip command are true? (Choose two.)

- A. It enables the transmission of IPv6 packets within the configured tunnel.**
- B. It specifies IPv4 as the encapsulation protocol.**
- C. It specifies IPv6 as the encapsulation protocol.
- D. It specifies IPv6 as the transport protocol.
- E. It specifies that the tunnel is a Teredo tunnel.

Correct Answer: AB

QUESTION 16

In which STP state does MAC address learning take place on a PortFast-enabled port?

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

Correct Answer: B

QUESTION 17

Under which circumstance is a router on a stick most appropriate?

- A. When a router has multiple subnets on a single physical link.
- B. When a router has single subnet on multiple physical links.
- C. When a router has multiple interface on single physical links.
- D. When a router has single interface on multiple physical links.

Correct Answer: A

QUESTION 18

Which type of routing protocol operates by exchanging the entire routing information?

- A. distance vector protocols
- B. link-state protocols
- C. path vector protocols
- D. exterior gateway protocols

Correct Answer: A

QUESTION 19

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

```
Switch# show spanning-tree interface fastethernet0/10
```

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

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

Correct Answer: C

QUESTION 20

Which two TCP messages use a 32-bit number as part of the initial TCP handshake? (Choose two.)

A. ACK

B. FIN

C. RST

D. SYN-ACK

E. SYN

Answer: A,E

QUESTION 21

Drag and drop the DHCP client states from the left into the standard order in which the client passes through them on the right.

bound	first
initializing	second
rebinding	third
renewing	fourth
requesting	fifth
selecting	sixth

Correct Answer:

	initializing
	selecting
	requesting
	bound
	renewing
	rebinding

QUESTION 22

Which two statements about LLDP are true? (Choose two)

- A. It functions at Layer 2 and Layer 3
- B. It is implemented in accordance with the 802.11a specification
- C. It is a Cisco-proprietary technology
- D. It uses mandatory TLVs to discover the neighboring devices
- E. It enables systems to learn about one another over the data-link layer

Correct Answer: DE

QUESTION 23

Which option is the industry-standard protocol for EtherChannel?

- A. PAGP
- B. LACP
- C. Cisco Discovery Protocol
- D. DTP

Correct Answer: B

QUESTION 24

Which two TLVs does LLDP support?(choose two)

- A. system description
- B. port duplex
- C. management address
- D. native VLAN
- E. spanning tree

Correct Answer: AC

Section: WAN

QUESTION 25

A network administrator enters the following command on a router: logging trap 3. What are three message types that will be sent to the Syslog server? (Choose three)

- A. warning
- B. informational
- C. error
- D. emergency
- E. debug
- F. critical

Correct Answer: CDF

QUESTION 26

Which component of an Ethernet frame is used to notify a host that traffic is coming?

- A. Data field
- B. preamble
- C. start of frame delimiter
- D. Type field

Correct Answer: D

QUESTION 27

which definition of a host 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: C

QUESTION 28

Which two statements about IPv6 mulitcast address are true? (Choose two)

- A. It the lifetime parameter is set to 1, the route is permanent.
- B. They use the prefix FF00::/8
- C. They use the prefix FC80::/8
- D. They identify a group of interfaces on different devices
- E. If the scope parameter is set to 5, the route is local to the node

Correct Answer: BD

QUESTION 29

While troubleshooting a GRE tunnel interface issue, the show interface command output displays tunnel status up, but the line protocol is down. What is the root cause for this issues?

- A. The route to the tunnel destination address is through the tunnel itself.
- B. The next hop server is misconfigured
- C. The tunnel was just reset.
- D. The interface has been administratively shutdown.

Correct Answer: A

QUESTION 30

Which cloud service that usually provides software beyond the basic operating system is normally used for development?

- A. infrastructure-as-a-service
- B. software-as-a-service
- C. database-as-a-service
- D. platforms-as-a-service

Correct Answer: D

QUESTION 31

Which two goals are reasons to implement private IPv4 addressing on your network? (Choose two)

- A. Reduce the risk of a network security breach.
- B. Comply with local law.
- C. Conserve IPv4 addresses.
- D. Comply with PCI regulations.
- E. Reduce the size of the forwarding table on network routers.

Correct Answer: AC

QUESTION 32

Which three commands are required to enable NTP authentication on a Cisco router? (Choose three)

- A. ntp max-associations
- B. ntp peer
- C. ntp refclock
- D. ntp authentication-key
- E. ntp trusted-key
- F. ntp authenticate

Correct Answer: DEF

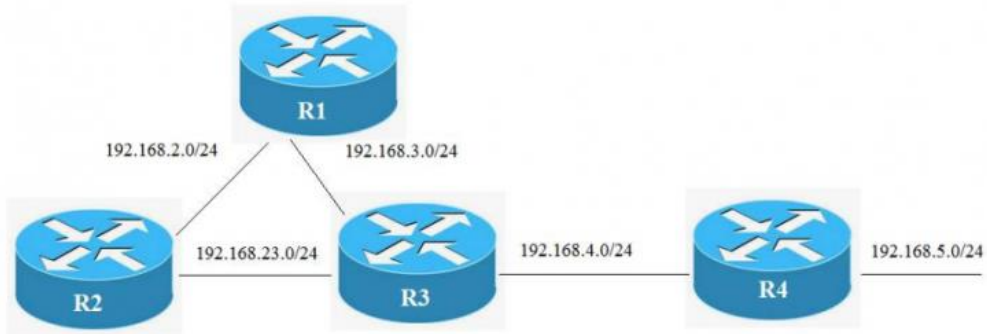
QUESTION 33

Which command must you enter to guarantee that an HSRP router with higher priority becomes the HSRP primary router after it is reloaded?

- A. standby 10 preempt
- B. standby 10 version 1
- C. standby 10 priority 150
- D. standby 10 version 2

Correct Answer: C

QUESTION 34



```
R3# show ip route
C 192.168.4.0/24 is directly connected, Ethernet1/2
S 192.168.5.0/24 [1/0] via 192.168.4.1
C 192.168.23.0/24 is directly connected, Ethernet1/1
R 192.168.1.0/24 [120/1] via 192.168.23.1, 00:00:10, Ethernet1/1
[120/1] via 192.168.3.1, 00:00:17, Ethernet1/0
C 192.168.3.0/24 is directly connected, Ethernet1/0
```

Refer to the exhibit. If all routers on this network run RIPv2, Which configurations should you apply to router R3 to produce this routing table?

- router rip
network 192.168.3.0
network 192.168.4.0
network 192.168.23.0
passive-interface default
- router rip
version 2
network 192.168.3.0
network 192.168.4.0
network 192.168.23.0
distance 50
- router rip
version 2
network 192.168.3.0
network 192.168.4.0
network 192.168.23.0
distance 70
passive-interface default
- router rip
version 2
network 192.168.3.0
network 192.168.23.0
distance 50

Correct Answer: A

QUESTION 35

Which feature or protocol must you enable so that the output of the show interfaces trunk command includes information native VLAN mismatches?

- A. DTP
- B. PortFast
- C. CDP**
- D. RSTP

Correct Answer: C

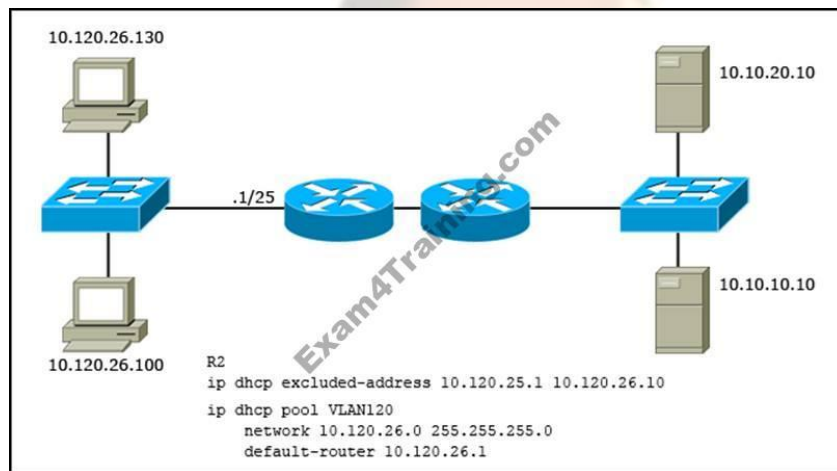
QUESTION 36

Which type of address is the public IP address of a NAT device?

- A. inside global**
- B. inside local
- C. outside global
- D. outside local
- E. outside public
- F. inside public

Correct Answer: A

QUESTION 37



Refer to the exhibit. Users in your office complaining that they cannot connect to the servers at a remote site. When troubleshooting, you find that you can successfully reach the servers from router R2. What is the most likely reason that the other users are experiencing connection failure?

- A. The ip helper-address command is missing on the R2 interface that connects to the switch.
- B. Interface ports are shut down on the remote servers
- C. VLSM is misconfigured between the router interface and DHCP pool
- D. The DHCP address pool has been exhausted

Correct Answer: C

QUESTION 38

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

QUESTION 39

Which chassis-aggregation technology binds two individual Cisco switches at control and data planes to act as one logical switch?

- A. VSS
- B. VRRP
- C. vPC
- D. LACP

Correct Answer: A

QUESTION 40

Which function can be centralized in software-defined networking?

- A. data plane
- B. control plane
- C. services plane
- D. application plane

Correct Answer: B

QUESTION 41

How does a Cisco IP phone handle untagged traffic that it receives from an attached PC?

- A. It drops the traffic.
- B. It tags the traffic with the default VLAN.
- C. It allows the traffic to pass through unchanged.
- D. It tags the traffic with the native VLAN.

Correct Answer: C

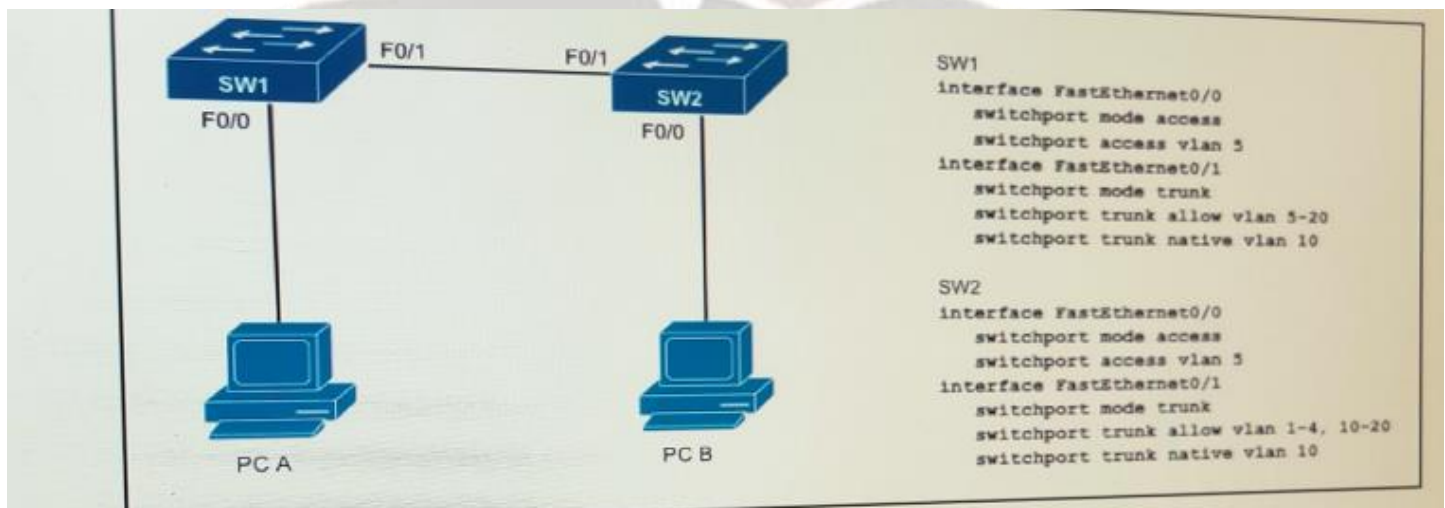
QUESTION 42

Which command must be present in a Cisco device configuration to enable the device to resolve an FQDN?

- A. ip name-server
- B. ip domain-name
- C. ip host
- D. ip domain-lookup

Correct Answer: D

QUESTION 43



Refer to the exhibit. What is the effect of the configuration?

- A. Traffic from PC A is dropped when it uses the trunk to communicate with PC B
- B. Traffic from PC A is sent untagged when it uses the trunk to communicate with PC B
- C. Traffic from PC B is dropped when it uses the trunk to communicate with PC A
- D. Traffic from PC B is sent untagged when it uses the trunk to communicate with PCA

Correct Answer: C

QUESTION 44

Which port status does the interface enter when UDLD detects a unidirectional link?

- A. shutdown
- B. up/up
- C. down/down

D. errdisable

Correct Answer: D

QUESTION 45

**Which two operational modes are supported on the members of a stackwise switch stack?
(Choose two)**

A. power-sharing

B. active

C. standby

D. passive

E. redundant

Correct Answer: BC

QUESTION 46

**Which three statements describe the reasons large OSPF networks use a hierarchical design?
(Choose three.)**

A. to confine network instability to single areas of the network.

B. to reduce the complexity of router configuration

C. to speed up convergence

D. to lower costs by replacing routers with distribution layer switches

E. to decrease latency by increasing bandwidth

F. to reduce routing overhead

Correct Answer: ACF

QUESTION 47

Which technology supports multiple dynamic secure connections an unsecure transport network?

- A. DMVPN
- B. VPN
- C. Site-to-site VPN
- D. client VPN

Correct Answer: A

QUESTION 48

Which command can you enter to display the operational status of the network ports on a router?

- A. show interface status
- B. show running-config interface fastethernet 0/1
- C. show ip interface brief
- D. show interface switchport

Correct Answer: C

QUESTION 49

Which IOS troubleshooting tool should you use to direct system messages to your screen?

- A. APIC-EM
- B. local SPAN
- C. log events
- D. terminal monitor

Correct Answer: D

QUESTION 50

Which two statements about the routing table are true? (Choose two)

- A. It displays the metric and the reported distance of the routes that it learns.
- B. It displays information about the successor and the feasible successor.
- C. It uses the > symbol to indicate the best route.
- D. It uses letters such as O, I and D to identify how a route is learned.
- E. It displays the administrative distance and metric of the routes that it learns.

Correct Answer: DE

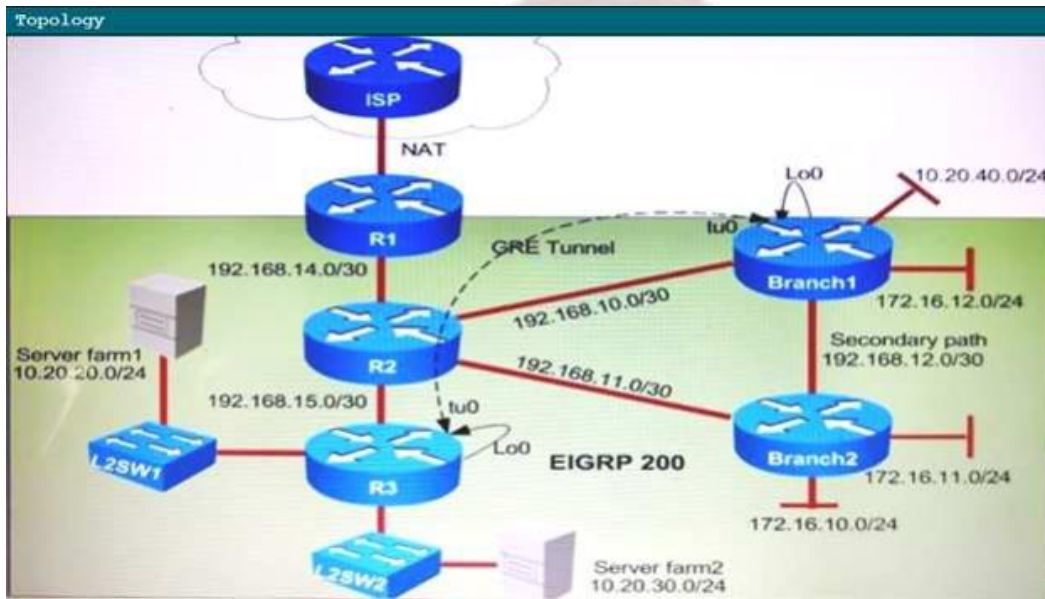
QUESTION 51

Scenario You are implementing EIGRP between the main office and branch offices. In Phase 1, you must implement and verify EIGRP configurations as mentioned in the topology. In Phase 2, your colleague is expected to do NAT and ISP configurations.

Identity the issues that you are encountering during Phase 1 EIGRP implementation. Router R1 connects the main office to the Internet and routers R2 and R3 are internal routers. Routers Branch1 and Branch2 connect to router R2 in the main office. Users from the Branch1 LAN network 10.20.40.0/24 are expected to perform testing of the application that is hosted on the servers in Server farm1, before servers are available for production. The GRE tunnel is configured between R3 and Branch1, and traffic between server farm 1 and Branch1 LAN network 10.20.40.0/24 is routed through the GRE tunnel using static routes. The link between Branch1 and Branch2 is used as a secondary path in the event of failure of the primary path to main office.

You have console access on R1, R2, R3, Branch1, and Branch2 devices. Use only show commands to troubleshoot the issues.

Instructions Enter IOS commands on the device to verify network operation and answer for multiple-choice questions. THIS TASK DOES NOT REQUIRE DEVICE CONFIGURATION. Click on the device icon to gain access to the console of the router. No console or enable passwords are required. To access the multiple-choice questions, click on the numbered boxes on the left of the top panel. There are four multiple-choice questions with this task. Be sure to answer all four questions before selecting the Next button.



```
R1
interface Ethernet0/0
  description ***Link to ISP***
  no ip address
  !
interface Ethernet0/1
  description ***Link to R2***
  ip address 192.168.14.250 255.255.255.252
  !
interface Ethernet0/2
  no ip address
  shutdown
  !
interface Ethernet0/3
  no ip address
  shutdown
  !
  !
router eigrp 200
  network 192.168.14.0
  !
  in forward-protocol nd
```

R2

```
interface Ethernet0/0
  description ***Link to R1***
  ip address 192.168.14
  !
interface Ethernet0/1
  description ***Link to R3***
  ip address 192.168.15.1 255.255.255.252
  !
interface Ethernet0/2
  description ***Link to Branch***
  ip address 192.168.10.1 255.255.255.252
  !
interface Ethernet0/3
  description ***Link to Branch2***
  ip address 192.168.11.1 255.255.255.252
  !
  !
router eigrp 200
  network 192.168.10.0
  network 192.168.11.0
  network 192.168.14.0
```

R3

```
ip address 192.168.100.1 255.255.255.252
keepalive 5 3
tunnel source Loopback0
tunnel destination 10.16.200.2
!
interface Ethernet0/0
  description ***Link to Server farm2***
  ip address 10.20.30.1 255.255.255.0
  !
interface Ethernet0/1
  description ***Link to Server farm1***
  ip address 10.20.20.1 255.255.255.0
  !
interface Ethernet0/2
  description ***Link to R2***
  ip address 192.168.15.2 255.255.255.252
  ip access-group BLOCKFIGRP in
  !
interface Ethernet0/3
  no ip address
  shutdown
  !
  !
  !
router eigrp 200
  network 10.16.200 1 0 0 0 0
```

```
Branch1
!
!
router eigrp 200
 network 10.16.200.2 0.0.0.0
 network 192.168.10.0
 network 192.168.12.0
!
ip forward-protocol nd
!
!
Branch1#show ip eigrp nei
Branch1#show ip eigrp neighbors
EIGRP-IPv4 Neighbors for AS(200)
H Address          Interface      Hold Uptime    SRTT  RTO  0
Seq
                               (sec)         (ms)    Cnt
Num
0  192.168.10.1     Et0/1         13  00:21:25     6  100  0
124
1  192.168.12.2     Et0/2         11  02:56:31     5  100  0
16
Branch# show acc
Branch#show ace
Branch#show access-list
Branch#
```

```
Branch2
 description ***Link to Branch2 LAN***
 ip address 172.16.11.1 255.255.255.0
!
interface Ethernet0/1
 description ***Link to R2***
 ip address 192.168.11.2 255.255.255.252
 ip access-group BLOCKEIGRP in
!
interface Ethernet0/2
 description ***Secondary Path - Link to Branch2***
 ip address 192.168.12.2 255.255.255.252
!
interface Ethernet0/3
 ip address 172.16.10.1 155.255.255.0
!
!
router eigrp 200
 network 172.16.0.0
 network 192.168.11.0
 network 192.168.12.0
!
ip forward-protocol nd
!
!
```

The traffic from Branch2 to the main office is using the secondary path instead of the primary path connected to R2. Which case of the issue is true?

- A. The network 192.168.11.0/30 was not advertised into EIGRP on Branch2.
- B. The IP address was misconfigured between the Branch2 and R2 interfaces.
- C. EIGRP packets were blocked by the inbound ACL on Branch2.
- D. The primary path has more link delay configured then secondary path which causes EIGRP to choose the secondary path.

Correct Answer: C

Section: Routing Technologies

Examine the R1 routing table. None of the internal routes other than locally connected appear in the routing table. Which cause of the issue is true?

- A. EIGRP neighbor relationship was not formed due to AS mismatch between routers R1 and R2.
- B. EIGRP neighbor relationship was not formed due to K values mismatch between routers R1 and R2.
- C. EIGRP packets were blocked by the inbound ACL on R1.
- D. IP address was misconfigured between the R1 and R2 interfaces.

Correct Answer: D

Section: Routing Technologies

You are verifying the EIGRP configurations in the topology. Which statement is true?

- A. Branch2 LAN network 172.16.11.0/24 is not advertised into the EIGRP network.
- B. Branch2 LAN network 172.16.10.0/24 is not advertised into the EIGRP network.
- C. R3 server farm2 network 10.20.30.0/24 is not advertised into the EIGRP network.
- D. Branch1 LAN network 172.16.12.0/24 is not advertised into the EIGRP network.

Correct Answer: D

Section: Routing Technologies

The GRE tunnel between R3 and Branch1 is down. Which case of the issue is true?

- A. The tunnel source loopback0 interface is not advertised into the EIGRP in Branch1.
- B. The tunnel source loopback0 interface is not advertised into the EIGRP in R3.

C. The EIGRP neighbor relationship was not formed due to EIGRP packets blocked by the inbound ACL on R3.

D. The EIGRP neighbor relationship was not formed due the IP address being misconfigured between the R2 and R3 interfaces.

Correct Answer: C

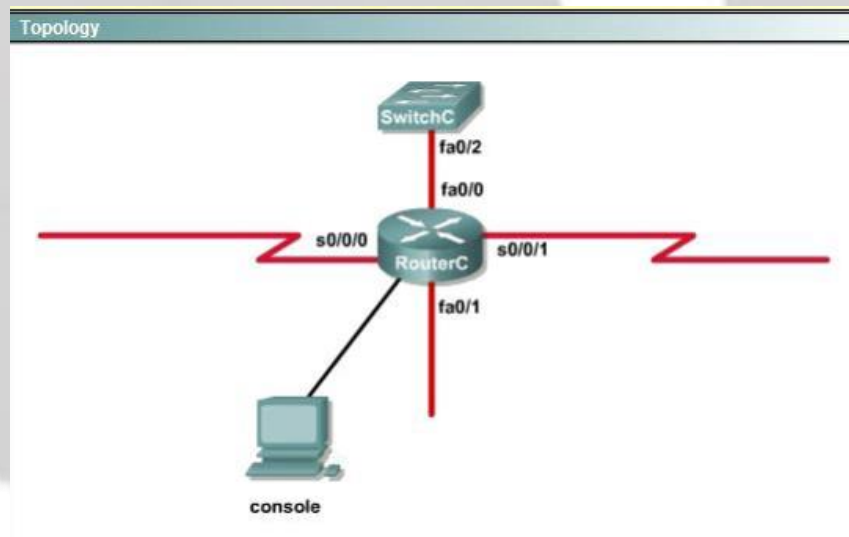
Section: Routing Technologies

QUESTION 52

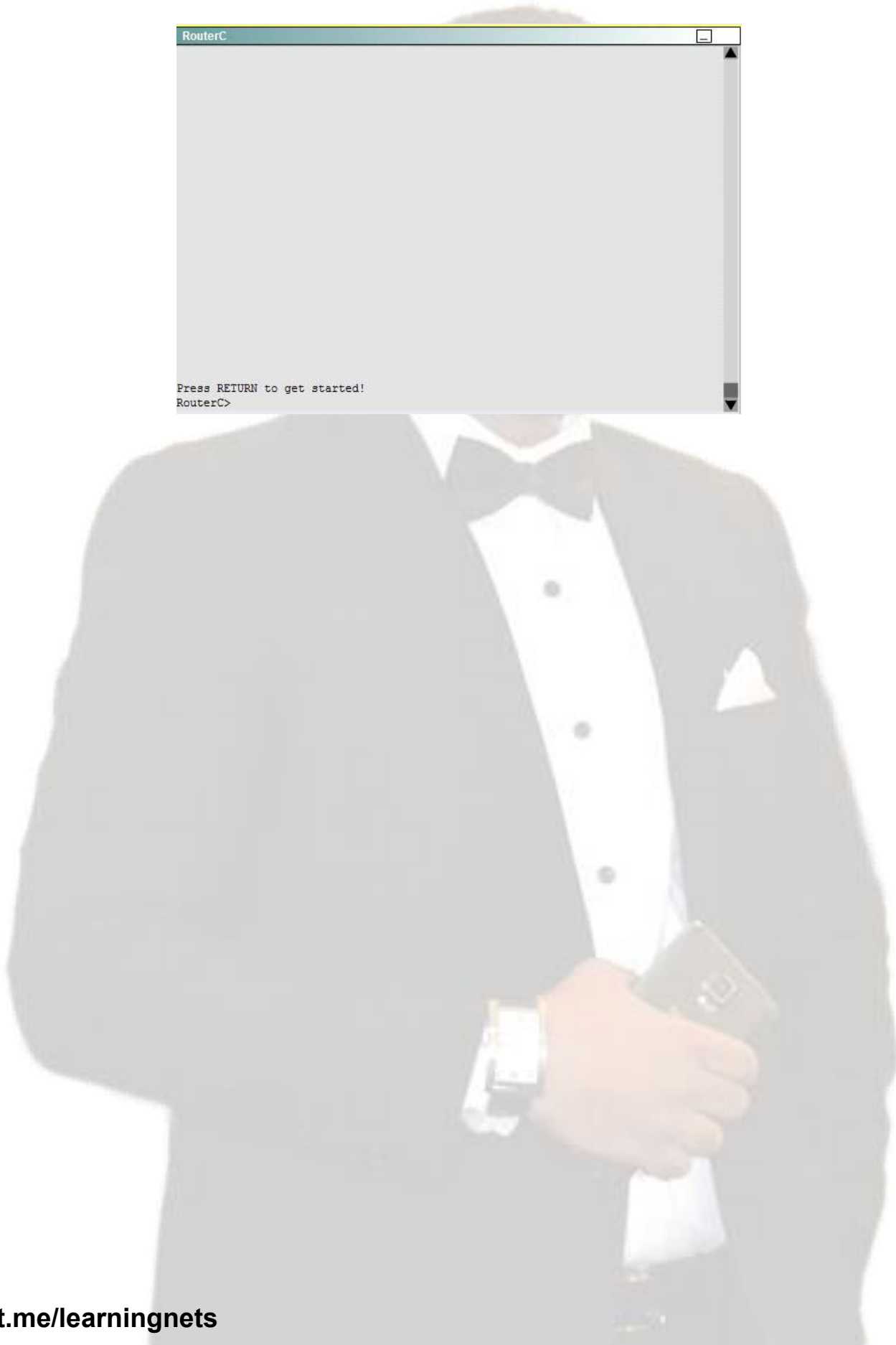
An administrator is trying to ping and telnet from SwitchC to RouterC with the results shown below.

```
SwitchC>  
SwitchC> ping 10.4.4.3  
Type escape sequence to abort  
Sending 5, 100-byte ICMP Echos to 10.4.4.3, timeout is 2 seconds:  
U.U.U  
Success rate is 0 percent (0/5)  
SwitchC>  
SwitchC> telnet 10.4.4.3  
Trying 10.4.4.3 ...  
% Destination unreachable; gateway or host down  
SwitchC>
```

Click the console connected to RouterC and issue the appropriate commands to answer the



```
RouterC  
  
Press RETURN to get started!  
RouterC>
```



```
<output omitted>

interface Loopback1
 ip address 172.16.4.1 255.255.255.0
 !
interface Loopback2
 ip address 10.145.145.1 255.255.255.0
 ipv6 address 2001:410:2:3::/64 eui-64
 !
interface FastEthernet0/0
 ip address 10.4.4.3 255.255.255.0
 ip access-group 106 in
 duplex auto
 speed auto
 !
interface FastEthernet0/1
 no ip address
 shutdown
 duplex auto
 speed auto
 !
interface Serial0/0/0
 bandwidth 64
 no ip address
 ip access-group 102 out
 encapsulation frame-relay
 ip ospf authentication
 ip ospf authentication
 ip ospf authentication-key san-fran
 !
interface Serial0/0/0.1 point-to-point
 ip address 10.140.3.2 255.255.255.0
 ip authentication mode eigrp 100 md5
 ip authentication key-chain eigrp 100 icndchain
 frame-relay interface-dlci 120
 !
interface Serial0/0/1
 bandwidth 64
 ip address 10.45.45.1 255.255.255.0
 ip access-group 102 in
 ip authentication mode eigrp 100 md5
 ip authentication key-chain eigrp 100 icndchain
 ip ospf authentication
 ip ospf authentication-key san-fran
 ipv6 address 2001:410:2:10::/64 eui-64
 !
```

```
router eigrp 100
 network 10.0.0.0
 network 172.16.0.0
 network 192.168.2.0
 not auto-summary
!
router ospf 100
 log-adjacency-changes
 network 10.4.4.3 0.0.0.0 area 0
 network 10.45.45.1 0.0.0.0 area 0
 network 10.140.3.2 0.0.0.0 area 0
 network 192.168.2.62 0.0.0.0 area 0
!
router rip
 version 2
 network 10.0.0.0
 network 172.16.0.0
!
ip default-gateway 10.1.1.2
!
!
ip http server
no ip http secure-server
!
```

```
access-list 102 permit tcp any any eq ftp
access-list 102 permit tcp any any eq ftp-data
access-list 102 deny tcp any any eq telnet
access-list 102 deny icmp any any echo-reply
access-list 102 permit ip any any

access-list 104 permit tcp any any eq ftp
access-list 104 permit tcp any any eq ftp-data
access-list 104 deny tcp any any eq telnet
access-list 104 permit icmp any any echo
access-list 104 deny icmp any any echo-reply
access-list 104 permit ip any any

access-list 106 permit tcp any any eq ftp
access-list 106 permit tcp any any ftp-data
access-list 106 deny tcp any any eq telnet
access-list 106 permit icmp any any echo-reply
access-list 110 permit udp any any eq domain
access-list 110 permit udp any eq domain any
access-list 110 permit tcp any any eq domain
access-list 110 permit tcp any eq domain any
access-list 110 permit tcp any any

access-list 114 permit ip 10.4.4.0.0.0.255 any

access-list 115 permit ip 0.0.0.0 255.255.255.0 any

access-list 122 deny tcp any any
access-list 122 deny imp any any echo-reply
access-list 122 permit ip any any
!
<output omitted>
```

What would be the effect of issuing the command `ip access-group 115` in on the `s0/0/1` interface?

A. No host could connect to RouterC through `s0/0/1`.

B. Telnet and ping would work but routing updates would fail.

C. FTP, FTP-DATA, echo, and www would work but telnet would fail.

D. Only traffic from the 10.4.4.0 network would pass through the interface.

Answer: A

Explanation:

From the output of access-list 114: `access-list 114 permit ip 10.4.4.0 0.0.0.255 any` we can easily understand that this access list allows all traffic (ip) from 10.4.4.0/24 network

QUESTION 53

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

- A. provides common view of entire topology
- B. exchanges routing tables for its own routes with neighbor
- C. calculates feasible path
- D. utilizes event-triggered updates
- E. utilizes frequent periodic updates

Correct Answer: AD

QUESTION 54

Which two statements about the tunnel mode ipv6ip command are true? (Choose two.)

- A. It enables the transmission of IPv6 packets within the configured tunnel.
- B. It specifies IPv4 as the encapsulation protocol.
- C. It specifies IPv6 as the encapsulation protocol.
- D. It specifies IPv6 as the transport protocol.
- E. It specifies that the tunnel is a Teredo tunnel.

Correct Answer: AB

QUESTION 55

Which action do you take to reset the VTP configuration revision number on a switch in VTP server mode?

- A. Change the VTP mode to transparent, and then change it to client mode.
- B. Change the VTP mode to transparent, and then change it back to server mode.
- C. Change the VTP domain name to any new value, and then change the name back to the original name.
- D. Change the VTP mode to off, and then change it back to server mode.

**Correct Answer: B Section:
Switching Explanation**

Explanation/Reference:

QUESTION 56

Which two statements about an Ethernet frame source address are true? (Choose two.)

- A. The leftmost bit is always 0
- B. The leftmost bit is always 1
- C. The address is 4 bits long
- D. The address is 4 bytes long
- E. The address is 6 bytes long

Correct Answer: AE

Section: (none) Explanation

Explanation/Reference:

QUESTION 57

Which two conditions can be used to elect the spanning-tree root bridge? (Choose two)

- A. the highest MAC address
- B. the lowest MAC address
- C. the highest port priority
- D. the lowest system ID
- E. the lowest switch priority

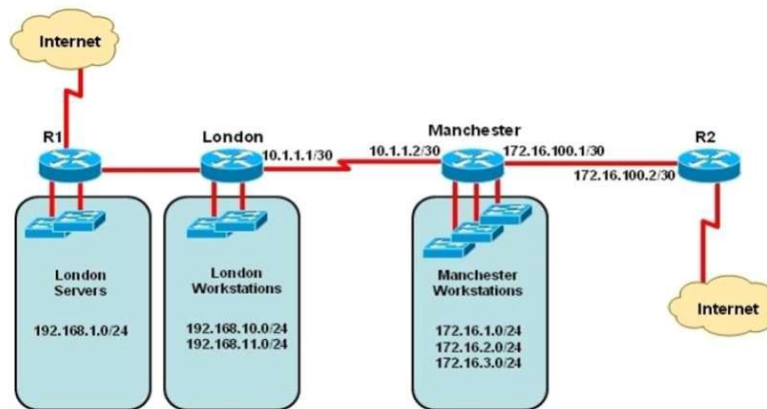
Correct Answer: BE

Section: Unseen (December)

Explanation

Explanation/Reference:

QUESTION 58



Refer to the exhibit. The network administrator must establish a route by which London workstations can forward traffic to the Manchester workstations. What is the simplest way to accomplish this?

- A. Configure a dynamic routing protocol on London to advertise all routes to Manchester.
- B. Configure a dynamic routing protocol on London to advertise summarized routes to Manchester.
- C. Configure a dynamic routing protocol on Manchester to advertise a default route to the London router.
- D. Configure a static default route on London with a next hop of 10.1.1.1.

E. Configure a static route on London to direct all traffic destined for 172.16.0.0/22 to 10.1.1.2.

- F. Configure Manchester to advertise a static default route to London.

Correct Answer: E

Section: Routing Technologies

Explanation

QUESTION 59

Which file-system management command is used frequently when IOS backups, upgrades, and restores are performed?

- A. show file
- B. delete
- C. show dir

D. copy

Correct Answer: D

Section: Unseen (December)

Explanatio

QUESTION 60

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

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

D. router(config)#ip route 0.0.0.0 0.0.0.0 GigabitEthernet0/1

Correct Answer: D

Section: Routing Technologies

Explanation

QUESTION 61

What is the default Syslog facility level?

- A. local4
- B. local5
- C. local6

D. local7

Correct Answer: D

Section: Infrastructure Management

Explanation

QUESTION 62

Which two statements about stacking Cisco switches are true? (Choose two)

- A. Each switch manages its own MAC address table
- B. It enables the administrator to manage multiple switches from a single management interface**
- C. when a new master switch is elected, it queries the previous master for its running configuration.
- D. The administrator can add additional switches to the stack as demand increases.**
- E. The administrator can create only one stack of switch of switches in a network which is under the same

Correct Answer: BD

Section: Network Programming & Advanced WAN

Explanation

QUESTION 62

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

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

Correct Answer: BE

Section: Unseen (December)

Explanation

QUESTION 63

Drag and drop the IPv6 IP addresses from the left onto the correct IPv6 address types on the right. Select and Place:

::	modified EUI-64
2020:10DB:0:0:85AB:800:52:734B	multicast
D8:FC:93:FF:FE:D8:05:0A	unicast
FF01::1	unspecified

Correct Answer:

	D8:FC:93:FF:FE:D8:05:0A
	FF01::1
	2020:10DB:0:0:85AB:800:52:734B
	::

Section: Network Fundamentals

QUESTION 64

Which two statements about GRE tunnels are true? (Choose two)

- A. They can operate in tunnel mode and transport mode
- B. They add 8 bytes to the IP header of each packet
- C. They provide privacy, integrity, and authenticity
- D. They allow multicast traffic to traverse WAN circuits
- E. They encapsulate the payload

Correct Answer: DE

Section: Unseen (December)

QUESTION 65

WHAT HAPPENS WHEN YOU ADD A SWITCH RUNNING AN EARLIER IOS VERSION TO A STACKWISE CONFIGURATION RUNNING A LATER VERSION ?

- A. THE STACK IGNORES THE SWITCH UNTILL YOU UPDATE THE IOS VERSION ON THE SWITCH.
- B. THE SWITHC SOFTWARE UPGRADES THE IOS VERSION ON THE SWITHCH TO MATCH THE VERSION ON THE STACK.
- C. THE SWITHC SOFTWARE DOWNGRADES THE IOS VERSION ON THE SWITHCH TO MATCH THE VERSION ON THE STACK.
- D. THE SWITH KEEPS ITS VERSION OF ISO AND RUNS NORMALLY AS PART OF THE STACK .

Correct Answer: D

QUESTION 66

Which command must you enter to guarantee that an HSRP router with higher priority becomes the HSRP primary router after it is reloaded?

- A. standby 10 preempt
- B. standby 10 version 1
- C. standby 10 priority 150
- D. standby 10 version 2

Correct Answer: C

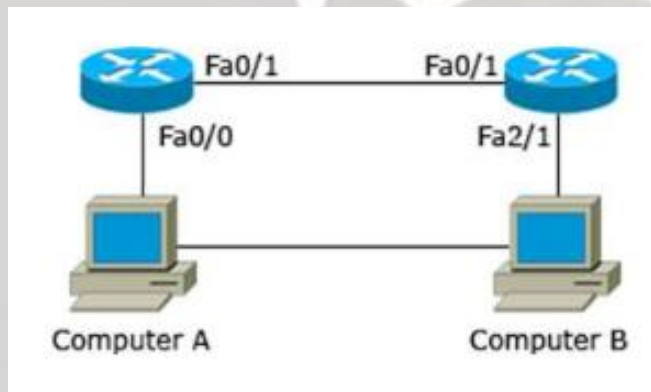
QUESTION 67

Which two options are requirements for configuring RIPv2 on the IPv4 network router? (choose two)

- 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: D E

QUESTION 68



Refer to the exhibit. If computer A is sending traffic to computer B, which option is the source IP address when a packet leaves R1 on interface F0/1?

- A. IP address of computer B
- B. IP address of the R2 interface F0/1
- C. IP address of the R1 interface F0/1
- D. IP address of computer A

Correct Answer: D

Section: Network Fundamentals

Explanation

QUESTION 69

Which specification supports full-duplex traffic only?

- A. 100BASE-TX
- B. 10BASE-T
- C. 1000BASE-TX
- D. 1000BASE-SX**

Correct Answer: D

Section: Unseen (December)

Explanation

QUESTION 70

Which two goals are reasons to implement private IPv4 addressing on your network? (Choose two)

- A. Reduce the risk of a network security breach.**
- B. Comply with local law.
- C. Conserve IPv4 addresses.**
- D. Comply with PCI regulations.
- E. Reduce the size of the forwarding table on network routers.

Correct Answer: AC

QUESTION 71

Which two statements about how a router makes forwarding decisions are true? (Choose two)

- A. The management plane gathers information from routing protocols
- B. The control plane gathers information from routing protocols.**
- C. The management plane forwards traffic based on information that it receives from the data plane.
- D. The data plane gathers information from routing protocols
- E. The control plane forwards traffic based on information that it receives from the data plane.
- F. The data plane forwards traffic through the router**

Correct Answer: BF

Section: Routing

Explanation

QUESTION 72

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

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

Correct Answer: ABC

Section: part 2

Explanation

QUESTION 73

which API use HTTP meddages to tansfer data to applications residing on different host ?

- A. OpFlex
- B. REST
- C. OpenStack
- D. OpenFlow

Correct Answer: B

Section: part 10

Explanation

QUESTION 74

Which network appliance check the state of a packet to determine whether the packet is legitimate?

- A. The firewall
- B. The LAN controller
- C. The layer 2 switch
- D. The load balance

Correct Answer: A

Section: Security

QUESTION 75

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

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

Correct Answer: AE

QUESTION 76

Which circumstance matches the description of an excessive collision?

- A. The same frame is sent sixteen times.
- B. An interface receives fifteen or more alignment errors.
- C. Bit 512 of the frame is sent
- D. The deferred counter value is greater than 1024

Correct Answer: A

Section: Unseen (December)

QUESTION 77

What is the most efficient subnet mask for a point to point ipv6 connection?

- A. /48
- B. /32
- C. /128
- D. /64
- E. /127

Correct Answer: E

Section: Unseen (December)

QUESTION 78

Which command disable DTP?

- A. switchport negotiate
- B. switchport mode active
- C. switchport nonegotiate**
- D. switchport mode passive

Correct Answer: C

Section: VLAN

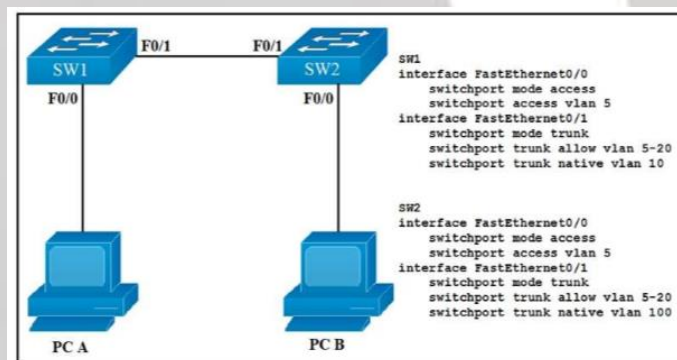
QUESTION 79

Which statement about switch ports is true?

- A. The default VLAN and native VLAN must be different on all ports.
- B. VLAN 1 is preconfigured as the default VLAN on all switch ports**
- C. VLAN 1 is preconfigured as the native VLAN on trunk ports only.
- D. VLAN 100 is preconfigured as the native VLAN on all switch ports

Correct Answer: B

QUESTION 80



Refer to the exhibit. How will switch SW2 handle traffic from VLAN 10 on SW1?

- A. It sends the traffic to VLAN 10.
- B. It sends the traffic to VLAN 100.**
- C. It drops the traffic.
- D. It sends the traffic to VLAN 1.

Correct Answer: B

Section: (none)

QUESTION 81

WHICH TWO CONDITIONS CAN STACKWISE USE TO DETERMINE THE MASTER OF THE STACK ?

- A. THE LOWEST MEMBER PRIORITY .
- B. THE HIGHEST SYSTEM MAC ADDRESS .
- C. THE GREATEST NUMBER OF CONFIGURED VLANS .
- D. THE HIGHEST MEMBER PRIORITY .
- E. THE LOWEST SYSTEM MAC ADDRESS .

Correct Answer: A E

QUESTION 82

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

Correct Answer: CE

Section: part 2

QUESTION 83

Drag and drop each WAN design option on the left onto the correct description on the right.

Select and Place:

dual-homed	one or more routers with connections to two or more ISPs
dual-multihomed	one or more routers with redundant connections to two or more ISPs
single-homed	one router with a connection to an ISP
single-multihomed	one router with two connections to the same ISP

Correct Answer:

	single-multihomed
	dual-multihomed
	single-homed
	dual-homed

QUESTION 84

Which two statements about PDU encapsulation are true? (Choose two)

A. In the TCP/IP reference model, PDU encapsulation starts on the internet layer with the data from the application layer.

B. In the TCP/IP reference model, PDU encapsulation occurs on the network layer.

C. PDU encapsulation takes place only at the transport layer

D. During encapsulation each layer adds a header and trailer to the PDU from the layer below

E. During encapsulation, each layer adds a header and sometimes adds a trailer to the PDU from the layer above

Correct Answer: B E

Section: Unseen

QUESTION 85

R1#show ip eigrp topology

```
P 10.242.0.148/30, 1 successors, FD is 28416
  via 10.85.193.42 (28416/28160), TenGigabitEthernet0/1/0.100
P 10.245.128.192/27, 2 successors, FD is 3328
  via 10.85.193.42 (3328/3072), TenGigabitEthernet0/1/0.100
  via 10.85.193.46 (3328/3072), TenGigabitEthernet0/2/0.100
P 10.73.2.128/25, 1 successors, FD is 5120, tag is 9999
  via Redistributed (5120/0)
P 10.245.128.40/29, 1 successors, FD is 768
  via 10.85.193.42 (768/512), TenGigabitEthernet0/1/0.100
P 10.245.128.64/29, 1 successors, FD is 768
  via 10.85.193.42 (768/512), TenGigabitEthernet0/2/0.100
P 10.73.149.0/25, 1 successors, FD is 5120, tag is 9999
P 10.85.184.0/23, 2 successors, FD is 256768, tag is 20000
  via 10.85.193.42 (256768/256512), TenGigabitEthernet0/1/0.100
  via 10.85.193.46 (256768/256512), TenGigabitEthernet0/2/0.100
```

Refer to the exhibit. Which two facts can you determine from the EIGRP topology table? (Choose two.)

- A. All successors are injecting into the routing table.
- B. If a route has more than one successor, only one route is injected into the routing table.
- C. The reported distance value is greater than the feasible distance.
- D. The FD 28416 for route 10.242.0.148 is also the metric for the routing table.
- E. The variance command must have been issued to allow route 10.85.184.0 to have two successors.

Correct Answer: AD

Section: (none)

QUESTION 86

You apply a new inbound access list to routers, blocking UDP packets to the HSRP group. Which two effects does this action have on the HSRP group process? (Choose two)

- A. Both the active and standby routers become active.
- B. The active router immediately becomes the standby router.
- C. HSRP redundancy works as expected.
- D. The routers in the group generate duplicate IP address warnings.

E. HSRP redundancy fails.

Correct Answer: AE

Section: FHRP

QUESTION 87

What are two reasons to use multicast to deliver video traffic, instead of unicast or broadcast?

(Choose two)

A. It enables multiple clients to receive the video stream simultaneously.

B. It enables multiple clients to send video streams simultaneously.

C. It enables multiple servers to send video streams simultaneously.

D. It provides reliable TCP transport.

E. It supports distributed applications.

Correct Answer: A E

Section: Basic Networking

QUESTION 88

```
Switch# show spanning-tree interface fastethernet 0/10
Vlan          Role Sts Cost      Prio.Nbr Type
-----
VLAN0001      Root FWD 19         128.1   P2p
VLAN0002      Altn BLK 19         128.2   P2p
VLAN0003      Root FWD 19         128.2   P2p
```

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

A. This switch has more than one interface connected to the root network segment in VLAN 2.

B. This switch is running RSTP while the elected designated switch is running 802.1d Spanning Tree.

C. This switch interface has a higher path cost to the root bridge than another in the topology.

D. This switch has a lower bridge ID for VLAN 2 than the elected designated switch.

Correct Answer: C

Section: part 10

QUESTION 89

Which two commands can you use to verify an IP SLA? (Choose two)

A. show ip sla reaction-configuration

B. show ip sla statistics

C. show ip sla application

D. show ip sla configuration

E. show ip sla history

Correct Answer: BD

Section: Unseen Section

QUESTION 90

Which two values must you specify to define a static route? (Choose two)

A. incoming interface

B. next-hop address or exit interface

C. administrative distance of the route

D. destination network and mask

E. source network and mask

Correct Answer: BD

Section: Routing Explanation

QUESTION 91

After an FTP session to ftp.cisco.com fails, you attempt to ping the server. A ping to ftp.cisco.com also fails, but a ping to the IP address of the server is successful. What is reason for the failed FTP session?

- A. The assigned DNS server is down
- B. A firewall is blocking traffic from the FTP site
- C. An ACL is blocking the FTP request
- D. The internet connection is down

Correct Answer: A

Section: Unseen (December) Explanation

QUESTION 92

Which two features can mitigate spanning tree issues that are caused by broken fiber cables on interswitch links? (Choose two)

- A. BPDU guard
- B. loop guard
- C. UDLD
- D. root guard
- E. DTP

Correct Answer: BC

QUESTION 93

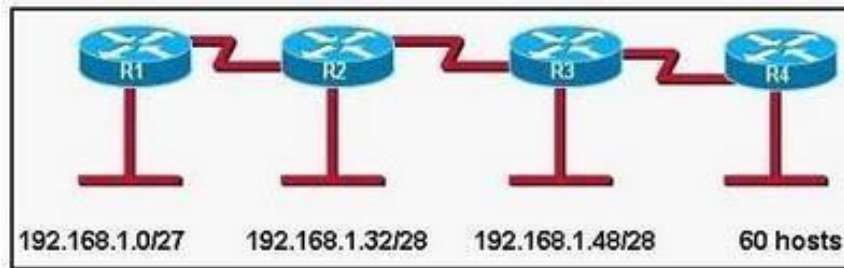
A Cisco router is booting and has just completed the POST process. It is now ready to find and load an IOS image. What function does the router perform next?

- 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: Unseen (December)

QUESTION 94



Refer to the exhibit. A new subnet with 60 hosts has been added to the network. Which subnet address should this network use to provide enough usable addresses while wasting the fewest address.

- A. 192.168.1.64/26
- B. 192.168.1.64/27
- C. 192.168.1.56/27
- D. 192.168.1.56/26

Correct Answer: A

QUESTION 95

Which option describes a benefit of a point-to-point leased line?

- A. Simply of configuration
- B. Flexibility of design
- C. low cost
- D. Full-mesh capability

Correct Answer: A

QUESTION 96

Which two steps you perform on each device that is configured for IPv4 routing before you implement OSPFv3? (Choose two)

- A. Configure an autonomous system number.
- B. Enable IPv6 unicast routing.
- C. Configure a router ID.
- D. Enable IPv6 on an interface.
- E. Configure a loopback interface.

Correct Answer: BD

Section: IPv6

QUESTION 97

When troubleshooting client DNS issues, which two tasks must you perform? (Choose two.)

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

Correct Answer: BE

Section: Network Programming & Advanced WAN Explanation

QUESTION 98

When you configure and boot a new device, when does the running configuration become active?

- A. When the startup configuration is copied into RAM**
- B. When the devices boots to ROMMON
- C. When IOS is loaded into RAM
- D. Immediately after the power-on self-test

Correct Answer: A

QUESTION 99

which value is used to build the CAM table?

- A. source IP address
- B. destination IP address
- C. destination MAC address
- D. source MAC address**

Correct Answer: D

QUESTION 100

Which LLDP extension provides additional support for VoIP?

- A. TLV
- B. LLDP-MED**
- C. LLDP-VOIP
- D. LLDPv3

Correct Answer: B

Section: (none)

QUESTION 101

Which two statements about single and dual-homed links are true? (Choose two)

- A. Dual-homed connections to a service provider most frequently use static routing.
- B. Dual-homed connections to multiple service provider can use OSPF or EIGRP for load balancing.
- C. Dual-homed connection to multiple service provider typically use BGP.
- D. Single-homed connections to a service provider require OSPF or EIGRP.
- E. Single-homed connections to a service provider can use either static routing or BGP.

Correct Answer: CE

Section: Routing

QUESTION 102

Which command can you use to test whether a switch supports secure connections and strong authentication?

- A. Switch# ssh -l admin 10.1.1.1
- B. Router> ssh -v2 -l admin 10.1.1.1
- C. Switch> ssh -v -l admin 10.1.1.1
- D. Router# ssh -v 1 -l admin 10.1.1.1

Correct Answer: B

Section: Basic Networking

QUESTION 103

Which two statements about private addresses are true? (Choose two)

- A. Network 10.1.1.0/29 supports 16 usable private host addresses.
- B. Addresses in the range 172.16.0.1 to 172.32.255.254 are defined as Class B private addresses.
- C. Network 192.168.25.0/28 supports 14 usable private host addresses.
- D. By default, Class C private networks support up to 255 subnets.
- E. the 172.16.x.x/16 private Class B network supports over 1 million addresses.

Correct Answer: CD

Section: Basic Networking

QUESTION 104

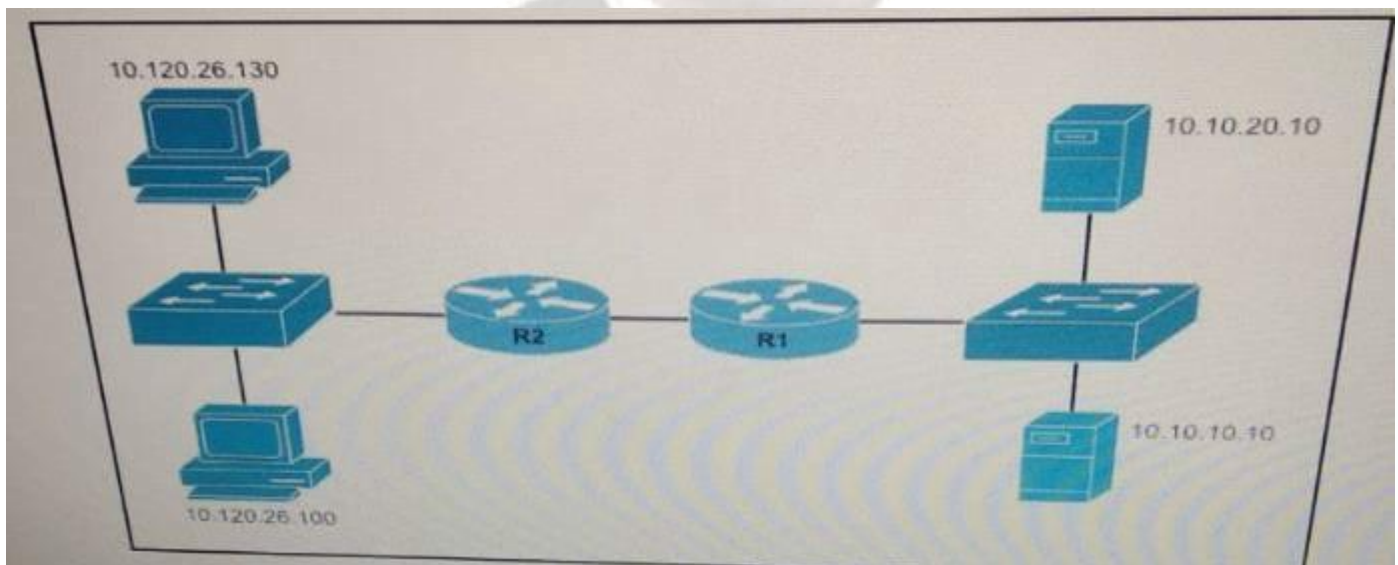
Which command should you enter to configure a single port to discard inferior BPDUs?

- A. spanning-tree portfast bpdudfilter default
- B. spanning-tree portfast bpdudfilter
- C. spanning-tree guard root
- D. spanning-tree portfast bpduguard

Correct Answer: D

Section: Switching

QUESTION 105



Users on the 10.120.26.x subnet can reach server 10.10.20.10 but they cannot reach server 10.10.10.10. The network is using dynamic routing and routers R1 and R2 are connected via EIGRP. Which two actions must you take to begin troubleshooting the connectivity issue to server 10.10.10.10? (Choose Two)

- A. Verify that the inbound and outbound ACLs on each device permit traffic to and from the server.
- B. Verify that the route to the server is present in the topology table and routing table.
- C. Verify that the route to the server is present in the database table.
- D. Verify the status of the interfaces between routers and switches.
- E. Verify that routers R1 and R2 have established an EIGRP neighbor relationship.

Correct Answer : A,E

QUESTION 106

Which IP address can send traffic to all hosts on network 10.101.0.0/16?

- A. 10.101.255.255**
- B. 10.101.0.1
- C. 10.101.254.254
- D. 224.0.0.1

Correct Answer: A

Section: Routing

QUESTION 107

Which two features can you enable on a switch to capture network traffic and measure performance? (Choose two)

- A. IP SLA
- B. SPAN**
- C. ACL
- D. SNMP**
- E. STP

Correct Answer: BD

Section: Network Programming & Advanced WAN

QUESTION 108

Which feature or method can you use to isolate physical layer problems on a serial link?

- A. autonegotiation
- B. protocol analyzer
- C. loopback tests**
- D. UDLD

Correct Answer: C

Section: WAN

QUESTION 109

Which two statements about RFC 1918 address are true? (Choose two)

- A. They require Network Address Translation or Port Address Translation to access the Internet.
- B. They increase network performance.
- C. They must be registered.
- D. They have reserved address space for Class A and Class B networks only.
- E. They provide security to end users when the users access the internet.

Correct Answer: AE

Section: WAN

QUESTION 110

Which command can you enter to verify that a router is synced with a configured time source?

- A. show ntp authenticate
- B. ntp associations
- C. ntp server time
- D. ntp authenticate
- E. show ntp associations

Correct Answer: E

Section: part 10

QUESTION 111

Which command should you enter to view the error log in an EIGRP for IPv6 environment?

- A. show ipv6 eigrp traffic
- B. show ipv6 eigrp topology
- C. show ipv6 eigrp events
- D. show ipv6 eigrp neighbors

Correct Answer: C

C Section: part 13

QUESTION 112

Which algorithm is used for the frame check sequence in an Ethernet frame?

- A. MD5
- B. AES-256
- C. CRC**
- D. SHA-1

Correct Answer: C

Section: Switching

QUESTION 113

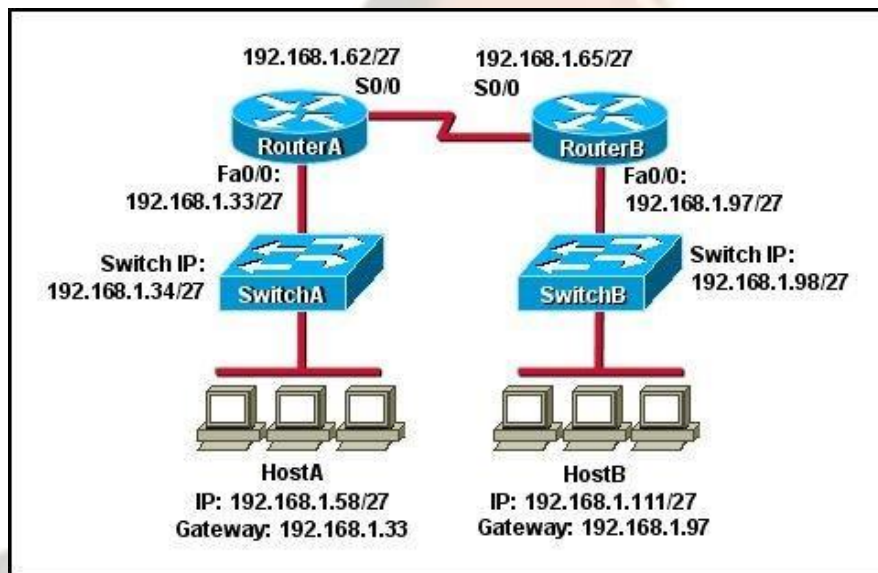
Which statement about recovering a password on a Cisco router is true?

- A. The default reset password is cisco
- B. It requires a secure SSI/VPN connection
- C. A factory reset is required if you forget the password
- D. It requires physical access to the router**

Correct Answer: D

Section: Basic Networking

QUESTION 114



Refer to the exhibit HostA cannot ping HostB. Assuming routing is properly configured, what is the cause of this problem?

- A. HostA is not on the same subnet as its default gateway.
- B. The address of SwitchA is a subnet address.
- C. The Fa0/0 interface on RouterA is on a subnet that can't be used.
- D. The serial interfaces of the routers are not on the same subnet.
- E. The Fa0/0 interface on RouterB is using a broadcast address.

Correct Answer: D

Section: Network Programming & Advanced WAN

QUESTION 115

According in industry best practices, which length is the recommended maximum for a Category 6 cable in a 10GBASE-T environment?

- A. 300 meter
- B. 55 meter
- C. 100 meter
- D. 37 meter

Correct Answer: C

Section: WAN

QUESTION 116

Which two statement about UTP cables are true? (Choose two)

- A. All Ethernet cable types from Category 1 through Category 6 are suitable for transmitting data in the appropriate environments.
- B. Category 6 Ethernet cables are appropriate for installation of up to 200m.
- C. Category 6a Ethernet cable can transmit up to 10 Gbps.
- D. Category 5 Ethernet cables support speeds up to 1000 Mbps beyond 100m.
- E. Category 5e Ethernet cables support speeds up to 1000 Mbps.

Correct Answer: CE

Section: Basic Networking

QUESTION 117

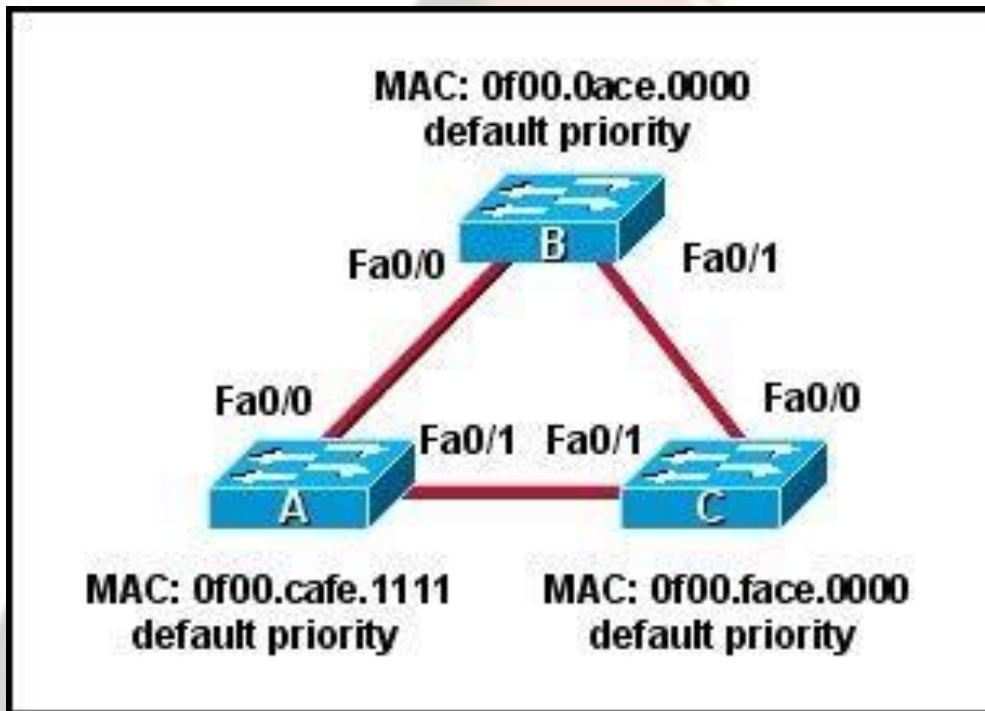
Which three statements about the features of SNMPv2 and SNMPv3 are true? (Choose three)

- A. SNMPv3 enhanced SNMPv2 security features.
- B. SNMPv3 added the inform protocol message to SNMP.
- C. SNMPv2 added the inform protocol message to SNMP.
- D. SNMPv3 added the GetBulk protocol message to SNMP.
- E. SNMPv2 added the GetBulk protocol message to SNMP.
- F. SNMPv2 added the GetNext protocol message to SNMP.

Correct Answer: ACE

Section: Network Programming & Advanced WAN

QUESTION 118



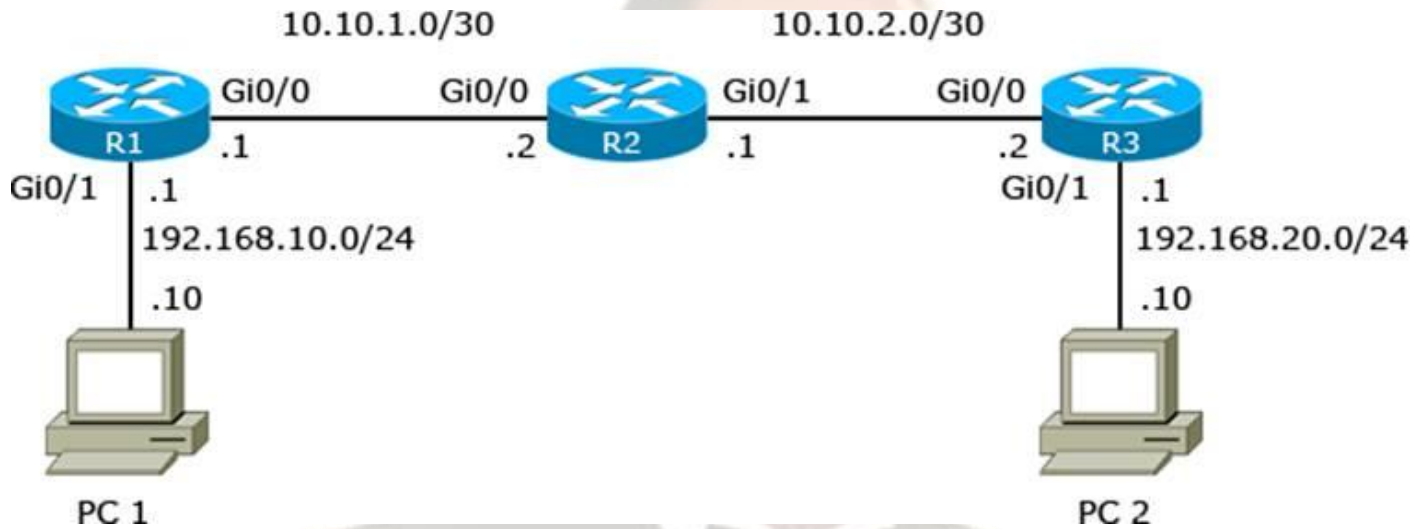
Refer to the topology shown in the exhibit. Which ports will be STP designated ports if all the links are operating at the same bandwidth? (Choose three.)

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

Correct Answer: ABC

Section: Switching

QUESTION 119



Refer to the Exhibit. When PC 1 send a packet to PC 2. The packet has which source and destination IP address when it arrives at interface Gi0/0 on route R2?

- A. Source 192.168.10.10 and destination 10.10.2.2
- B. Source 192.168.10.10 and destination 192.168.20.10
- C. Source 10.10.1.1 and destination 10.10.2.2
- D. Source 192.168.20.10 and destination 192.168.20.1

Correct Answer: B

Section: Routing

QUESTION 120

Drag and drop the descriptions of IP protocol transmissions from the left onto the correct IP traffic on the right.

It sends transmissions in sequence.	TCP
Transmission include an 8-byte header.	
It transmits packets as a stream.	
It transmits packets individually	
It uses a higher transmission rate to support latency-sensitive applications	UDP
It uses a lower transmission rate to ensure reliability	

Correct Answer:

It sends transmissions in sequence.	TCP
It transmits packets as a stream.	
It uses a lower transmission rate to ensure reliability.	
It transmits packets individually.	
Transmissions include an 8-byte header.	UDP
It uses a higher transmission rate to support latency-sensitive applications.	

QUESTION 121

Drag and drop the BGP terms from the left onto the correct descriptions on the right

autonomous system number	device that is running BGP
BGP speaker	neighbor device that shares the same As number as the local device
eBGP peer	neighbor that is located outside of the administrative domain of the local device
iBGP peer	value that identifies an administrative domain
prefix	value that is advertised with the network keyword

Correct Answer:

autonomous system number	BGP speaker
BGP speaker	iBGP peer
eBGP peer	eBGP peer
iBGP peer	autonomous system number
prefix	prefix

QUESTION 122

Drag each WAN accesses connectivity option on a the left to the matching design goal on the right.

client VPN	Enable mobile devices to connect to an enterprise network
DMVPN	Use the logical full-mesh network of a service provider across an enterprise headquarters and remote sites
MPLS	Securely connect two networks over an untrusted network.
site-to-site VPN	Use GRE tunnels and IPSec to create a full-mesh network through a central location

Correct Answer:

client VPN	client VPN
DMVPN	MPLS
MPLS	site-to-site VPN
site-to-site VPN	DMVPN

QUESTION 123

Which two circumstances can prevent two routers from establishing an EIGRP neighbor adjacency? (Choose two)

- A. An ACL is blocking traffic from multicast address 224.0.0.5
- B. The routers have mismatched K values.
- C. Both routers have the same router ID.
- D. The two routers have the same autonomous system number.
- E. The routers are on different subnets.

Correct Answer: BE

Section: Routing

QUESTION 124

When troubleshooting a user complaint, you notice that two routers failed to establish an OSPF neighbor adjacency. Which two issues are root causes for the problem? (Choose two)

- A. The two routers are configured with the same area ID.
- B. The two routers are using the same router ID.**
- C. The two routers are configured with different process IDs.
- D. The passive-interface command is configured on the connected interfaces.**
- E. OSPF is configured on the primary network of the neighbor, but not on the secondary network.

Correct Answer: BD

Section: Routing Explanation

QUESTION 125

After you configure the ip dns spoofing command globally on a device, under which two conditions is DNS spoofing enabled on the device? (choose two)

- A. The DNS server queue limit is disabled
- B. The ip host command is disabled
- C. All configured IP name server addresses are removed**
- D. The ip dns spoofing command is disabled on the local interface
- E. The no ip domain lookup command is configured**

Correct Answer: CE

Section: part 9

QUESTION 126

Which issue is a common cause of runts?

- A . duplex mismatch
- B . native VLAN mismatch
- C . overloaded hardware queues
- D . collisions on the wire**

Correct Answer: D

QUESTION 127

You are implementing WAN access for an enterprise network while running applications that require a fully meshed network, which two design standards are appropriate for such an environment? (choose two)

- A. multiple MPLS VPN connections with static routing
- B. a collapsed core and distribution layer, to minimize costs
- C. a dedicated WAN distribution layer, to consolidate connectivity to remote sites
- D. a centralized DMVPN solution, to simplify connectivity for the enterprise**
- E. multiple MPLS VPN connections with dynamic routing**

Correct Answer: D E

Section: WAN

QUESTION 128

Which enterprise device provides centralized control to authentication and roaming?

- A. a lightweight access point
- B. a LAN switch
- C. a firewall
- D. a wireless LAN controller**

Correct Answer: D

Section: Basic Networking

QUESTION 129

Which two statements about Ethernet standards are true? (Choose two)

- A. Ethernet is defined by IEEE standard 802.2.
- B. Ethernet is defined by IEEE standard 802.3.
- C. When an Ethernet network uses CSMA/CD, it terminates transmission as soon as a collision occurs.
- D. Ethernet 10BASE-T does not support full-duplex.
- E. When an Ethernet network uses CSMA/CA, it terminates transmission as soon as collision occurs.

Correct Answer: BC

Section: Unseen

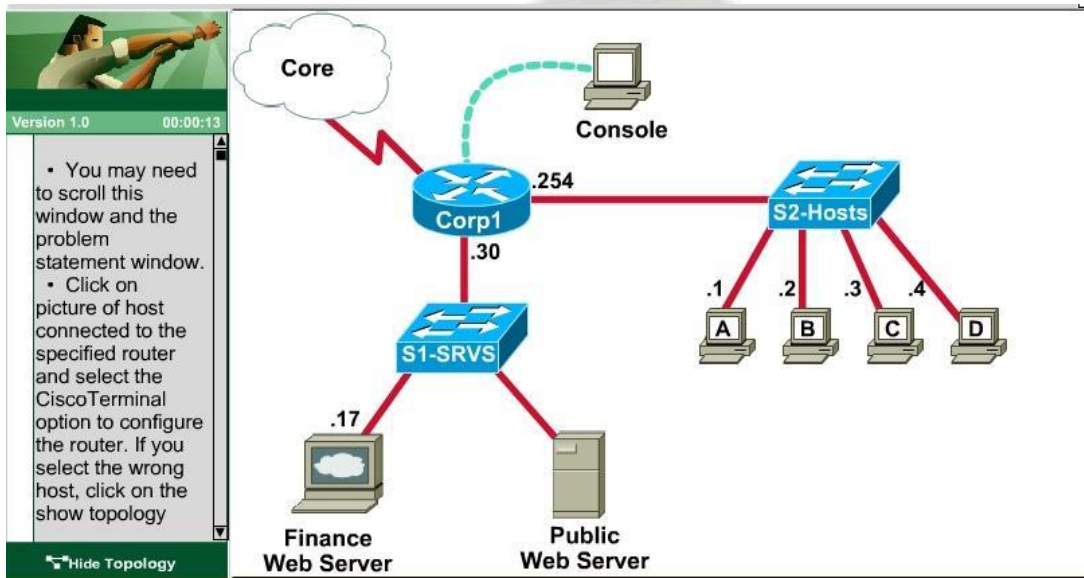
QUESTION 130

A corporation wants to add security to its network. The requirements are: Host C should be able to use a web browser (HTTP) to access the Finance Web Server. 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. All hosts in the Core and on local LAN should be able to access the Public Web Server.

You have been tasked to create and apply a numbered access list to a single outbound interface. This access list can contain no more than three statements that meet these requirements.

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 192.168.94.65. The computers in the Hosts LAN have been assigned addresses of 192.168.125.1 - 192.168.125.254. - host A 192.168.125.1 - host B 192.168.125.2 - host C 192.168.125.3 - host D 192.168.125.4 The Finance Web Server has been assigned an address of 172.22.109.17 The Public Web Server in the Server LAN has been assigned an address of 172.22.109.18.



Correct Answer: See explanation

Section: Infrastructure Security Explanation

Explanation/Reference: Explanation: We should create an access-list and apply it to the interface that is connected to the Server LAN because it can filter out traffic from both S2 and Core networks. To see which interface this is, use the “show ip int brief” command:

```
Corp1#show ip int brief
Interface          IP-Address      OK? Method Status
FastEthernet0/0    192.168.125.254 YES manual  up
FastEthernet0/1    172.22.109.30  YES manual  up
Serial10/0         192.168.94.65  YES manual  up
Corp1#
```

From this, we know that the servers are located on the fa0/1 interface, so we will place our numbered access list here in the outbound direction.

Corp1#configure terminal Our access-list needs to allow host C – 192.168.125.3 to the Finance Web Server 172.22.109.17 via HTTP (port 80), so our first line is this:

```
Corp1(config)#access-list 100 permit tcp host 192.168.125.3 host 172.22.109.17 eq 80
```

Then, our next two instructions are these:

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.

This can be accomplished with one command (which we need to do as our ACL needs to be no more than 3 lines long), blocking all other access to the finance web server: Corp1(config)#access-list 100 deny ip any host 172.22.109.17

Our last instruction is to allow all hosts in the Core and on the local LAN access to the Public Web Server (172.22.109.18)

```
Corp1(config)#access-list 100 permit ip host 172.22.109.18 any
```

Finally, apply this access-list to Fa0/1 interface (outbound direction)

```
Corp1(config)#interface fa0/1
```

```
Corp1(config-if)#ip access-group 100 out
```

Notice: We have to apply the access-list to Fa0/1 interface (not Fa0/0 interface) so that the access-list can filter traffic coming from both the LAN and the Core networks. To verify, just click on host C to open its web browser. In the address box type <http://172.22.109.17> to check if you are allowed to access Finance Web Server or not. If your configuration is correct then you can access it.

Click on other hosts (A, B and D) and check to make sure you can't access Finance Web Server from these hosts. Then, repeat to make sure they can reach the public server at 172.22.109.18. Finally, save the configuration

```
Corp1(config-if)#end Corp1#copy running-config startup-config
```

QUESTION 131

Which two values are needed to run the APIC-EM ACL Analysis tool? (Choose two.)

A. destination port

B. source address

C. protocol

D. source port

E. periodic refresh interval

F. destination address

Correct Answer: B F

Section: Infrastructure Security Explanation

QUESTION 132

**Which two technologies can combine multiple physical switches into one logical switch?
(Choose two)**

A. HSRP

B. StackWise

C. VSS

D. VRRP

E. GLBP

Correct Answer: BC

Section: Network Programming & Advanced WAN

QUESTION 133

When a switch is running in VTP server mode, VLAN configuration information is stored in which file?

A. vlan.dat

B. config.text

C. startup-config

D. vlan.config

Correct Answer: A

Section: VLAN

QUESTION 134

**Which two differences between distance-vector and link-state routing protocols are true?
(Choose two)**

- A. Only distance-vector routing protocols maintain identical topology tables on all connected neighbors.
- B. Distance-vector routing protocols are less susceptible to loops than link-state protocols.
- C. Only distance-vector routing protocols send full routing table updates.
- D. Only link-state routing protocols use the Bellman-Ford algorithm.
- E. Link-state routing protocols offer faster convergence than distance-vector protocols during network changes.

Correct Answer: CE

Section: Unseen

QUESTION 135

Which command should you enter on an interface in a vendor-neutral EtherChannel so that it will be selected first to transmit packets?

- A. pagp port-priority 1024
- B. pagp system-priority 1024
- C. lacp system-priority 1024
- D. lacp port-priority 1024

Correct Answer: D

Section: Switching

QUESTION 136

To enable router on a stick on a router subinterface, which two steps must you perform?
(Choose two)

A. Configure a default to route traffic between subinterfaces.

B. Configure encapsulation dot1q

C. Configure an IP route to the VLAN destination network

D. Configure the subinterface with an IP address

E. Configure full duplex and speed.

Correct Answer: BD

Section: Switching

QUESTION 137

Which type of port supports voice VLAN configuration?

A. trunk switch port

B. access switch port

C. Layer 3 switch port

D. private VLAN switch port

Correct Answer: B

Section: Unseen (December) Explanation

QUESTION 138

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

QUESTION 139

Which two approaches are common when troubleshooting network issues? (Choose two.)

A. top-down

B. policing

C. layer-by-layer

D. round-robin

E. divide and conquer

Correct Answer: AE

Section: (none)

QUESTION 140

How many bits can be used to identify unique hosts in the address range for network 10.0.0.0/8?

A. 24

B. 32

C. 8

D. 16

Correct Answer: A

Section: Basic Networking

QUESTION 141

Which step in the router boot process searches for an IOS image to load into the router?

A. bootstrap

B. POST

C. mini-IOS

D. ROMMON mode

Correct Answer: A

Section: Network Programming & Advanced WAN

QUESTION 142

Which two commands can you enter to configure an interface to actively negotiate an EtherChannel? (Choose two.)

- A. channel-group 10 mode auto
- B. channel-group 10 mode active**
- C. channel-group 10 mode on
- D. channel-group 10 mode desirable**
- E. channel-group 10 mode passive

Correct Answer: BD

Section: (none)

QUESTION 143

Which circumstances is a common cause of late collisions?

- A. overload hardware queues
- B. native VLAN mismatch
- C. duplex mismatch**
- D. software misconfiguration

Correct Answer: C

Section: (none)

QUESTION 144

Which two pieces of information can you determine from the output of the show ntp status command? (Choose two.)

- A. whether the clock is synchronized
- B. the IP address of the peer to which the clock is synchronized
- C. the NTP version number of the peer
- D. whether the NTP peer is statically configured
- E. the configured NTP servers

Correct Answer: AB

QUESTION 145

Which two descriptions of TACACS+ are true? (Choose two.)

- A. It encrypts only the password.
- B. It can authorize specific router commands.
- C. It separates authentication, authorization, and accounting functions.
- D. It uses UDP as its transport protocol.
- E. It combines authentication and authorization.

Correct Answer: BC

Section: Infrastructure Security one)

QUESTION 146

Which command can you enter on a switch to display the IP addresses associated with connected devices?

A. Show cdp neighbors detail

B. Show cdp neighbors

C. Show cdp interface

D. Show cdp traffic

Correct Answer: A

Section: (none)

QUESTION 147

Which command must you enter to configure a DHCP relay?

A. ip dhcp relay

B. ip address dhcp

C. ip helper-address

D. ip dhcp pool

Correct Answer: C

Section: (none)

QUESTION 148

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

A. hub and spoke

B. point-to-point

C. full mesh

D. star

Correct Answer: A

Section: WAN

QUESTION 149

What is the simplest IP SLA operation that can end-to-end response time between devices?

A. ICMP path echo

B. ICMP path jitter

C. ICMP jitter

D. ICMP echo

Correct Answer: AD

Section: WAN

QUESTION 150

What is a valid HSRP virtual MAC address?

- A. 0000.5E00.01A3
- B. 0007.B400.AE01
- C. 0000.0C07.AC15**
- D. 0007.5E00.B301

Correct Answer: C

Section: FHRP

QUESTION 151

Which feature is automatically enabled on voice vlan ports?

- A. port-security
- B. PortFast**
- C. 802.1q
- D. 802.1x

Correct Answer: B

Section: VLAN

QUESTION 152

which frame type allows STP to compute the spanning-tree topology?

A. BPDU

B. RSTP

C. LSA

D. LSP

Correct Answer: A

Section: part 13

QUESTION 153

which Rapid PVST+ port role provides a different path to the root bridge?

A. designated

B. forwarding

C. backup

D. alternate

Correct Answer: D

Section: part 13

QUESTION 154

Which value is included in the initial TCP SYN message?

- A. a session ID
- B. a TTL number
- C. an acknowledgment number
- D. a sequence number**

Correct Answer: D

Section: (none)

QUESTION 155

Which command should you enter to configure an LLDP delay time of 5 seconds?

- A. lldp holdtime 5
- B. lldp reinit 5**
- C. lldp timer 5000
- D. lldp reinit 5000

Correct Answer: B

Section: (none)

QUESTION 156

Which two commands should you enter to view the PID and serial number of a router?
(Choose two.)

A. show license udi

B. show license feature

C. show license

D. show license status

E. show version

Correct Answer: AE

Section: (none)

QUESTION 157

Which protocol enables a Cisco IP phone to provide QoS instructions to a switch?

A. 802.1Q

B. DTP

C. VTP

D. CDP

Correct Answer: D

Section: Unseen (December)

QUESTION 158

Which two pins does an RJ-45 connector use to transmit data?

A. 1

B. 2

C. 4

D. 3

E. 6

Correct Answer: AB

Section: Basic Networking Explanation

QUESTION 159

Which two facts about configuring EIGRPv6 are true? (Choose two.)

A. You must configure neighboring devices with the same ipv6 hello-interval eigrp value

B. If you change the interface delay, the EIGRPv4 delay remains unchanged.

C. The variance command for EIGRPv6 is independent of EIGRPv4.

D. If you change the interface bandwidth, the EIGRPv4 metric is affected.

E. The router ID must be an IPv6 address.

Correct Answer: CD

Section: part 12

QUESTION 160

Which technology provides chassis redundancy in a VSS environment?

A. BFD

B. multichassis EtherChannels

C. VRRP

D. StackWise

Correct Answer: B

QUESTION 161

```
R1#show ip route | b Gateway
Gateway of last resort is 10.111.34.105 to network 0.0.0.0

B* 0.0.0.0/0 [20/0] via 10.111.34.105, 2w6d
   10.0.0.0/8 is variably subnetted, 9 subnets, 3 masks
C   10.43.76.0/25 is directly connected, GigabitEthernet0/0
L   10.43.76.125/32 is directly connected, GigabitEthernet0/0
C   10.48.151.196/30 is directly connected, FastEthernet0/2/0
L   10.48.151.197/32 is directly connected, FastEthernet0/2/0
C   10.111.34.104/30 is directly connected, Serial0/0/0
L   10.111.34.106/32 is directly connected, Serial0/0/0
D   10.111.34.108/30
   [90/2181120] via 10.48.151.198, 2w6d, FastEthernet0/2/0
C   10.111.248.26/32 is directly connected, Loopback0
D   10.111.248.27/32
   [90/156160] via 10.48.151.198, 2w6d, FastEthernet0/2/0
```

Refer to the exhibit. Which two facts about the routing table are true? (Choose two)

A. The router uses interface Serial0/0/0 to reach host address 10.43.76.123.

B. The router uses interface Serial0/0/0 to reach network 192.168.1.0/24.

C. Nine different network are within the 10.0.0.0/8 range.

D. Three different networks are within the 10.0.0.0/8 range.

E. The router uses interface GigabitEthernet0/0 to reach host address 10.111.35.106.

Correct Answer: BC

QUESTION 162

Which benefit of implementing a dual-homed WAN connection instead of a single-homed connection is true?

- A. Only dual-homed connections support OSPF in conjunction with BGP
- B. Only dual-homed connections support split horizon with EIGRP
- C. Only dual-homed connections enable an individual router to tolerate the loss of a network link**
- D. Only dual-homed connections support recursive routing

Correct Answer: C

QUESTION 163

Which two statements about exterior routing protocols are true? (Choose two)

- A. BGP is the current standard exterior routing protocol**
- B. They determine the optimal path within an autonomous system
- C. They determine the optimal path between autonomous systems**
- D. Most modern networking supports both EGP and BGP for external routing
- E. Most modern network routers support both EGP and EIGRP for external routing

Correct Answer: AC

Section: Routing

QUESTION 164

Which two statements correctly describe distance-vector routing protocols? (Choose two.)

- A. They require quick network convergence to support normal operations.
- B. They specify the next hop toward the destination subnet.**
- C. They generate a complete topology of the network.
- D. They update other devices on the network when one device detects a topology change.**
- E. They use a variety of metrics to identify the distance to a destination network.

Correct Answer: BD

QUESTION 165

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: part 1

QUESTION 166

Which two advantages do dynamic routing protocols provide over static routing? (Choose two.)

- A. Dynamic routing requires fewer resources than static routing
- B. Only dynamic routing is supported on all topologies that require multiple routers
- C. Dynamic routing protocols are easier to manage on very large networks
- D. Dynamic routing protocols automatically adapt to reroute traffic if possible
- E. Dynamic routing is more secure than static routing

Correct Answer: CD

QUESTION 167

Under which circumstance is a router on a stick most appropriate?

- A. when the router must route multiple subnets across multiple physical links
- B. when the router must route multiple subnets across a single physical link
- C. when the router must route a single subnet across a single physical link
- D. when the router must route a single subnet across multiple physical links

Correct Answer: B

Section: Unseen (December)

QUESTION 168

Which two options are 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
- E. it can count the number of hops to the remote host.

Correct Answer: AB

QUESTION 169

Which keyboard shortcut can you use to exit the System Configuration Dialog on a Cisco networking device and return to privileged EXEC mode without making changes?

- A. Ctrl-C
- B. Ctrl-V
- C. Shift-Esc
- D. Ctrl-Alt-Delete

Correct Answer: A

Section: Basic Networking

QUESTION 170

Which command can you enter on a switch to determine the current SNMP security model?

- A. snmp-server contact
- B. show snmp pending
- C. show snmp group**
- D. show snmp engineID

Correct Answer: C

Section: Unseen (December)

QUESTION 171

Which effect does the switchport trunk native vlan 10 command have?

- A. It prevents traffic on VLAN 1 from passing on the trunk.
- B. It configures the interface as a trunk port.
- C. It allows traffic from native VLAN 10 on the trunk.
- D. It sets VLAN 10 as the native VLAN on the trunk.**

Correct Answer: D

Section: VLAN

QUESTION 172

What are two common types of copper cables? (Choose two)

A. unshielded twisted pair

B. shielded twisted pair

C. single-mode

D. multimode

E. OM4

Correct Answer: AB

Section: Basic Networking

QUESTION 173

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

A. the ACL trace tool in Cisco APIC-EM

B. the Cisco IWAN application

C. the Cisco APIC-EM automation scheduler

D. the ACL analysis tool in Cisco APIC-EM

Correct Answer: D

Section: Security

QUESTION 174

Which tunneling mechanism embeds an IPv4 address within an IPv6 address?

- A. GRE
- B. ISATAP
- C. 6to4**
- D. 4to6
- E. Teredo

Correct Answer: C

Section: WAN

QUESTION 175

What is the effect of PortFast on the MAC aging process?

- A. It prevents fast aging of MAC addresses when IEEE 802.1D is in use.
- B. It ignores the MAC aging timer when IEEE 802.1D is in use.
- C. It prevents fast aging of MAC addresses when RSTP is in use.**
- D. It ignores the MAC aging timer when RSTP is in use.

Correct Answer: C

Section: Switching

QUESTION 176

which two statements describe key differences between single- and dual-homed WAN connections? (Choose two)

- A. Dual-homed WAN connections are more expensive than single-homed connections
- B. Dual-homed WAN connections have more management-application overhead than single-homed connections
- C. Dual-homed WAN connections require more skill to administer than single-homed connections
- D. Dual-homed WAN connections have a simpler topology than single-homed connections
- E. Dual-homed WAN connections have higher WAN speed than single-homed connections

Correct Answer: AC

Section: part 10

Question 177

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

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

Correct Answer: D

QUESTION 178

Which command should you enter to configure a device as an NTP server?

- A. ntp server
- B. ntp authenticate
- C. ntp peer
- D. ntp master**

Correct Answer: D

Section: Network Programming & Advanced WAN

QUESTION 179

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: Basic Networking

QUESTION 180

In Which three ways is an IPv6 header simpler than an IPv4 header? (Choose three)

- A. Unlike IPv4 headers, IPv6 headers have a fixed length.
- B. IPv6 uses an extension header instead of the IPv4 Fragmentation field.
- C. IPv6 headers eliminated the IPv4 Checksum field.
- D. IPv6 headers use the Fragment Offset field in place of the IPv4 Fragmentation field.
- E. IPv6 headers use a smaller Option field size than IPv4 headers.
- F. IPv6 headers use a 4-bit TTL field, and IPv4 headers use an 8-bit TTL field.

Correct Answer: ABC

Section: IPv6

QUESTION 181

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

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

Correct Answer: ABC

Section: IPv6

QUESTION 182

Which two tasks does a router perform when it receives a packet that is being forwarded from one network to another? (choose two)

- A. It encapsulates the layer 2 packet
- B. It examines the MAC address table for the forwarding interface
- C. It removes the layer 2 frame header and trailer
- D. It examines the routing table for the best path to the destination IP address of the packet
- E. It removes the layer 3 frame header and trailer

Correct Answer: CD

Section: part 12

QUESTION 183

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: AB

Section: part 1

QUESTION 184

Which option is the main function of congestion management?

A. providing long term storage of buffered data

B. queuing traffic based on priority

C. discarding excess traffic

D. classifying traffic

Correct Answer: B

QUESTION 185

Which task must you perform to enable an IOS device to use DNS services?

A. Configure manual bindings.

B. Configure the relay agent information option.

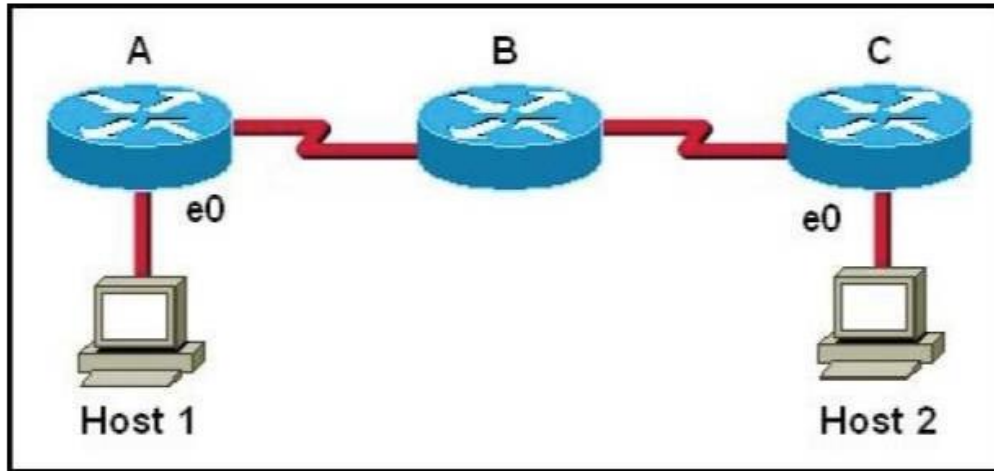
C. Configure a relay agent information reforwarding policy.

D. Configure a name server.

Correct Answer: A

Section: WAN

QUESTION 186



Refer to the exhibit . Host 1 is trying to communicate with Host 2. The e0 interface on Router C is down. Which two statements are true? (Choose two.)

- A. Router C will use ICMP to inform Host 1 that Host 2 cannot be reached.
- B. Router C will use ICMP to inform Router B that Host 2 cannot be reached.
- C. Router C will use ICMP to inform Host 1, Router A, and Router B that Host 2 cannot be reached.
- D. Router C will send a Destination Unreachable message type.
- E. Router C will send a Router Selection message type.
- F. Router C will send a Source Quench message type.

Correct Answer: AD

Section: Network Programming & Advanced WAN

QUESTION 187

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: IPv6

QUESTION 188

Which two actions must you take to correctly configure PPPoE on a client? (Choose two)

A. Define a dialer interface.

B. Define a virtual template interface.

C. Create a dialer pool and bind it to the virtual template.

D. Create a dialer pool and bind it to the physical interface.

E. Create a BBA group and link to the dialer interface.

Correct Answer: AD

Section: WAN

QUESTION 189

Which command is needed to send RIPv2 updates as broadcast when configured for RIPv2?

- A. ip rip receive version 2
- B. ip rip receive version 1
- C. version 2

D. ip rip v2-broadcast

Correct Answer: D

Section: Routing Explanation

QUESTION 190

Which MAC protocol sets a random timer to reattempt communication?

- A. RARP
- B. CSMA/CA
- C. CSMA/CD**
- D. IEEE 802.1x

Correct Answer: C

Section: Basic Networking

QUESTION 191

Which two characteristics of an ICMP echo-based IP SLA are true? (Choose two)

- A. It can use RSPAN to report network statistics to a designated remote port.
- B. It requires a remote device to log and maintain collected data.
- C. It aggregates traffic statistics for reporting on a configuration basis.
- D. It measures traffic to determine the reliability of a connection from a Cisco router to a designated end device.**
- E. it generates continuous traffic to monitor network performance.**

Correct Answer: DE

Section: Network Programming & Advanced WAN

QUESTION 192

Where does a switch maintain DHCP snooping information?

- A. in the MAC address table
- B. in the CAM table
- C. in the DHCP binding database**
- D. in the VLAN database

Correct Answer: C

QUESTION 193

Which two statements about IGP and EGP routing protocols are true? (Choose two)

- A. Service providers use OSPF and IS-IS for intra-AS routing
- B. EGP routing protocols are used to connect multiple IGP networks.**
- C. OSPF, EIGRP, and BGP are categorized as IGP routing protocols
- D. Service providers use EGP and BGP for intra- AS routing.
- E. IGP routing protocols are used within internal networks.**

Correct Answer: BE

Section: part 11

QUESTION 194

What is the first step in the NAT configuration process?

- A. Define global and local interfaces.
- B. Define IP address pools.
- C. Define public and private IP addresses.
- D. Define inside and outside interfaces.**

Correct Answer: D

Section: WAN

QUESTION 195

When you are troubleshooting an ACL issue on a router, which command would you use to verify which interface are affected by the ACL?

- A. show ip interface
- B. list ip interface
- C. show interface
- D. show ip access-list
- E. show access-lists

Correct Answer: A

Section: Security

QUESTION 196

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

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

Correct Answer: AC

Section: (none)

QUESTION 197

Which technology in a service provider environment can use labels to tunnel customer data?

- A. MPLS**
- B. PPPoE
- C. Metro Ethernet
- D. DMVPN

Correct Answer: A

Section: WAN

QUESTION 198

Which two commands can you use to configure an PAgP EtherChannel? (Choose two)

- A. channel-group 10 mode on
- B. channel-group 10 mode auto**
- C. channel-group 10 mode passive
- D. channel-group 10 mode desirable**
- E. channel-group 10 mode active

Correct Answer: BD

Section: part 13

QUESTION 199

Which two pieces of information can you learn by viewing the routing table? (Choose two)

A. whether access lists are blocking incoming routes

B. whether routes were summarized

C. whether a route was learned via IGP or EGP

D. the interface on which traffic is sent

E. whether a route was tagged

Correct Answer: BC

QUESTION 200

Which configuration register setting do you use to bypass the password that is stored in the startup configuration?

A. 0xFFFF

B. 0x2102

C. 0x2142

D. 1x2102

Correct Answer: C

Section: Basic Networking

Section: Routing

QUESTION 201

Which two tasks should you perform to begin troubleshooting a network problem?(Choose two)

- A. Gather all the facts.
- B. Monitor and verify the resolution.
- C. Define the problem as a set of symptoms and causes.
- D. Analyze the results.
- E. Implement an action plan.

Correct Answer: AC

Section: Basic Networking

QUESTION 202

Which PPP subprotocol negotiates authentication options?

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

Correct Answer:

B Section: part 8

QUESTION 203

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: Network Programming & Advanced WAN

QUESTION 204

Which two statements about RIPv2 are true? (Choose two)

- A. It stores RIP neighbor adjacency information in a neighbor table.
- B. It does not support clear text authentication, similar to RIPv1.
- C. It uses the Bellman-Ford routing algorithm**
- D. It supports CIDR and VLSM**
- E. It sends periodic updates via broadcast

Correct Answer: CD

Section: Routing

QUESTION 205

You are configuring a 100-Mb Fast Ethernet connection between a PC and Switch. Which action must you take to configure the speed on each of the two interfaces?

- A. Set both interfaces to auto-negotiate.
- B. Set both interfaces to 100 Mb**
- C. Set the switch port to auto-negotiate and the PC interface to 100 MB.
- D. Set the switch port to 100 MB and the PC interface to auto-negotiate.

Correct Answer: B

Section: Basic Networking

QUESTION 206

Which option is the main function of congestion management?

- A. discarding excess traffic
- B. queuing traffic based on priority**
- C. classifying traffic
- D. providing long-term storage of buffered data

Correct Answer: B

Section: part 8

QUESTION 207

Drag and drop the source from the left to the numbers on the right. Beginning with the lowest and ending with highest administrative distance.

connected	1
EBGP	2
EIGRP	3
OSPF	4
RIP	5
static	6

Correct Answer:

connected	connected
EBGP	static
EIGRP	EBGP
OSPF	EIGRP
RIP	OSPF
static	RIP

QUESTION 208

Drag and drop the protocols from the left onto the correct IP traffic types on the right.

Initial state of the question:

- Left side (Protocols): DHCP, HTTP, SMTP, SNMP, Telnet, VoIP
- Right side (IP Traffic Types):
 - TCP: 3 empty boxes
 - UDP: 3 empty boxes

Correct Answer:

Final state (Correct Answer):

- Left side: 6 empty boxes
- Right side (IP Traffic Types):
 - TCP: HTTP, SMTP, Telnet
 - UDP: DHCP, SNMP, VoIP

QUESTION 209

Drag and drop the extended traceroute options from the left onto the correct descriptions on the right

maximum time to live	value that, when reached, terminates the traceroute command
minimum time to live	IP header options
numeric display	overrides the router selection of an outbound interface
source address	sets the interval for which the probe waits for a response
timeout	suppresses the display of known hops
Timestamp verbose	suppresses the display hostnames

Correct Answer:

	maximum time to live
	Timestamp verbose
	source address
	timeout
	minimum time to live
	numeric display

QUESTION 210

Drag the security features on the left to the specific security risks they help protect against on the right. (Not all features are used).

access-group	emote access to device console
console password	access to the console 0 line
enable secret	access to connected networks or resources
CHAP authentication	viewing of password
VTY password	access to privileged mode
service password-encryption	

Correct Answer:

access-group	VTY password
console password	console password
enable secret	access-group
CHAP authentication	service password-encryption
VTY password	enable secret
service password-encryption	

QUESTION 211

Drag and drop the PPPoE message types from the left into the sequence in which PPPoE messages are sent on the right.

PADI	1
PADR	2
PADO	3
PADS	4

Correct Answer:

	PADI
	PADO
	PADR
	PADS

Question 212

Drag and drop the benefits of a Cisco Wireless LAN controller from the left onto the correct examples on the right

dynamic RF feature	Access points automatically adjust their signal strength
easy deployment process	The controller image is deployed automatically to access point
easy upgrade process	The controller provides centralized management of users and VLANs
optimized user performance	The controller uses load balancing to maximize throughput

Correct Answer:

dynamic RF feature	dynamic RF feature
easy deployment process	easy upgrade process
easy upgrade process	easy deployment process
optimized user performance	optimized user performance

QUESTION 213

You are configuring a switch so that it accepts traffic from a maximum of two dynamic MAC address. Drag and drop the required configuration commands on the left into the correct sequence on the right. (Not all commands are used)

switchport mode access	1
switchport port- security	2
switchport port-security mac-address 0060.3EED.77AB	3
switchport port-security mac-address 00D0.D3ED.622A	4
switchport port-security mac-address sticky	
switchport port-security maximum 2	
switchport port-security violation shutdown	

Correct Answer:

switchport mode access	switchport mode access
switchport port- security	switchport port- security
switchport port-security mac-address 0060.3EED.77AB	switchport port-security mac-address sticky
switchport port-security mac-address 00D0.D3ED.622A	switchport port-security maximum 2
switchport port-security mac-address sticky	
switchport port-security maximum 2	
switchport port-security violation shutdown	

QUESTION 214

Cisco IOS supports Which QoS models?

- A. best-effort and integrated services
- B. integrated services and differentiated services
- C. best-effort and differentiated services
- D. best-effort, integrated services, and differentiated services**

Correct Answer: D

Section: Network Programming & Advanced WAN

QUESTION 215

According to security best practices, which two actions must you take to protect an unused switch port? (Choose two)

- A. A configure the port as a trunk port.
- B. Configure the port as an access port on a VLAN other than VLAN 1.**
- C. Configure the port to automatically come online.
- D. Administratively shutdown the port**
- E. Enable CDP.

Correct Answer: BD

Section: Switching

QUESTION 216

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

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

Correct Answer: B

Section: Basic Networkin

QUESTION 217

What are two advantages of static routing? (Choose two)

- A. It can be implemented easily even in large environments
- B. It produces minimal CPU load
- C. It cannot be used to load-balance traffic over multiple links
- D. It allows the administrator to control the path of traffic
- E. It allows the network to respond immediately to changes.

Correct Answer: BD

Section: Routing

QUESTION 218

Which two statements about EUI-64 addressing are true? (Choose two.)

- A. The address includes the hex digits FFFE after the last 24 bits of the interface MAC address.
- B. A 64-bit interface identifier is derived from the interface MAC address.
- C. A locally administrated address has the universal/local bit set to 0.
- D. A 96-bit interface identifier is derived from the interface MAC address.
- E. The address includes the hex digits FFFE after the first 14 bits of the interface MAC address.

Correct Answer: AB

Section: IPv6

QUESTION 219

```
CiscoSwitch-MDF-1#configure terminal
CiscoSwitch-MDF-1#interface VLAN 1
CiscoSwitch-MDF-1(config-if)#ip address 192.168.2.2 255.255.255.0
CiscoSwitch-MDF-1(config-if)#end
```

Refer to the exhibit. What is the effect of the given configuration?

- A. It configures an inactive switch virtual interface.
- B. It configures an active management interface.
- C. It configures the native VLAN.
- D. It configures the default VLAN.

Correct Answer: A

Section: VLAN

QUESTION 220

Which NAT function can map multiple inside addresses to a single outside address?

A. PAT

B. SFTP

C. RARP

D. ARP

E. TFTP

Correct Answer: A

Section: (none)

QUESTION 221

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: Routing

QUESTION 222

Which command should you enter to verify the priority of a router in an HSRP group?

- A. show standby**
- B. show interfaces
- C. show sessions
- D. show hsrp

Correct Answer: A

Section: (none)

QUESTION 223

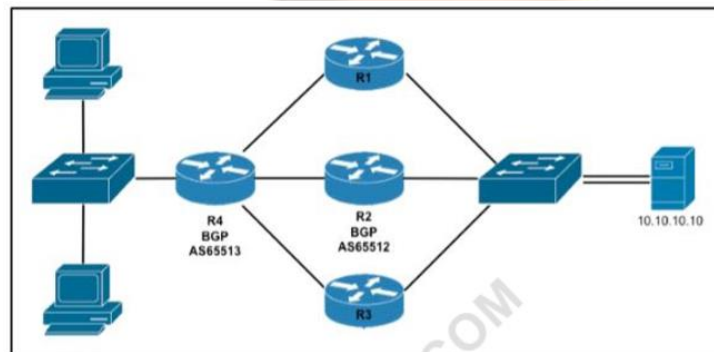
Which two statements about southbound APIs are true? (Choose two)

- A. OpenFlow is a southbound API standard.
- B. They enable communication between the controller and the network device.**
- C. They communicate with the management plane.
- D. They enable communication between the controller and SDN applications.**
- E. They use HTTP messages to communicate.

Correct Answer: BD

Section: Network Programming & Advanced WAN

QUESTION 224



Refer to the exhibit. Router R4 is dynamically learning the path to the server. If R4 is connected to R1 via OSPF Area 20, to R2 via BGP, and to R3 via EIGRP 777, which path is installed in the routing table of R4?

- A. the path through R1, because the OSPF administrative distance is 110
- B. the path through R2, because the IBGP administrative distance is 200
- C. the path through R3, because the EIGRP administrative distance is lower than the OSPF and BGP administrative distances
- D. the path through R2, because the EBGP administrative distance is 20

Correct Answer: D

QUESTION 225

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 the routing protocol
- C. Under serial interface
- D. Under the multilink interface

Correct Answer: D

QUESTION 226

Which command must you enter to enable OSPFv2 in an IPv4 network?

- A. router ospf process-id
- B. router ospf value
- C. ip ospf hello-interval seconds
- D. router ospfv2 process-id

Correct Answer: A

Section: Routing

QUESTION 227

Which two statements about the extended traceroute command are true? (Choose two.)

- A. It can validate the reply data.
- B. It can be repeated automatically at a specified interval.
- C. It can send packets from a specified interface or IP address.
- D. It can use a specified ToS.
- E. It can use a specified TTL value.

Correct Answer: CE

Section: Infrastructure Management

QUESTION 228

Which two command sequences must you configure on a switch to establish a Layer 3 EtherChannel with an open standard protocol? (Choose two)

- A. interface GigabitEthernet0/0/1
channel-group 10 mode on
- B. interface port-channel 10
switchport
switchport mode trunk
- C. interface GigabitEthernet0/0/1
channel-group 10 mode auto
- D. interface port-channel 10
no switchport
ip address 172.16.0.1 255.255.255.0
- E. interface GigabitEthernet0/0/1
channel-group 10 mode active

Correct Answer: DE

Section: Switching

QUESTION 229

Which two statements about the ip default-network command are true? (Choose two)

- A. it specifies the network that is used when the device finds an exact match in the routing table
- B. it specifies the network that is used when the device cannot find an exact match in the routing table
- C. it can be configured on a layer 2 switch to specify the next hop
- D. it requires IP routing to be disabled on the device
- E. it requires IP routing to be enabled on the device

Correct Answer: BE

Section: Routing

QUESTION 230

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: part

QUESTION 231

Which two statements about IPv6 anycast addresses are true?(Choose two)

- A. They receive packets on the closest interface that is discovered by the routing protocol
- B. They are allocated from the IPv6 broadcast address space
- C. They are used in conjunction with source-specific multicast for IPv6
- D. They use the prefix FC00::/8
- E. They are allocated from the IPv6 unicast address space

Correct Answer: AE

Section: part 10

QUESTION 232

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: part 2

QUESTION 233

Which two QoS tools can provide congestion management?(Choose two)

A. CBWFQ

B. FRTS

C. CAR

D. PQ

E. PBR

Correct Answer: AD

Section: part 10

QUESTION 234

Which statement about loopback testing on a router serial interface is true?

A. Traffic is dropped with both software loopbacks and hardware loopbacks.

B. Traffic is dropped with a hardware loopback, but traffic passes through the interface with a software loopback

C. Traffic passes through the interface with both software loopbacks and hardware loopbacks.

D. Traffic is dropped with a software loopback, but traffic passes through the interface with a hardware loopback

Correct Answer: A

QUESTION 235

which address 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

QUESTION 236

After you deploy a new WLAN controller on your network, which two additional tasks you consider? (Choose two)

- A. configure additional security policies
- B. deploy POE switches
- C. configure multiple VRRP groups
- D. configure additional VLANs
- E. deploy load balancers

Correct Answer: A E

Section: Network Programming & Advanced WAN

QUESTION 237

After you configure a DHCP server on VLAN 10 to service clients on VLAN 10 and VLAN 20, clients on VLAN 10 are given IP address assignments, but clients on VLAN 20 fail to receive IP addresses. Which action must you take to correct the problem?

- A. Configure the default gateway in the DHCP server configuration.
- B. Configure a separate DHCP server on VLAN 20.
- C. Configure the DNS name option in the DHCP server configuration.
- D. Configure the ip helper-address command in the DHCP server configuration.

Correct Answer: B

Section: (none)

QUESTION 238

```

A          BC          D          E
↓          ↓↓         ↓          ↓
B* 0.0.0.0 [20/0] via 10.111.11.93, 7w0d
    10.0.0.0/8 is variably subnetted, 187 subnets, 16 masks
O K1 10.6.1.58/32 [110/31] via 10.153.0.10, 5w5d, GigabitEthernet0/0/2.2
O K1 10.6.78.80/28 [110/31] via 10.153.0.10, 5w5d, GigabitEthernet0/0/2.2
O IA 10.7.228.148/31
  [110/11] via 10.153.0.10, 5w5d, GigabitEthernet0/0/2.2
O IA 10.7.228.150/31
  [110/21] via 10.153.0.10, 5w5d, GigabitEthernet0/0/2.2
  [110/21] via 10.48.162.70, 5w5d, GigabitEthernet0/0/3
```

Refer to the exhibit. Drag and drop the routing table components on the left onto the corresponding letter from the exhibit on the right. Not all options are used.

administrative distance	A
metric	B
next-hop interface	C
outbound interface	D
route source	E
subnet mask	
timestamp	

Correct Answer

	route source
	administrative distance
next-hop interface	metric
	timestamp
subnet mask	outbound interface

QUESTION 239

Which two statements about NTP operations are true? (Choose two.)

- A. NTP uses UDP over IP.
- B. Cisco routers can act as both NTP authoritative servers and NTP clients.
- C. Cisco routers can act only as NTP servers.
- D. Cisco routers can act only as NTP clients.
- E. NTP uses TCP over IP.

Correct Answer: AB

Section: (none)

QUESTION 240

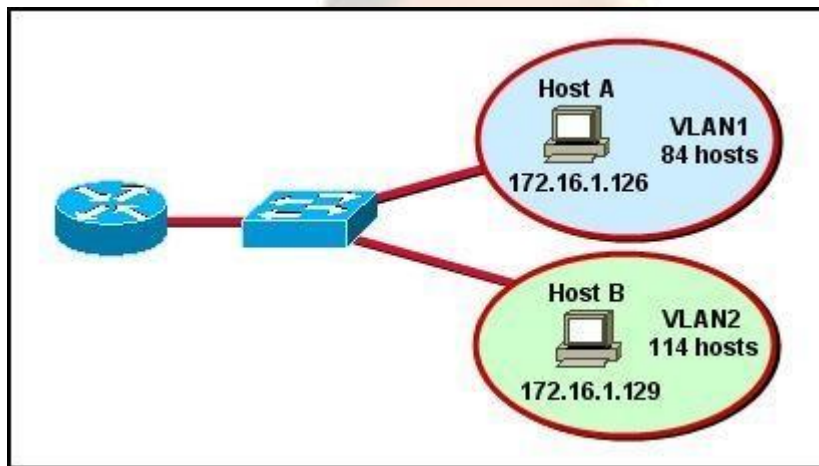
Which command should you use to display detailed information about EBGP peers?

- A. show ip bgp summary
- B. show ip bgp neighbors
- C. show ip bgp paths
- D. show ip bgp

Correct Answer: B

Section: (none)

QUESTION 241



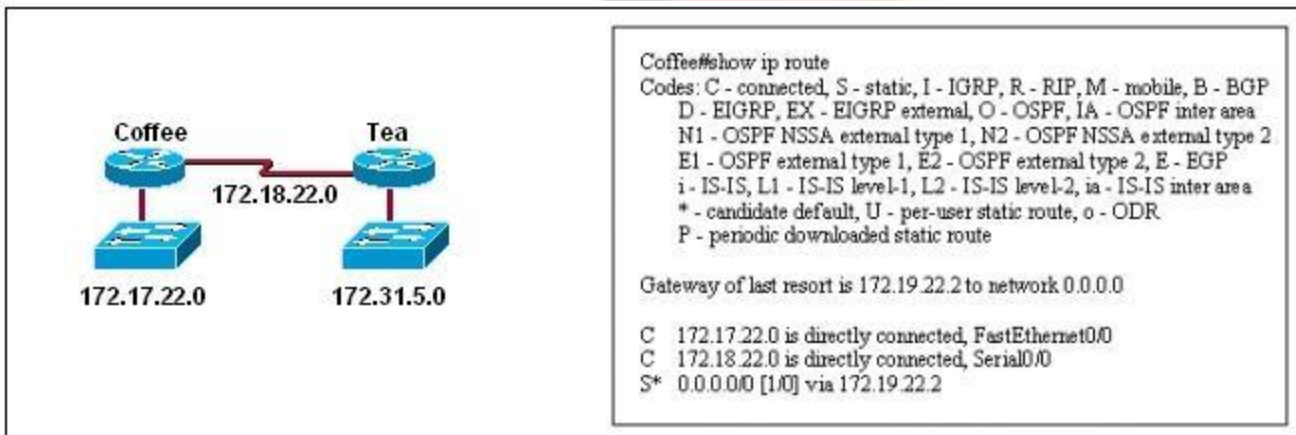
Refer to the exhibit . All hosts have connectivity with one another. Which statements describe the addressing scheme that is in use in the network? (Choose three.)

- A. The subnet mask in use is 255.255.255.192.
- B. The subnet mask in use is 255.255.255.128.
- C. The IP address 172.16.1.25 can be assigned to hosts in VLAN1
- D. The IP address 172.16.1.205 can be assigned to hosts in VLAN1
- E. The LAN interface of the router is configured with one IP address.
- F. The LAN interface of the router is configured with multiple IP addresses.

Correct Answer: BCF

Section: Network Fundamentals

QUESTION 242



Refer to the exhibit. Users on the 172.17.22.0 network cannot reach the server located on the 172.31.5.0 network. The network administrator connected to router Coffee via the console port, issued the show ip route command, and was able to ping the server. Based on the output of the show ip route command and the topology shown in the graphic, what is the cause of the failure?

- A. The network has not fully converged.
- B. IP routing is not enabled.
- C. A static route is configured incorrectly.**
- D. The FastEthernet interface on Coffee is disabled.
- E. The neighbor relationship table is not correctly updated.
- F. The routing table on Coffee has not updated.

Correct Answer: C

Section: Network Fundamentals

QUESTION 244

Which command should you enter to configure a single port to prevent alternate ports from becoming designated ports?

- A. spanning-tree guard root
- B. spanning-tree guard loop**
- C. spanning-tree loopguard default
- D. spanning-tree etherchannel misconfig

Correct Answer: B

Section: (none)

QUESTION 245

Which two IP SLA operations can you use to measure the end-to-end response time for all IP traffic between a Cisco router and an end device? (Choose two.)

- A. UDP jitter
- B. ICMP echo**
- C. TCP connect
- D. UDP echo
- E. ICMP path jitter
- F. ICMP path echo**

Correct Answer: BF

Section: Infrastructure Managemen

QUESTION 246

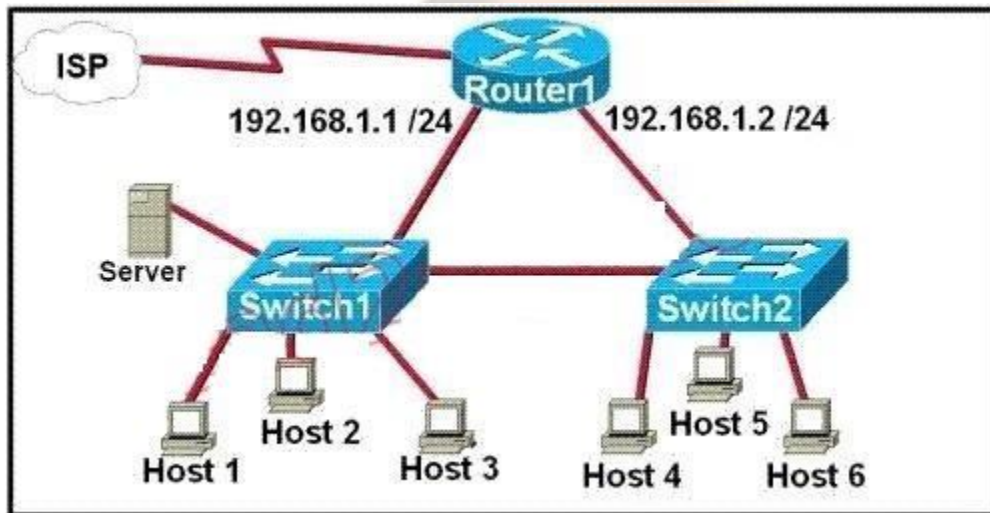
Which three statements about Syslog utilization are true? (Choose three.)

- A. Utilizing Syslog improves network performance.
- B. The Syslog server automatically notifies the network administrator of network problems.
- C. A Syslog server provides the storage space necessary to store log files without using router disk space.
- D. There are more Syslog messages available within Cisco IOS than there are comparable SNMP trap messages.
- E. Enabling Syslog on a router automatically enables NTP for accurate time stamping.
- F. A Syslog server helps in aggregation of logs and alerts.

Correct Answer: CDF

Section: Infrastructure Management

QUESTION 247



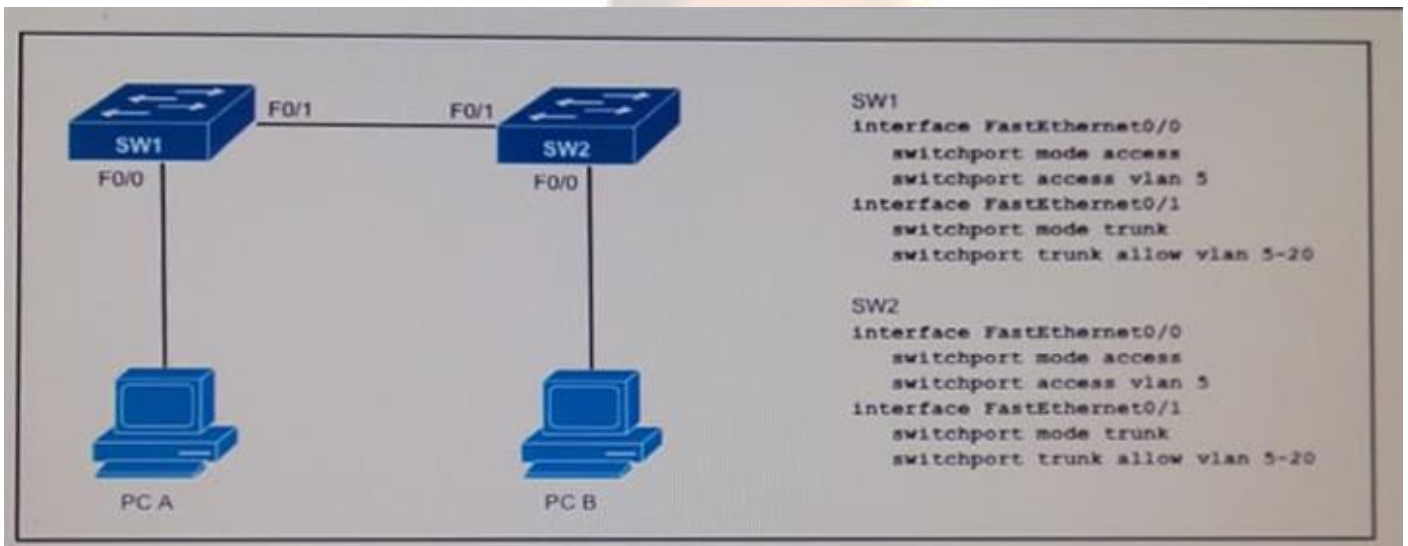
Refer to the exhibit. A network technician is asked to design a small network with redundancy. The exhibit represents this design, with all hosts configured in the same VLAN. What conclusions can be made about this design?

- A. The design will function as intended
- B. Spanning-tree will need to be used
- C. The router will not accept the addressing scheme
- D. The connection between switches should be a trunk.
- E. The router interfaces must be encapsulated with the 802.1Q protocol.

Correct Answer: C

Section: part 10

QUESTION 248



Refer to the exhibit. Traffic on the control plane uses which VLAN ?

A. VLAN 1

B. VLAN 5

C. VLAN 10

D. VLAN 20

Correct Answer: A

Section: part 10

QUESTION 249

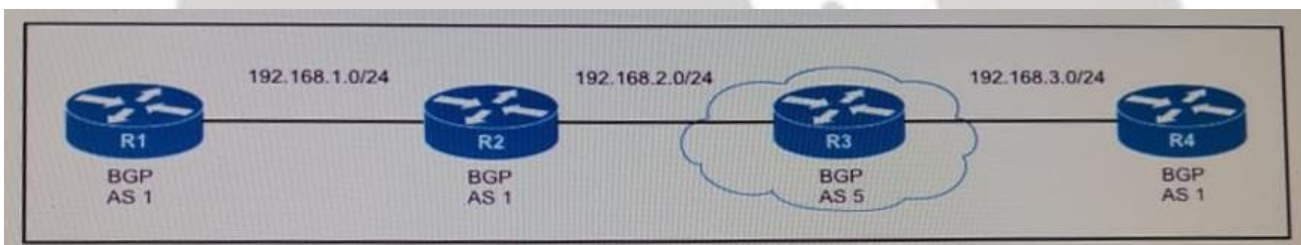
WHEN YOU CONFIGURE DHCP ON A ROUTER, WHICH COMMAND MUST YOU ENTER SO THAT THE DEFAULT GATEWAY IS AUTOMATICALLY DISTRIBUTED?

- A. dns-server
- B. default-router
- C. default-gateway
- D. ip dhcp pool

Correct Answer: B

Section: (none)

QUESTION 250



Refer to the exhibit. Which BGP configuration do you need to apply to router R4 to allow traffic to flow normally on this network?

- A .router bgp 1
- no synchronization
- neighbor 192.168.1.1 remote-as1
- neighbor 192.168.2.1remote-as 1
- neighbor 192.168.3.1 remote-as 5
- no auto-summary

B.router bgp 1

No synchronization neighbor

192.168.1.1 remote-as 1

neighbor 192.168.2.1 remote-as 1

neighbor 192. 168.2.1ebgp-multihop 4

neighbor 192. 168.3.1remote-as 5

no auto-summary

C. router bgp 1

-multihop 4no synchronization

neighbor 192.168.1.1 remote-as 1

neighbor 192.168.1.1ebgp-multihop 4

neighbor 192.168.2.1remote-as 1

neighbor 192.168.2.1ebgp-multihop 4

neighbor 192.168.3.1remote-as 5

neighbor 192.168.3.1ebgp-multihope

D. router bgp 1

no synchronization

neighbor 192.168.1.1 remote-as 1

neighbor 192.168.1.1ebgp-multihop 4

neighbor 192.168.2.1remote-as 1

neighbor 192.168.2.1ebgp-multihop 4

neighbor 192.168.3.1remote-as 5 no auto-summary

E. router bgp 1

no synchronization

neighbor 192.168.1.1 remote-as 1

neighbor 192.168.2.1 remote-as 1

neighbor 192.168.3.1 remote-as 5

F. router bgp 1

no synchronization

neighbor 192.168.1.1 remote-as 1

neighbor 192.168.2.1 remote-as 1

neighbor 192.168.2.1 ebgp-multihop 4

neighbor 192.168.3.1 remote-as 5 no auto-summary

neighbor 192.168.3.1 ebgp-multihop 4 no auto-summary

G. router bpg 1

no synchronization

neighbor 192.168.1.1 remote-as 1

neighbor 192.168.1.1 ebgp-multihop 4

neighbor 192.168.2.1 remove-as 1

neighbor 192.168.2.1 ebgp-multihop 4

neighbor 192.168.3.1 remote-as 5

Correct Answer: E

QUESTION 251

What are types of IPv6 static routes? (Choose Three.)

- A. Recursive Static routes
- B. Directly connected static routes**
- C. Fully specified static routes**
- D. Dynamically specified static routes
- E. injected static routes
- F. Redistributed static routes**

Correct Answer: BCF

Section: part

QUESTION 251

which keyword enables an HSRP router to take the active role immediately when it comes online?

- A. preempt**
- B. priority s
- C. version
- D. IP address

Correct Answer: A

Section: part 3

QUESTION 252

What is the minimum Ethernet frame size?

- A. 32 bytes
- B. 64 bytes**
- C. 1024 bytes
- D. 1500 bytes

Correct Answer: B

Section: (none)

QUESTION 253

What are two benefits that the UDP protocol provide for application traffic? (Choose two.)

- A. UDP traffic has lower overhead than TCP traffic**
- B. UDP provides a built-in recovery mechanism to retransmit lost packets
- C. The CTL field in the UDP packet header enables a three-way handshake to establish the connection
- D. The application can use checksums to verify the integrity of application data**
- E. UDP maintains the connection state to provide more stable connections than TCP

Correct Answer: AD

Section: (none)

QUESTION 254

Which two address spaces are valid Class B IPv4 ranges that are non-routable to the Internet? (Choose two.)

- A. 10.0.0.0 through 10.0.255.255
- B. 169.254.0.0 through 169.254.255.255**
- C. 172.16.0.0 through 172.31.255.255**
- D. 172.16.0.0 through 172.32.255.255
- E. 192.168.0.0 through 192.168.255.255

Correct Answer: BC

Section: (none)

QUESTION 254

Which two types of NAT addresses are used in a Cisco NAT device? (Choose two.)

- A. inside private
- B. inside local**
- C. external local
- D. external global
- E. inside global**
- F. outside private

Correct Answer: BE

Section: (none)

QUESTION 255

Which two statements about DNS lookup operations are true? (Choose two.)

- A. When the primary IP address of the destination is down, the DNS server can forward the client to an alternate IP address.
- B. The client sends a request for IP address to domain name resolution to the DNS server.
- C. The DNS server pings the destination to verify that is available.
- D. They use destination port 53.
- E. The client sends a request for domain name to IP address resolution to the DNS server.

Correct Answer: BE

Section: (none)

QUESTION 256

Which two statements correctly describe the ping utility? (Choose two.)

- A. It uses UDP
- B. It can identify the source of an ICMP "time exceeded" message
- C. It uses ICMP
- D. It can identify the path that a packet takes to a remote device
- E. It can verify connectivity to a remote device without identifying the path

Correct Answer: CE

Section: (none)

QUESTION 257

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)

QUESTION 258

Which two functions can be performed by local DNS server?(choose two)

- A. copying updated IOS images to cisco switches
- B. resolving names locally
- C. transferring split horizon traffic between zones
- D. assigning IP addresses to local clients
- E. forwarding name resolution requests to an external DNS server

Correct Answer: BE

Section: part 12 Explanation

QUESTION 258

You are configuring port security on a Cisco switch. Which command must you enter so that only a certain number of dynamically learned MAC addresses are permanently assigned to the interface?

- A.switchport port-security maximum
- B.switchport nonegotiate
- C.switchport port-security
- D.switchport port-security mac-address sticky

Correct Answer: BE

QUESTION 259

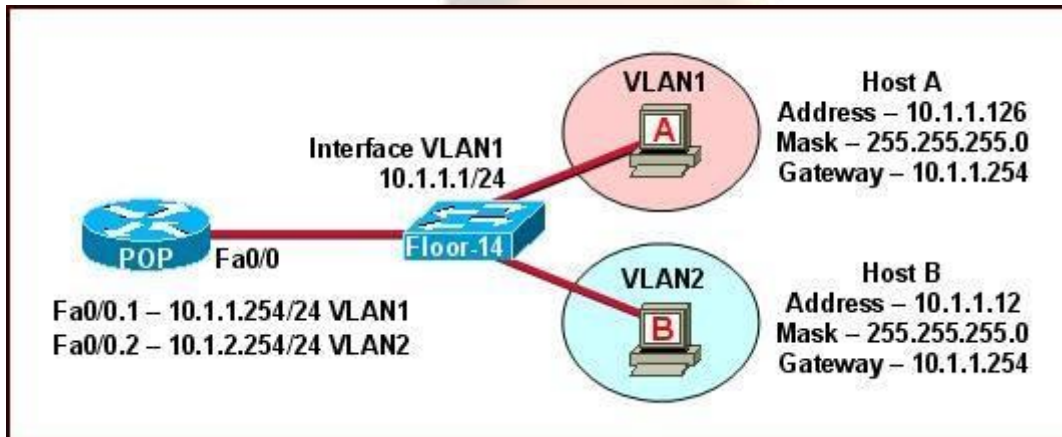
Which technology is a critical component of a cloud-based architecture?

- A. DNS
- B. MPLS
- C. DHCP
- D. IPv6

Correct Answer: A

Section: (none)

QUESTION 260



Refer to the exhibit. 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: Network Fundamentals

QUESTION 261

```
R1# show ip route | b Gateway
Gateway of last resort is 10.85.193.46 to network 0.0.0.0
D*EX 0.0.0.0/0
 [170/256768] via 10.85.193.46, 5w3d, TenGigabitEthernet0/2/0.100
 [170/256768] via 10.85.193.42, 5w3d, TenGigabitEthernet0/1/0.100
10.0.0.0/8 is variably subnetted, 6407 subnets, 20 masks
 B 10.48.168.60/30 [20/0] via 10.48.168/58, 6d22h
 B 10.7.2.0/24 [20/0] via 10.111.34.197, 7w0d
 B 10.7.3.0/24 [20/0] via 10.111.34.197, 7w0d
 B 10.7.4.0/24 [20/0] via 10.111.34.197, 7w0d
 B 10.7.6.0/24 [20/0] via 10.111.34.197, 7w0d
 D EX 10.48.168.98/32
 [170/256768] via 10.85.193.46, 5w3d, TenGigabitEthernet0/2/0.100
 [170/256768] via 10.85.193.42, 5w3d, TenGigabitEthernet0/1/0.100
 D 10.48.168.128/29
 [90/3072] via 10.85.193.46, 5w3d, TenGigabitEthernet0/2/0.100
 [90/3072] via 10.85.193.42, 5w3d, TenGigabitEthernet0/1/0.100
 D 10.48.168.160/27
 [90/3328] via 10.85.193.46, 5w3d, TenGigabitEthernet0/2/0.100
 [90/3328] via 10.85.193.42, 5w3d, TenGigabitEthernet0/1/0.100

 S 10.243.72.0/22 [1/0] via 144.9.75.241
 O E2 10.2.97.0/24 [110/100] via 10.82.4.46,7w0d,
 GigabitEthernet1/0/2
 [110/100] via 10.82.4.42,7w0d, GigabitEthernet1/0/1
 O E2 10.3.0.0/16 [110/100] via 10.82.4.46,7w0d,
 GigabitEthernet1/0/2
 [110/100] via 10.82.4.42,7w0d, GigabitEthernet1/0/1
 O E2 10.5.1.0/24 [110/100] via 10.82.4.46,2w6d,
 GigabitEthernet1/0/2
 [110/100] via 10.82.4.42,2w6d, GigabitEthernet1/0/1
 O E2 10.5.5.0/24 [110/100] via 10.82.4.46,5w5d,
 GigabitEthernet1/0/2
 [110/100] via 10.82.4.42,5w5d, GigabitEthernet1/0/1
```

Refer to the exhibit. Which two statements about router R1 are true?

- A. At least three IGP routing protocols are running on the router
- B. At least two IGP routing protocols are running on the router
- C. The router has two EIGRP neighbors and one OSPF neighbor
- D. The router has an OSPF Area 0 adjacency with the device at 10.82.4.42
- E. The router is learning external OSPF and EIGRP routes

Correct Answer: BE

Section: (none)

QUESTION 262

At which severity level can syslog logging begin to affect router performance?

- A. debugging
- B. emergency
- C. notification

D. critical

Correct Answer: D

Section: part 10

QUESTION 263

What is one benefit of PVST+?

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

Correct Answer: C

Section: LAN Switching Technologies

QUESTION 264

```
00:00:39: %LINEPROTO-5-UPDOWN: Line protocol on Interface Vlan1, changed state to down
00:00:40: %SPAN TREE-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 (fc1)
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. The switch will need a different IOS code in order to support VLANs and STP.
- 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)

QUESTION 265

Which two benefits of implementing a full-mesh WAN topology are true? (Choose two.)

- A. increased latency
- B. redundancy**
- C. reduced jitter
- D. reliability**
- E. improved scalability

Correct Answer: BD

Section: WAN Technologies

QUESTION 266

Which command is configured on a switch to enable neighbor discovery in a multivendor environment?

- A. lldp run**
- B. lldp transmit
- C. lldp receive
- D. cdp run

Correct Answer: A

Section: Infrastructure Management

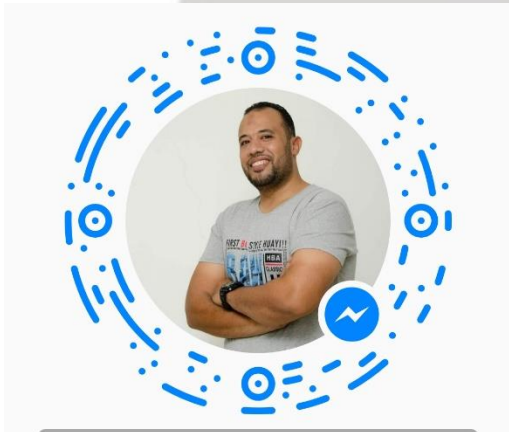
QUESTION 267

You have configured a router with an OSPF router ID, but its IP address still reflects the physical interface. Which action can you take to correct the problem in the least disruptive way?

- A. Reload the OSPF process
- B. Reboot the router
- C. Specify a loopback address
- D. Save the router configuration

Correct Answer: A

Section: Routing Technologies



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