

Exam : **200-301**

Title : Cisco Certified Network
Associate Exam

Vendor : Cisco

Version : V15.35

NO.1 A Cisco IP phone receive untagged data traffic from an attached PC. Which action is taken by the phone?

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

Answer: A

Explanation:

https://www.cisco.com/c/en/us/td/docs/switches/lan/catalyst2960x/software/15-0_2_EX/vlan/configuration_guide/b_vlan_152ex_2960-x_cg/b_vlan_152ex_2960-x_cg_chapter_0110.pdf

NO.2 Refer to the exhibit.

```
Designated Router (ID) 10.11.11.11, Interface address 10.10.10.1
Backup Designated router (ID) 10.3.3.3, Interface address 10.10.10.3
Timer intervals configured, Hello 10, Dead 40, Wait 40, Retransmit 5
oob-resync timeout 40
Hello due in 00:00:08
Supports Link-local Signaling (LLS)
Cisco NSF helper support enabled
IETF NSF helper support enabled
Index 1/1/1, flood queue length 0
Next 0x0(0)/0x0(0)/0x0(0)
Last flood scan length is 1, maximum is 6
Last flood scan time is 0 msec, maximum is 1 msec
Neighbor Count is 3, Adjacent neighbor count is 3
Adjacent with neighbor 10.1.1.4
Adjacent with neighbor 10.2.2.2
Adjacent with neighbor 10.3.3.3 (Backup Designated Router)
Suppress hello for 0 neighbor(s)
```

The show ip ospf interface command has been executed on R1 How is OSPF configured?

- A.** The interface is not participating in OSPF
- B.** A point-to-point network type is configured
- C.** The default Hello and Dead timers are in use
- D.** There are six OSPF neighbors on this interface

Answer: C

NO.3 Drag and drop the AAA functions from the left onto the correct AAA services on the right

records user activities	Authentication
restricts the services that are available to a user	
identifies the user	Authorization
controls the actions that a user can perform	
provides analytical information for the network administrator	Accounting
verifies the password associated with a user	

Answer:

records user activities	Authentication
restricts the services that are available to a user	
identifies the user	Authorization
controls the actions that a user can perform	
provides analytical information for the network administrator	Accounting
verifies the password associated with a user	

NO.4 What benefit does controller-based networking provide versus traditional networking?

- A. moves from a two-tier to a three-tier network architecture to provide maximum redundancy
- B. provides an added layer of security to protect from DDoS attacks
- C. allows configuration and monitoring of the network from one centralized port
- D. combines control and data plane functionality on a single device to minimize latency

Answer: C

NO.5 A network engineer must create a diagram of a multivendor network. Which command must be configured on the Cisco devices so that the topology of the network can be mapped?

- A. Device(Config)#lldp run
- B. Device(Config)#cdp run
- C. Device(Config-if)#cdp enable
- D. Device(Config)#flow-sampler-map topology

Answer: A

NO.6 Which feature on the Cisco Wireless LAN Controller when enabled restricts management access from specific networks?

- A. CPUACL
- B. TACACS
- C. Flex ACL
- D. RADIUS

Answer: A

Reference:

<https://www.cisco.com/c/en/us/support/docs/wireless-mobility/wlan-security/71978-acl-wlc.html>

NO.7 When a site-to-site VPN is used, which protocol is responsible for the transport of user data?

- A. IKEv2
- B. IKEv1
- C. IPsec
- D. MD5

Answer: C

NO.8 How do TCP and UDP differ in the way that they establish a connection between two endpoints?

- A. TCP uses synchronization packets, and UDP uses acknowledgment packets.
- B. UDP uses SYN, SYN ACK and FIN bits in the frame header while TCP uses SYN, SYN ACK and ACK bits
- C. UDP provides reliable message transfer and TCP is a connectionless protocol
- D. TCP uses the three-way handshake and UDP does not guarantee message delivery

Answer: D

NO.9 What are two reasons that cause late collisions to increment on an Ethernet interface? (Choose two)

- A. when the sending device waits 15 seconds before sending the frame again
 - B. when the cable length limits are exceeded
 - C. when one side of the connection is configured for half-duplex
 - D. when Carrier Sense Multiple Access/Collision Detection is used
 - E. when a collision occurs after the 32nd byte of a frame has been transmitted
- The usual possible causes are full-duplex/half-duplex mismatch, exceeded Ethernet cable length limits, or defective

hardware such as incorrect cabling, non-compliant number of hubs in the network, or a bad NIC.

Answer: B,C

NO.10 When a floating static route is configured, which action ensures that the backup route is used when the primary route fails?

- A.** The floating static route must have a higher administrative distance than the primary route so it is used as a backup
- B.** The administrative distance must be higher on the primary route so that the backup route becomes secondary.
- C.** The floating static route must have a lower administrative distance than the primary route so it is used as a backup
- D.** The default-information originate command must be configured for the route to be installed into the routing table

Answer: A

NO.11 Which mode must be used to configure EtherChannel between two switches without using a negotiation protocol?

- A.** on
- B.** auto
- C.** active
- D.** desirable

Answer: A

NO.12 What are two descriptions of three-tier network topologies? (Choose two)

- A.** The core and distribution layers perform the same functions
- B.** The access layer manages routing between devices in different domains
- C.** The network core is designed to maintain continuous connectivity when devices fail.
- D.** The core layer maintains wired connections for each host
- E.** The distribution layer runs Layer 2 and Layer 3 technologies

Answer: C,E

NO.13 Refer to exhibit.

```
Router(config)#interface GigabitEthernet 1/0/1
Router(config-if)#ip address 192.168.16.143 255.255.255.240
Bad mask /28 for address 192.168.16.143
```

Which statement explains the configuration error message that is received?

- A.** It is a broadcast IP address
- B.** The router does not support /28 mask.
- C.** It belongs to a private IP address range.
- D.** It is a network IP address.

Answer: A

NO.14 Drag and drop to the characteristics of networking from the left onto the correct networking types on the right.

focused on network	Controller-Based Networking
focused on devices	
user input is a configuration	
user input is a policy	
uses white list security model	
uses black list security model	

Answer:

focused on network	Controller-Based Networking
focused on devices	
user input is a configuration	
user input is a policy	
uses white list security model	
uses black list security model	

NO.15 What is the expected outcome when an EUI-64 address is generated?

- A.** The seventh bit of the original MAC address of the interface is inverted
- B.** The interface ID is configured as a random 64-bit value
- C.** The characters FE80 are inserted at the beginning of the MAC address of the interface
- D.** The MAC address of the interface is used as the interface ID without modification

Answer: A

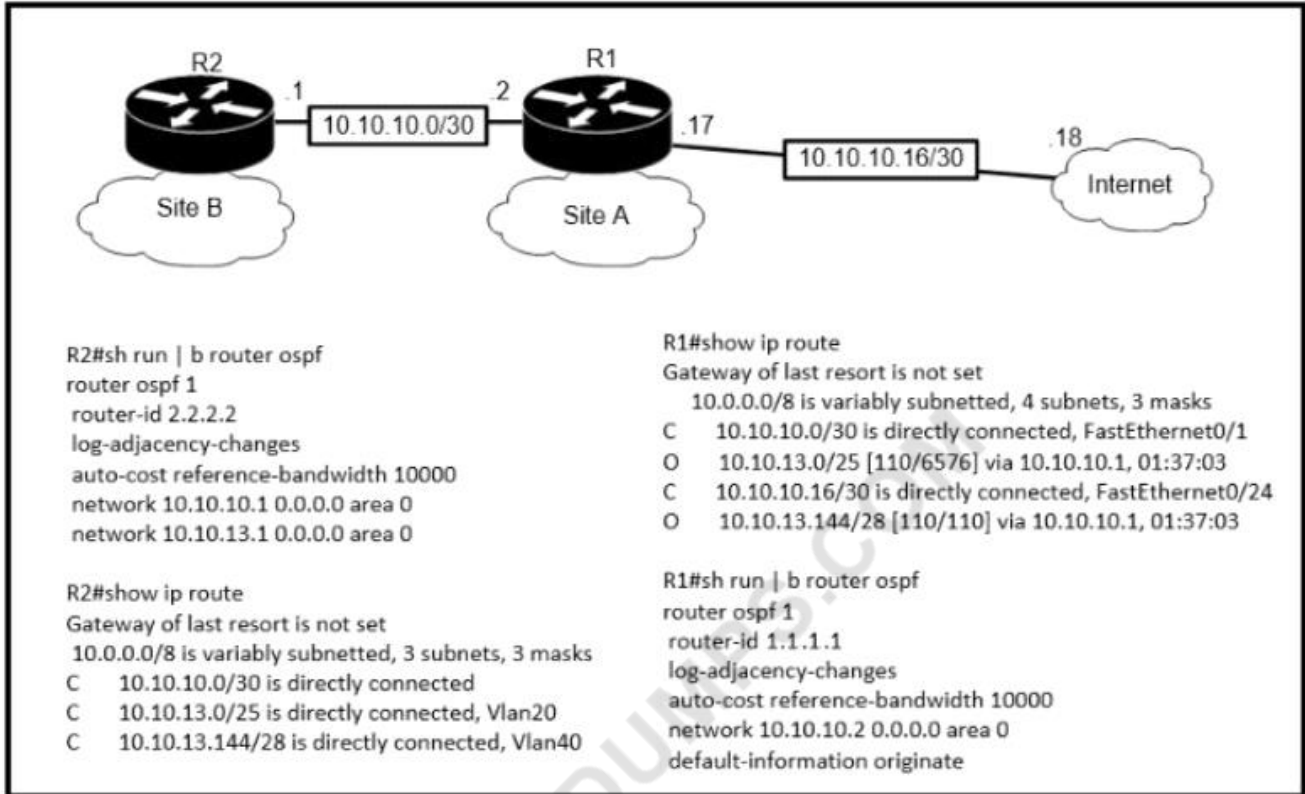
NO.16 Which function does an SNMP agent perform?

- A.** it sends information about MIB variables in response to requests from the NMS
- B.** it coordinates user authentication between a network device and a TACACS+ or RADIUS server

- C. it requests information from remote network nodes about catastrophic system events.
- D. it manages routing between Layer 3 devices in a network

Answer: A

NO.17 Refer to the exhibit.



The default-information originate command is configured under the R1 OSPF configuration. After testing, workstations on VLAN 20 at Site B cannot reach a DNS server on the Internet. Which action corrects the configuration issue?

- A. Add the default-information originate command on R2
- B. Configure the ip route 0.0.0.0 0.0.0.0 10.10.10.18 command on R1
- C. Configure the ip route 0.0.0.0 0.0.0.0 10.10.10.2 command on R2
- D. Add the always keyword to the default-information originate command on R1

Answer: D

NO.18 What are two benefits of network automation? (Choose two)

- A. reduced operational costs
- B. reduced hardware footprint
- C. faster changes with more reliable results
- D. fewer network failures
- E. increased network security

Answer: A,C

NO.19 Which two command sequences must you configure on 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 GigabitEthernet0/0/1

channel-group 10 mode active

C. interface GigabitEthernet0/0/1

channel-group 10 mode auto

D. interface port-channel 10

switchport

switchport mode trunk

E. interface port-channel 10

no switchport

ip address 172.16.0.1.255.255.255.0

Answer: B,E

NO.20 Which command prevents passwords from being stored in the configuration as plain text on a router or switch?

A. enable secret

B. service password-encryption

C. username Cisco password encrypt

D. enable password

Answer: B

NO.21 R1 has learned route 10.10.10.0/24 via numerous routing protocols. Which route is installed?

A. route with the lowest cost

B. route with the next hop that has the highest IP

C. route with the shortest prefix length

D. route with the lowest administrative distance

Answer: D

NO.22 Which network allows devices to communicate without the need to access the Internet?

A. 1729.0.0/16

B. 172.28.0.0/16

C. 192.0.0.0/8

D. 209.165.201.0/24

Answer: B

NO.23 Which attribute does a router use to select the best path when two or more different routes to the same destination exist from two different routing protocols.

A. dual algorithm

B. metric

C. administrative distance

D. hop count

Answer: C

NO.24 Which command must be entered when a device is configured as an NTP server?

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

Answer: D

NO.25 When OSPF learns multiple paths to a network, how does it select a route?

- A. It multiple the active K value by 256 to calculate the route with the lowest metric.
- B. For each existing interface, it adds the metric from the source router to the destination to calculate the route with the lowest bandwidth.
- C. It divides a reference bandwidth of 100 Mbps by the actual bandwidth of the existing interface to calculate the router with the lowest cost.
- D. It count the number of hops between the source router and the destination to determine the router with the lowest metric

Answer: C

NO.26 What is a characteristic of spine-and-leaf architecture?

- A. Each device is separated by the same number of hops
- B. It provides variable latency
- C. It provides greater predictability on STP blocked ports.
- D. Each link between leaf switches allows for higher bandwidth.

Answer: B

NO.27 Which two outcomes are predictable behaviors for HSRP? (Choose two)

- A. The two routers synchronize configurations to provide consistent packet forwarding
- B. The two routers negotiate one router as the active router and the other as the standby router
- C. Each router has a different IP address, both routers act as the default gateway on the LAN, and traffic is load-balanced between them
- D. The two routers share a virtual IP address that is used as the default gateway for devices on the LAN
- E. The two routers share the same interface IP address and default gateway traffic is load-balanced between them

Answer: B,D

NO.28 Which action must be taken to assign a global unicast IPv6 address on an interface that is derived from the MAC address of that interface?

- A. configure a stateful DHCPv6 server on the network
- B. enable SLAAC on an interface
- C. disable the EUI-64 bit process
- D. explicitly assign a link-local address

Answer: B

NO.29 Refer to the exhibit.

```
ip arp inspection vlan 2
interface fastethernet 0/1
 switchport mode access
 switchport access vlan 2
```

What is the effect of this configuration?

- A. The switch port interface trust state becomes untrusted
- B. The switch port remains administratively down until the interface is connected to another switch
- C. Dynamic ARP inspection is disabled because the ARP ACL is missing
- D. The switch port remains down until it is configured to trust or untrust incoming packets

Answer: A

NO.30 In which way does a spine and-leaf architecture allow for scalability in a network when additional access ports are required?

- A. A spine switch and a leaf switch can be added with redundant connections between them
- B. A spine switch can be added with at least 40 GB uplinks
- C. A leaf switch can be added with a single connection to a core spine switch.
- D. A leaf switch can be added with connections to every spine switch

Answer: D

NO.31 Refer to the exhibit.

```
R1# show ip route
....
D       172.16.32.0/27 [90/2688597172] via 20.1.1.1
O       172.16.32.0/19 [110/292094] via 20.1.1.10
R       172.16.32.0/24 [120/2] via 20.1.1.3
```

Router R1 is running three different routing protocols. Which route characteristic is used by the router to forward the packet that it receives for destination IP 172.16.32.1?

- A. longest prefix
- B. metric
- C. cost
- D. administrative distance

Answer: D

NO.32 Which configuration is needed to generate an RSA key for SSH on a router?

- A. Configure the version of SSH
- B. Configure VTY access.
- C. Create a user with a password.
- D. Assign a DNS domain name

Answer: D

NO.33 Which API is used in controller-based architectures to interact with edge devices?

- A. overlay
- B. northbound
- C. underlay
- D. southbound

Answer: D

NO.34 Router R1 must send all traffic without a matching routing-table entry to 192.168.1.1. Which configuration accomplishes this task?

- ☐ R1#Config t
R1(config)#ip routing
R1(config)#ip route default-route 192.168.1.1
- ☐ R1#Config t
R1(config)#ip routing
R1(config)#ip route 192.168.1.1 0.0.0.0 0.0.0.0
- ☐ R1#Config t
R1(config)#ip routing
R1(config)#ip route 0.0.0.0 0.0.0.0 192.168.1.1
- ☐ R1#Config t
R1(config)#ip routing
R1(config)#ip default-gateway 192.168.1.1

- A. Option A
- B. Option B
- C. Option C
- D. Option D

Answer: C

NO.35 What is a benefit of using a Cisco Wireless LAN Controller?

- A. Central AP management requires more complex configurations
- B. Unique SSIDs cannot use the same authentication method
- C. It supports autonomous and lightweight APs
- D. It eliminates the need to configure each access point individually

Answer: D

NO.36 An engineer must configure a /30 subnet between two routers. Which usable IP address and subnet mask combination meets this criteria?

```
interface e0/0  
description to HQ-A371:19452  
ip address 209.165.201.2 255.255.255.252
```

```
interface e0/0  
description to HQ-A371:19452  
ip address 10.2.1.3 255.255.255.252
```

```
interface e0/0  
description to HQ-A371:19452  
ip address 172.16.1.4 255.255.255.248
```

```
interface e0/0  
description to HQ-A371:19452  
ip address 192.168.1.1 255.255.255.248
```

- A. Option A
- B. Option B
- C. Option C
- D. Option D

Answer: A

NO.37 Which unified access point mode continues to serve wireless clients after losing connectivity to the Cisco Wireless LAN Controller?

- A. sniffer
- B. mesh
- C. flexconnect
- D. local

Answer: C

Reference:

https://www.cisco.com/c/en/us/td/docs/wireless/controller/8-5/config-guide/b_cg85/flexconnect.html

NO.38 Refer to the exhibit.

```
SW1#sh lacp neighbor
Flags:  S - Device is requesting Slow LACPDUs
        F - Device is requesting Fast LACPDUs
        A - Device is in Active mode           P - Device is in Passive mode
```

Channel group 35 neighbors

Partner's information:

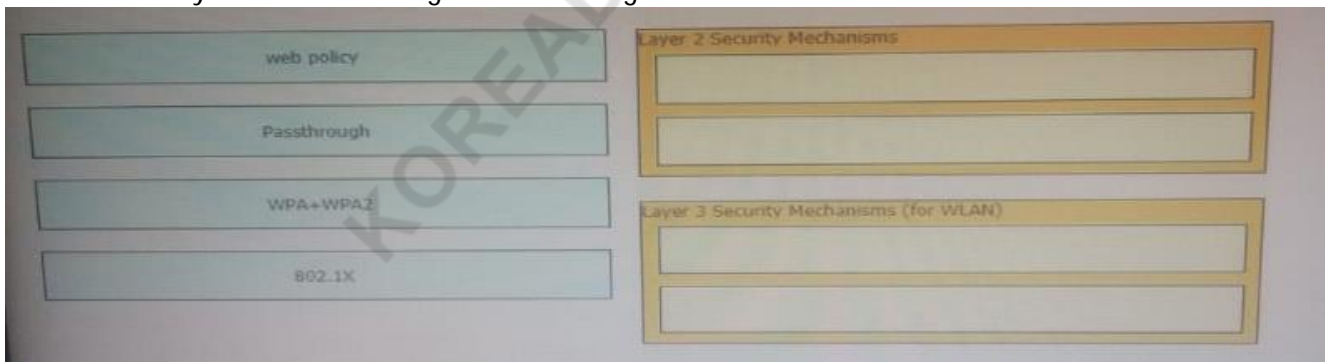
Port	Flags	LACP port Priority	Dev ID	Age	Admin key	Oper Key	Port Number	Port State
Et1/0	SP	32768	aabb.cc80.7000	8s	0x0	0x23	0x101	0x3C
Et1/1	SP	32768	aabb.cc80.7000	8s	0x0	0x23	0x102	0x3C

Based on the LACP neighbor status, in which mode is the SW1 port channel configured?

- A. passive
- B. mode on
- C. auto
- D. active

Answer: A

NO.39 Drag and drop the Cisco Wireless LAN Controller security settings from the left onto the correct security mechanism categories on the right.



Answer:



NO.40 Which WPA3 enhancement protects against hackers viewing traffic on the Wi-Fi network?

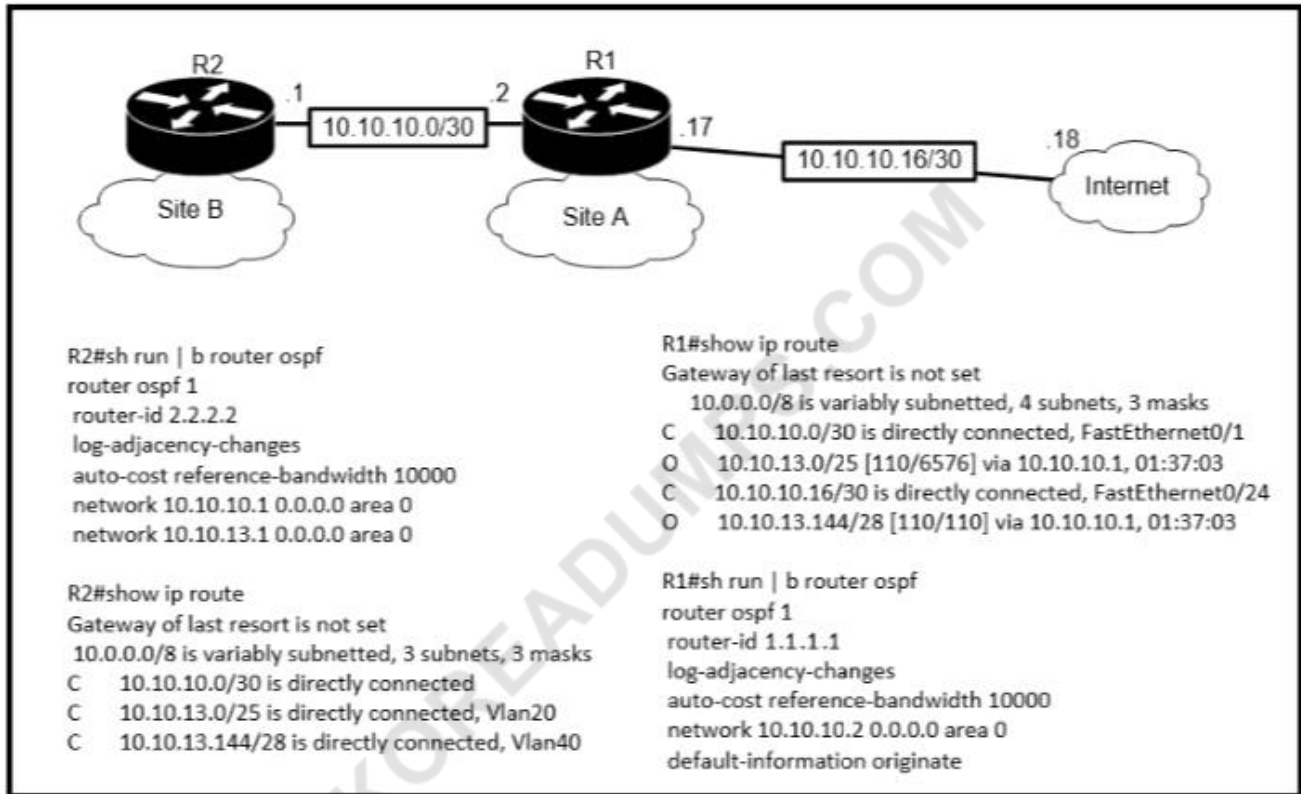
- A. TKIP encryption
- B. AES encryption

C. scrambled encryption key

D. SAE encryption

Answer: D

NO.41 Refer to the exhibit.



An engineer is bringing up a new circuit to the MPLS provider on the Gi0/1 interface of Router1. The new circuit uses eBGP and teams the route to VLAN25 from the BGP path. What is the expected behavior for the traffic flow for route 10.10.13.0/25?

A. Traffic to 10.10.13.0/25 is load balanced out of multiple interfaces

B. Route 10.10.13.0/25 is updated in the routing table as being learned from interface Gi0/1.

C. Traffic to 10.10.13.0/25 is asymmetrical

D. Route 10.10.13.0/25 learned via the Gi0/0 interface remains in the routing table

Answer: C

NO.42 Refer to the exhibit. How does router R1 handle traffic to 192.168.10.16?

A. It selects the IS-IS route because it has the shortest prefix inclusive of the destination address.

B. It selects the EIGRP route because it has the lowest administrative distance.

C. It selects the OSPF route because it has the lowest cost.

D. It selects the RIP route because it has the longest prefix inclusive of the destination address.

Answer: B

NO.43 Which two actions influence the EIGRP route selection process? (Choose two)

A. The router calculates the reported distance by multiplying the delay on the exiting interface by 256.

B. The router calculates the best backup path to the destination route and assigns it as the feasible

successor.

C. The router calculates the feasible distance of all paths to the destination route

D. The advertised distance is calculated by a downstream neighbor to inform the local router of the bandwidth on the link

E. The router must use the advertised distance as the metric for any given route

Answer: A,D

NO.44 Refer to the exhibit.

```
Switch#show etherchannel summary
[output omitted]
```

Group	Port-channel	Protocol	Ports	
-----+-----+-----+-----				
10	Po10 (SU)	LACP	Gi0/0 (P)	Gi0/1 (P)
20	Po20 (SU)	LACP	Gi0/2 (P)	Gi0/3 (P)

Which two commands were used to create port channel 10? (Choose two)

- ☐ int range g0/0-1
channel-group 10 mode active
- ☐ int range g0/0-1
channel-group 10 mode desirable
- ☐ int range g0/0-1
channel-group 10 mode passive
- ☐ int range g0/0-1
channel-group 10 mode auto
- ☐ int range g0/0-1
channel-group 10 mode on

A. Option A

B. Option B

C. Option C

D. Option D

E. Option E

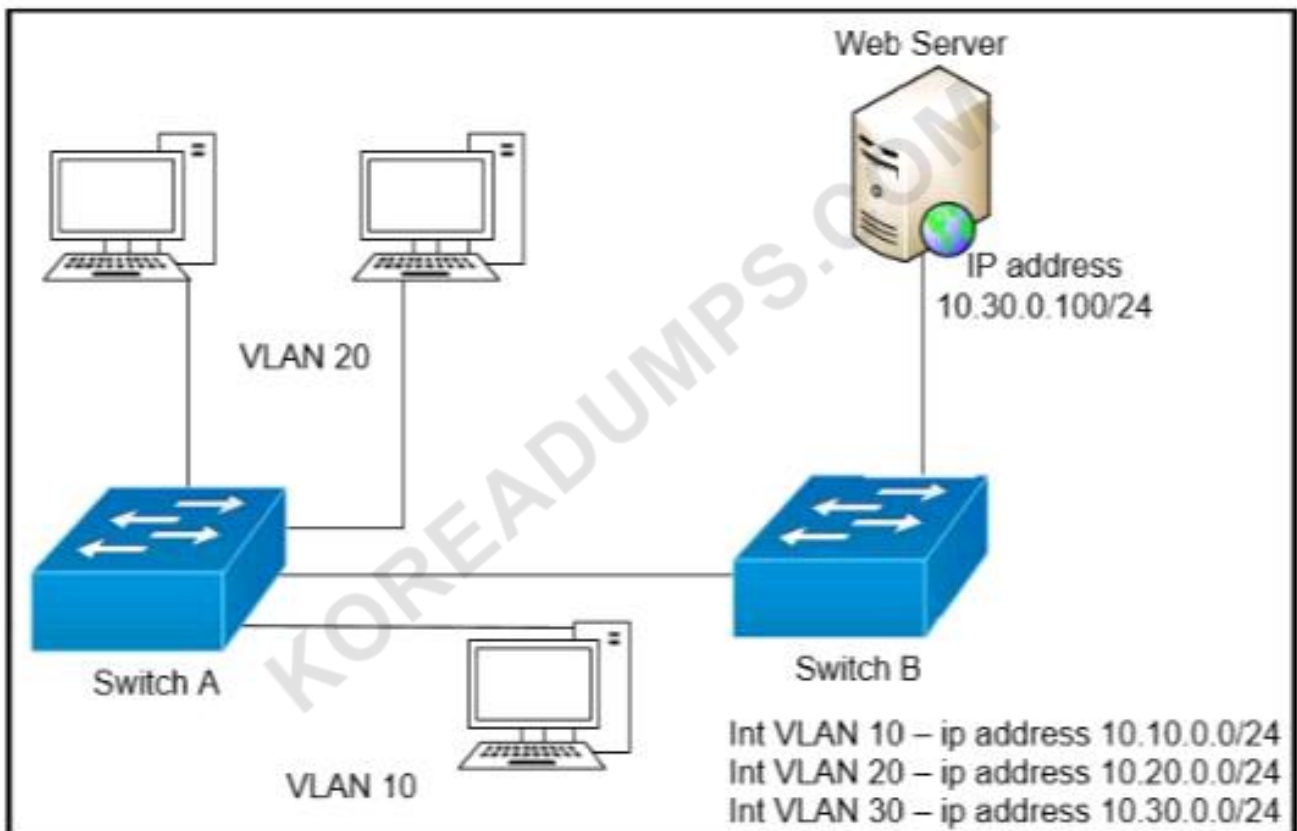
Answer: A,C

NO.45 What is a difference between RADIUS and TACACS+?

- A. RADIUS is most appropriate for dial authentication, but TACACS+ can be used for multiple types of authentication
- B. TACACS+ encrypts only password information and RADIUS encrypts the entire payload
- C. TACACS+ separates authentication and authorization, and RADIUS merges them
- D. RADIUS logs all commands that are entered by the administrator, but TACACS+ logs only start, stop, and interim commands

Answer: C

NO.46 Refer to the exhibit.



A network engineer must block access for all computers on VLAN 20 to the web server via HTTP. All other computers must be able to access the web server. Which configuration when applied to switch A accomplishes this task?


```
config t
ip access-list extended wwwblock
deny tcp any host 10.30.0.100 eq 80
int vlan 10
ip access-group wwwblock in
```

```
config t
ip access-list extended wwwblock
deny tcp any host 10.30.0.100 eq 80
permit ip any any
int vlan 20
ip access-group wwwblock in
```

```
config t
ip access-list extended wwwblock
permit ip any any
deny tcp any host 10.30.0.100 eq 80
int vlan 30
ip access-group wwwblock in
```

```
config t
ip access-list extended wwwblock
permit ip any any
deny tcp any host 10.30.0.100 eq 80
int vlan 20
ip access-group wwwblock in
```

- A. Option A
- B. Option B
- C. Option C
- D. Option D

Answer: B

NO.47 Refer to the exhibit.

```
EIGRP: 192.168.12.0/24
RIP: 192.168.12.0/27
OSPF: 192.168.12.0/28
```

How does the router manage traffic to 192.168.12.16?

- A. It selects the RIP route because it has the longest prefix inclusive of the destination address.
- B. It chooses the OSPF route because it has the longest prefix inclusive of the destination address.
- C. It load-balances traffic between all three routes
- D. It chooses the EIGRP route because it has the lowest administrative distance

Answer: A

NO.48 What is an advantage of Cisco DNA Center versus traditional campus device management?

- A. It supports numerous extensibility options including cross-domain adapters and third-party SDKs.
- B. It supports high availability for management functions when operating in cluster mode.
- C. It enables easy autodiscovery of network elements in a brownfield deployment.
- D. It is designed primarily to provide network assurance.

Answer: A

NO.49 While examining excessive traffic on the network, it is noted that all incoming packets on an interface appear to be allowed even though an IPv4 ACL is applied to the interface.

Which two misconfigurations cause this behavior? (Choose two)

- A. The packets fail to match any permit statement
- B. A matching permit statement is too high in the access test
- C. A matching permit statement is too broadly defined
- D. The ACL is empty
- E. A matching deny statement is too high in the access list

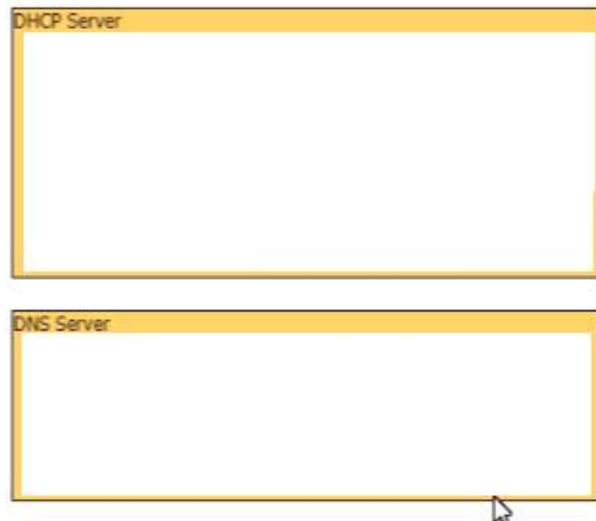
Answer: B,D

NO.50 Which design element is a best practice when deploying an 802.11b wireless infrastructure?

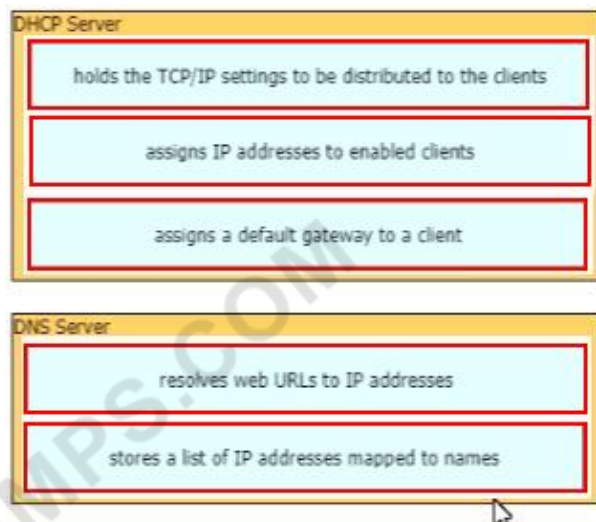
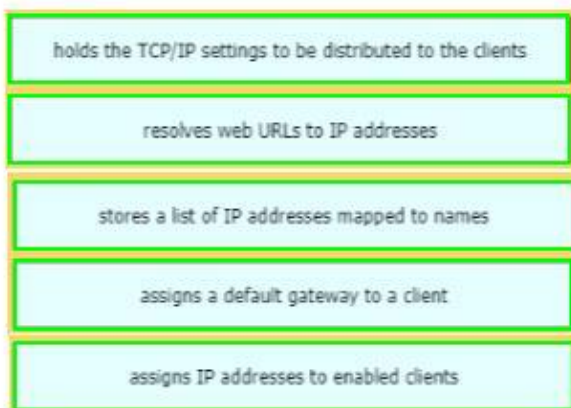
- A. disabling TPC so that access points can negotiate signal levels with their attached wireless devices.
- B. setting the maximum data rate to 54 Mbps on the Cisco Wireless LAN Controller
- C. allocating nonoverlapping channels to access points that are in close physical proximity to one another
- D. configuring access points to provide clients with a maximum of 5 Mbps

Answer: C

NO.51 Drag and drop the functions from the left onto the correct network components on the right



Answer:



NO.52 How do traditional campus device management and Cisco DNA Center device management differ in regards to deployment?

- A.** Cisco DNA Center device management can deploy a network more quickly than traditional campus device management
- B.** Traditional campus device management allows a network to scale more quickly than with Cisco DNA Center device management
- C.** Cisco DNA Center device management can be implemented at a lower cost than most traditional campus device management options
- D.** Traditional campus device management schemes can typically deploy patches and updates more quickly than Cisco DNA Center device management

Answer: A

NO.53 Which two actions are performed by the Weighted Random Early Detection mechanism? (Choose two)

- A.** It drops lower-priority packets before it drops higher-priority packets

- B.** It can identify different flows with a high level of granularity
- C.** It guarantees the delivery of high-priority packets
- D.** It can mitigate congestion by preventing the queue from filling up
- E.** IT supports protocol discovery

Answer: B,D

NO.54 Which set of action satisfy the requirement for multifactor authentication?

- A.** The user swipes a key fob, then clicks through an email link
- B.** The user enters a user name and password, and then clicks a notification in an authentication app on a mobile device
- C.** The user enters a PIN into an RSA token, and then enters the displayed RSA key on a login screen
- D.** The user enters a user name and password and then re-enters the credentials on a second screen

Answer: A

NO.55 How do AAA operations compare regarding user identification, user services and access control?

- A.** Authorization provides access control and authentication tracks user services
- B.** Authentication identifies users and accounting tracks user services
- C.** Accounting tracks user services, and authentication provides access control
- D.** Authorization identifies users and authentication provides access control

Answer: B

NO.56 What is a difference between local AP mode and FlexConnect AP mode?

- A.** Local AP mode creates two CAPWAP tunnels per AP to the WLC
- B.** FlexConnect AP mode fails to function if the AP loses connectivity with the WLC
- C.** FlexConnect AP mode bridges the traffic from the AP to the WLC when local switching is configured
- D.** Local AP mode causes the AP to behave as if it were an autonomous AP

Answer: A

NO.57 A network engineer is configuring an OSPFv2 neighbor adjacency Drag and drop the parameters from the left onto their required categories on the right. Not all parameters are used

netmask	must be unique
OSPF process ID	
router ID	must match
IP address	
area ID	
timers	

Answer:

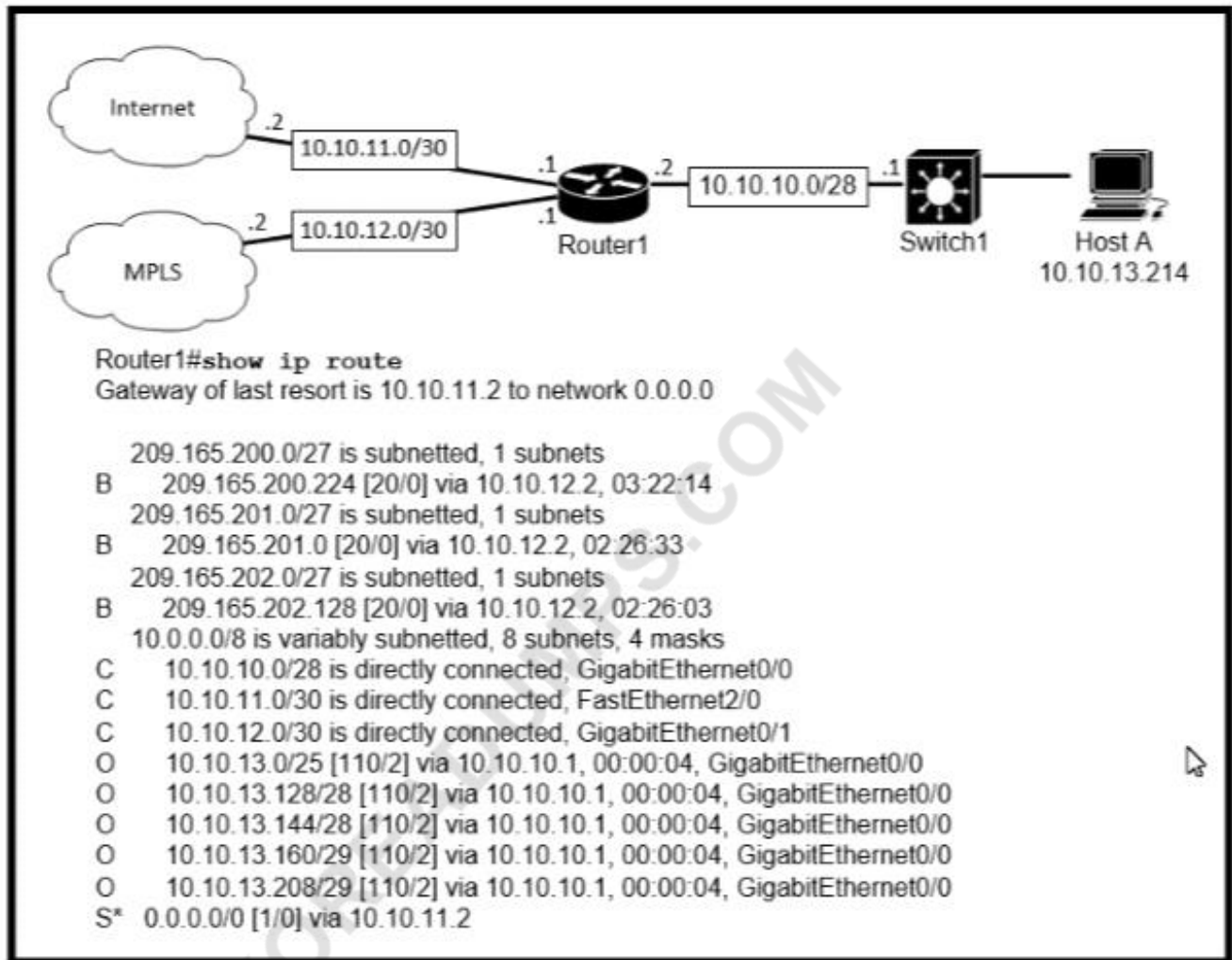
netmask	must be unique
OSPF process ID	
router ID	must match
IP address	
area ID	
timers	

NO.58 Which function does the range of private IPv4 addresses perform?

- A.** allows multiple companies to each use the same addresses without conflicts
- B.** provides a direct connection for hosts from outside of the enterprise network
- C.** ensures that NAT is not required to reach the internet with private range addressing
- D.** enables secure communications to the internet for all external hosts

Answer: A

NO.59 Refer to the exhibit.



Which prefix does Router 1 use for traffic to Host A?

- A. 10.10.10.0/28
- B. 10.10.13.0/25
- C. 10.10.13.144/28
- D. 10.10.13.208/29

Answer: D

NO.60 A frame that enters a switch fails the Frame Check Sequence. Which two interface counters are incremented? (Choose two)

- A. runs
- B. giants
- C. frame
- D. CRC
- E. input errors

Answer: D,E

NO.61 What event has occurred if a router sends a notice level message to a syslog server?

- A. A TCP connection has been torn down
- B. An ICMP connection has been built

- C. An interface line has changed status
- D. A certificate has expired.

Answer: C

NO.62 An organization has decided to start using cloud-provided services. Which cloud service allows the organization to install its own operating system on a virtual machine?

- A. platform-as-a-service
- B. software-as-a-service
- C. network-as-a-service
- D. infrastructure-as-a-service

Answer: D

NO.63 Refer to the exhibit.

```

R1# show ip route

D    192.168.16.0/26 [90/2679326] via 192.168.1.1
R    192.168.16.0/24 [120/3] via 192.168.1.2
O    192.168.16.0/21 [110/2] via 192.168.1.3
i L1 192.168.16.0/27 [115/30] via 192.168.1.4

```

Which route does R1 select for traffic that is destined to 192.168.16.2?

- A. 192.168.16.0/21
- B. 192.168.16.0/24
- C. 192.168.16.0/26
- D. 192.168.16.0/27

Answer: C

NO.64 Drag and drop the IPv4 network subnets from the left onto the correct usable host ranges on the right

172.28.228.144/18	172.28.228.1 - 172.28.229.254
172.28.228.144/21	172.28.224.1 - 172.28.231.254
172.28.228.144/23	172.28.228.129 - 172.28.228.254
172.28.228.144/25	172.28.228.145 - 172.28.228.150
172.28.228.144/29	172.28.192.1 - 172.28.255.254

Answer:

172.28.228.144/18	172.28.228.144/23
172.28.228.144/21	172.28.228.144/21
172.28.228.144/23	172.28.228.144/25
172.28.228.144/25	172.28.228.144/29
172.28.228.144/29	172.28.228.144/18

NO.65 Which two must be met before SSH can operate normally on a Cisco IOS switch? (Choose two)

- A. The switch must be running a k9 (crypto) IOS image
- B. The Ip domain-name command must be configured on the switch
- C. IP routing must be enabled on the switch
- D. A console password must be configured on the switch
- E. Telnet must be disabled on the switch

Answer: A,B

Reference:

<https://www.cisco.com/c/en/us/support/docs/security-vpn/secure-shell-ssh/4145-ssh.html>

NO.66 Refer to the exhibit.

```

R2#show ip nat translations
Pro Inside global      Inside local  Outside local  Outside global
tcp 172.23.104.3:43268  10.4.4.4:43268 172.23.103.10:23 172.23.103.10:23
tcp 172.23.104.4:45507  10.4.4.5:45507 172.23.103.10:80 172.23.103.10:80

```

An engineer configured NAT translations and has verified that the configuration is correct. Which IP address is the source IP?

- A. 10.4.4.4
- B. 10.4.4.5
- C. 172.23.103.10
- D. 172.23.104.4

Answer: D

NO.67 Which command is used to specify the delay time in seconds for LLDP to initialize on any interface?

- A. lldp timer
- B. lldp holdtime

- C. lldp reinit
- D. lldp tlv-select

Answer: C

Reference:

https://www.cisco.com/c/en/us/td/docs/switches/lan/catalyst2960/software/release/12-2_37_ey/configuration/guide/scg/swlldp.pdf

NO.68 Refer to the exhibit.

```
SW1(config-line)#line vty 0 15
SW1(config-line)#no login local
SW1(config-line)#password cisco

SW2(config)#username admin1 password abcd1234
SW2(config)#username admin2 password abcd1234
SW2(config-line)#line vty 0 15
SW2(config-line)#login local

SW3(config)#username admin1 secret abcd1234
SW3(config)#username admin2 secret abcd1234
SW3(config-line)#line vty 0 15
SW3(config-line)#login local

SW4(config)#username admin1 secret abcd1234
SW4(config)#username admin2 secret abcd1234
SW4(config-line)#line console 0
SW4(config-line)#login local
```

An administrator configures four switches for local authentication using passwords that are stored in a cryptographic hash. The four switches must also support SSH access for administrators to manage the network infrastructure. Which switch is configured correctly to meet these requirements?

- A. SW1
- B. SW2
- C. SW3
- D. SW4

Answer: C

NO.69 Which statement identifies the functionality of virtual machines?

- A. Virtualized servers run most efficiently when they are physically connected to a switch that is

separate from the hypervisor

- B.** The hypervisor can virtualize physical components including CPU, memory, and storage
- C.** Each hypervisor can support a single virtual machine and a single software switch
- D.** The hypervisor communicates on Layer 3 without the need for additional resources

Answer: B

NO.70 When configuring IPv6 on an interface, which two IPv6 multicast groups are joined? (Choose two)

- A.** 2000::/3
- B.** 2002::5
- C.** FC00::/7
- D.** FF02::1
- E.** FF02::2

Answer: D,E

Reference:

<https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/ipv6/configuration/xr-3s/ipv6-xr-36s-book/ipv6-multicast.html>

NO.71 Which option about JSON is true?

- A.** uses predefined tags or angle brackets () to delimit markup text
- B.** used to describe structured data that includes arrays
- C.** used for storing information
- D.** similar to HTML, it is more verbose than XML

Answer: B

NO.72 Which statement correctly compares traditional networks and controller-based networks?

- A.** Only traditional networks offer a centralized control plane
- B.** Only traditional networks natively support centralized management
- C.** Traditional and controller-based networks abstract policies from device configurations
- D.** Only controller-based networks decouple the control plane and the data plane

Answer: D

NO.73 What are two fundamentals of virtualization? (choose two)

- A.** The environment must be configured with one hypervisor that serves solely as a network manager to monitor SNMP traffic
- B.** It allows logical network devices to move traffic between virtual machines and the rest of the physical network
- C.** It allows multiple operating systems and applications to run independently on one physical server.
- D.** It allows a physical router to directly connect NICs from each virtual machine into the network
- E.** It requires that some servers, virtual machines and network gear reside on the Internet

Answer: A,C

NO.74 Refer to the exhibit.

```
SW1#show spanning-tree vlan 30

VLAN0030
Spanning tree enabled protocol rstp
Root ID      Priority          32798
              Address          0025.63e9.c800
              Cost            19
              Port            1 (FastEthernet 2/1)
              Hello Time      2 sec
              Max Age         30 sec
              Forward Delay   20 sec

[Output suppressed]
```

What two conclusions should be made about this configuration? (Choose two)

- A. The designated port is FastEthernet 2/1
- B. This is a root bridge
- C. The spanning-tree mode is Rapid PVST+
- D. The spanning-tree mode is PVST+
- E. The root port is FastEthernet 2/1

Answer: C,E

NO.75 Which command enables a router to become a DHCP client?

- A. ip address dhcp
- B. ip helper-address
- C. ip dhcp pool
- D. ip dhcp client

Answer: A

Reference:

https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/ipaddr_dhcp/configuration/12-4/dhcp-12-4-book/config-dhcp-client.html

NO.76 Refer to the exhibit.

```
IBGP route 10.0.0.0/30
RIP route 10.0.0.0/30
OSPF route 10.0.0.0/16
OSPF route 10.0.0.0/30
EIGRP route 10.0.0.1/32
```

A router reserved these five routes from different routing information sources.
Which two routes does the router install in its routing table? (Choose two)

- A. RIP route 10.0.0.0/30
- B. iBGP route 10.0.0.0/30
- C. OSPF route 10.0.0.0/30
- D. EIGRP route 10.0.0.1/32
- E. OSPF route 10.0.0.0/16

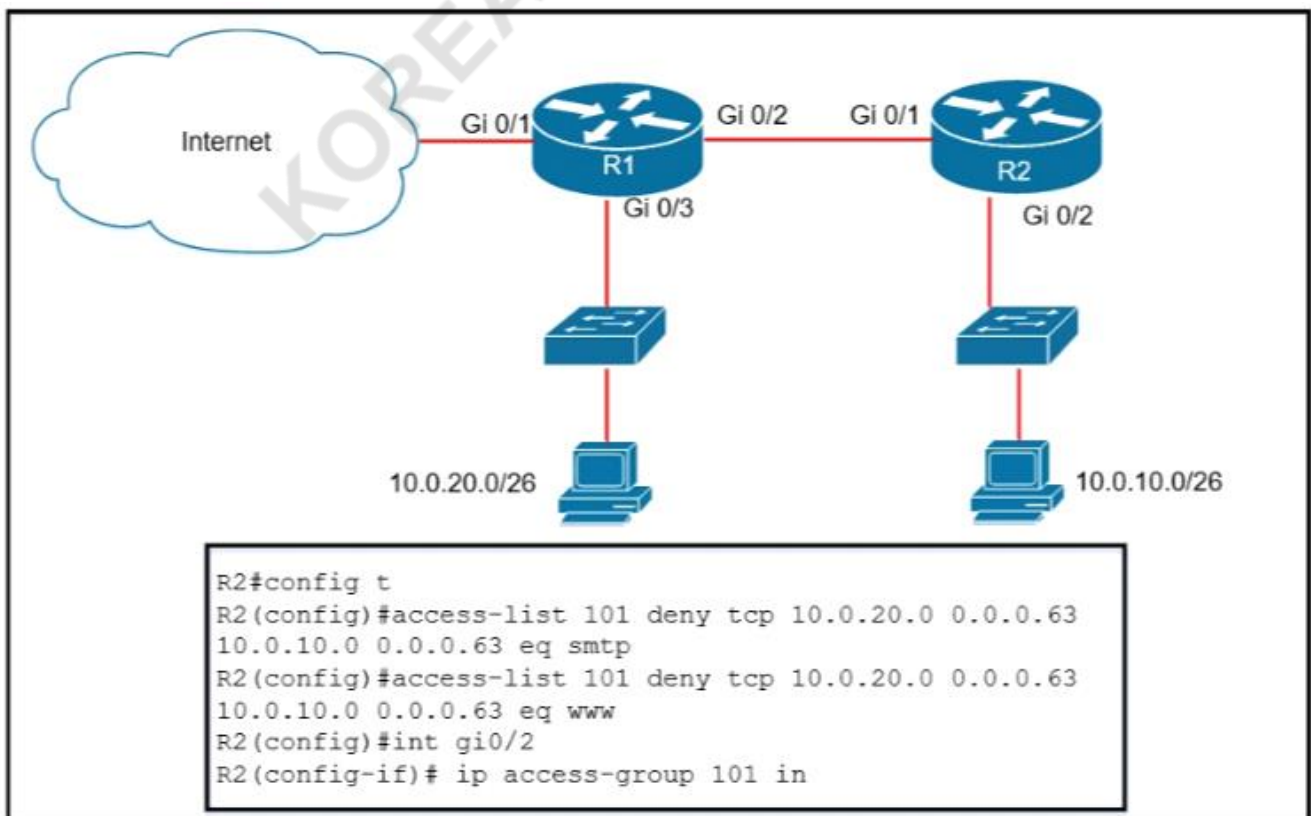
Answer: A,D

NO.77 What is the default behavior of a Layer 2 switch when a frame with an unknown destination MAC address is received?

- A. The Layer 2 switch drops the received frame
- B. The Layer 2 switch floods packets to all ports except the receiving port in the given VLAN.
- C. The Layer 2 switch sends a copy of a packet to CPU for destination MAC address learning.
- D. The Layer 2 switch forwards the packet and adds the destination MAC address to its MAC address table

Answer: B

NO.78 Refer to the exhibit.



An extended ACL has been configured and applied to router R2. The configuration failed to work as intended. Which two changes stop outbound traffic on TCP ports 25 and 80 to 10.0.20.0/26 from the 10.0.10.0/26 subnet while still allowing all other traffic? (Choose two)

- A. Add a "permit ip any any" statement to the beginning of ACL 101 for allowed traffic.
- B. Add a "permit ip any any" statement at the end of ACL 101 for allowed traffic.

- C. The source and destination IPs must be swapped in ACL 101
- D. The ACL must be configured the Gi0/2 interface inbound on R1
- E. The ACL must be moved to the Gi0/1 interface outbound on R2

Answer: A,C

NO.79 Drag and drop the attack-mitigation techniques from the left onto the Types of attack that they mitigate on the right.

configure 802.1x authentication	802.1q double-tagging VLAN-hopping attack
configure DHCP snooping	MAC flooding attack
configure the native VLAN with a nondefault VLAN ID	man-in-the-middle spoofing attack
disable DTP	switch-spoofing VLAN-hopping attack

Answer:

configure 802.1x authentication	configure the native VLAN with a nondefault VLAN ID
configure DHCP snooping	configure 802.1x authentication
configure the native VLAN with a nondefault VLAN ID	configure DHCP snooping
disable DTP	disable DTP

NO.80 Which two tasks must be performed to configure NTP to a trusted server in client mode on a single network device? (Choose two)

- A. Enable NTP authentication.
- B. Verify the time zone.
- C. Disable NTP broadcasts
- D. Specify the IP address of the NTP server
- E. Set the NTP server private key

Answer: D,E

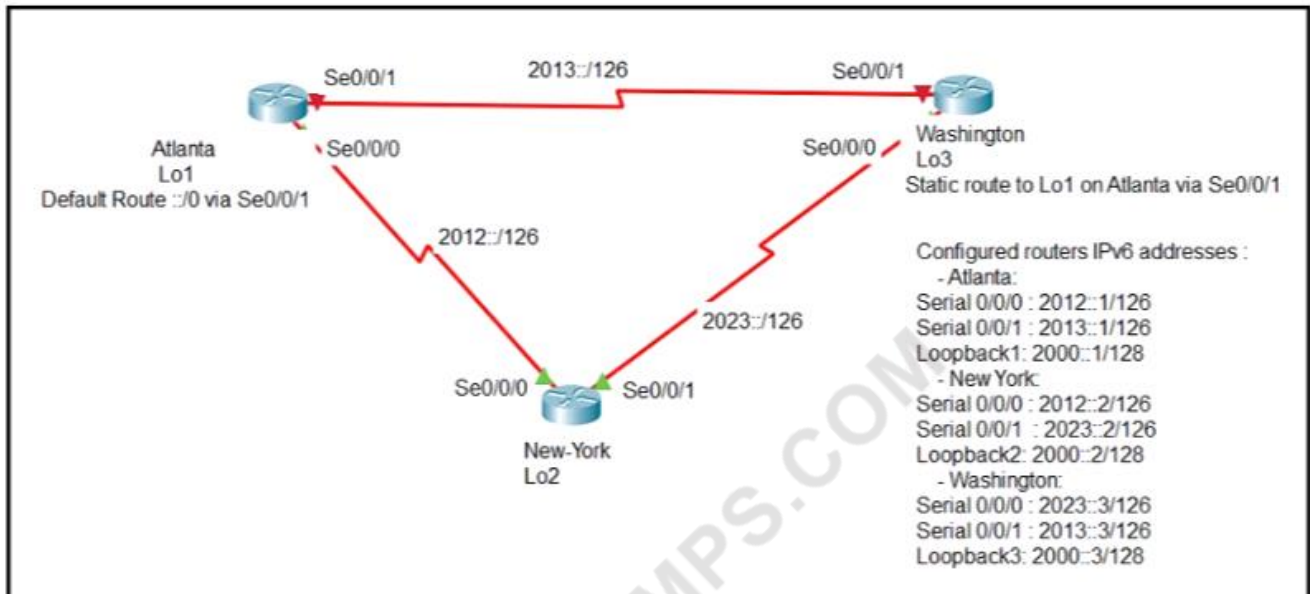
NO.81 A user configured OSPF in a single area between two routers A serial interface connecting R1 and R2 is running encapsulation PPP By default which OSPF network type is seen on this interface when the user types show ip ospf interface on R1 or R2?

- A. port-to-multipoint
- B. broadcast
- C. point-to-point

D. nonbroadcast

Answer: C

NO.82 Refer to Exhibit.

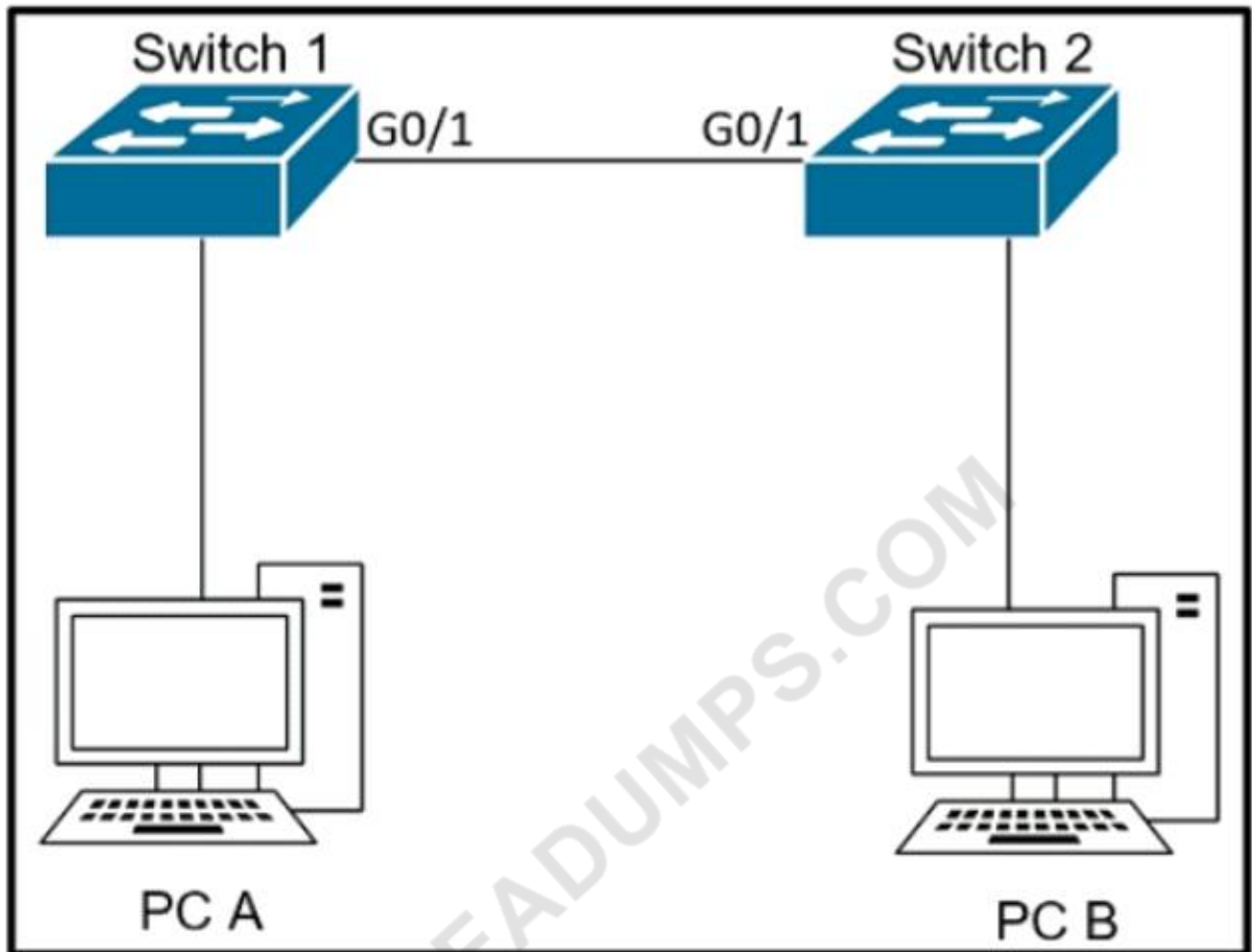


An engineer is configuring the NEW York router to reach the Lo1 interface of the Atlanta router using interface Se0/0/0 as the primary path. Which two commands must be configured on the New York router so that it can reach the Lo1 interface of the Atlanta router via Washington when the link between New York and Atlanta goes down? (Choose two)

- A. ipv6 router 2000::1/128 2012::1
- B. ipv6 router 2000::1/128 2012::1 5
- C. ipv6 router 2000::1/128 2012::2
- D. ipv6 router 2000::1/128 2023::2 5
- E. ipv6 router 2000::1/128 2023::3 5

Answer: A,E

NO.83 Refer to the exhibit.



The network administrator wants VLAN 67 traffic to be untagged between Switch 1 and Switch 2 while all other VLANs are to remain tagged.

Which command accomplishes this task?

- A. switchport access vlan 67
- B. switchport trunk allowed vlan 67
- C. switchport private-vlan association host 67
- D. switchport trunk native vlan 67

Answer: D

NO.84 What are two differences between optical-fiber cabling and copper cabling? (Choose two)

- A. Light is transmitted through the core of the fiber
- B. A BNC connector is used for fiber connections
- C. The glass core component is encased in a cladding
- D. Fiber connects to physical interfaces using RJ-45 connections
- E. The data can pass through the cladding

Answer: A,C

NO.85 Which IPv6 address type provides communication between subnets and cannot route on the Internet?

- A. global unicast

- B. unique local
- C. link-local
- D. multicast

Answer: C

NO.86 Which 802.11 frame type is association response?

- A. management
- B. protected frame
- C. control
- D. action

Answer: A

Reference:

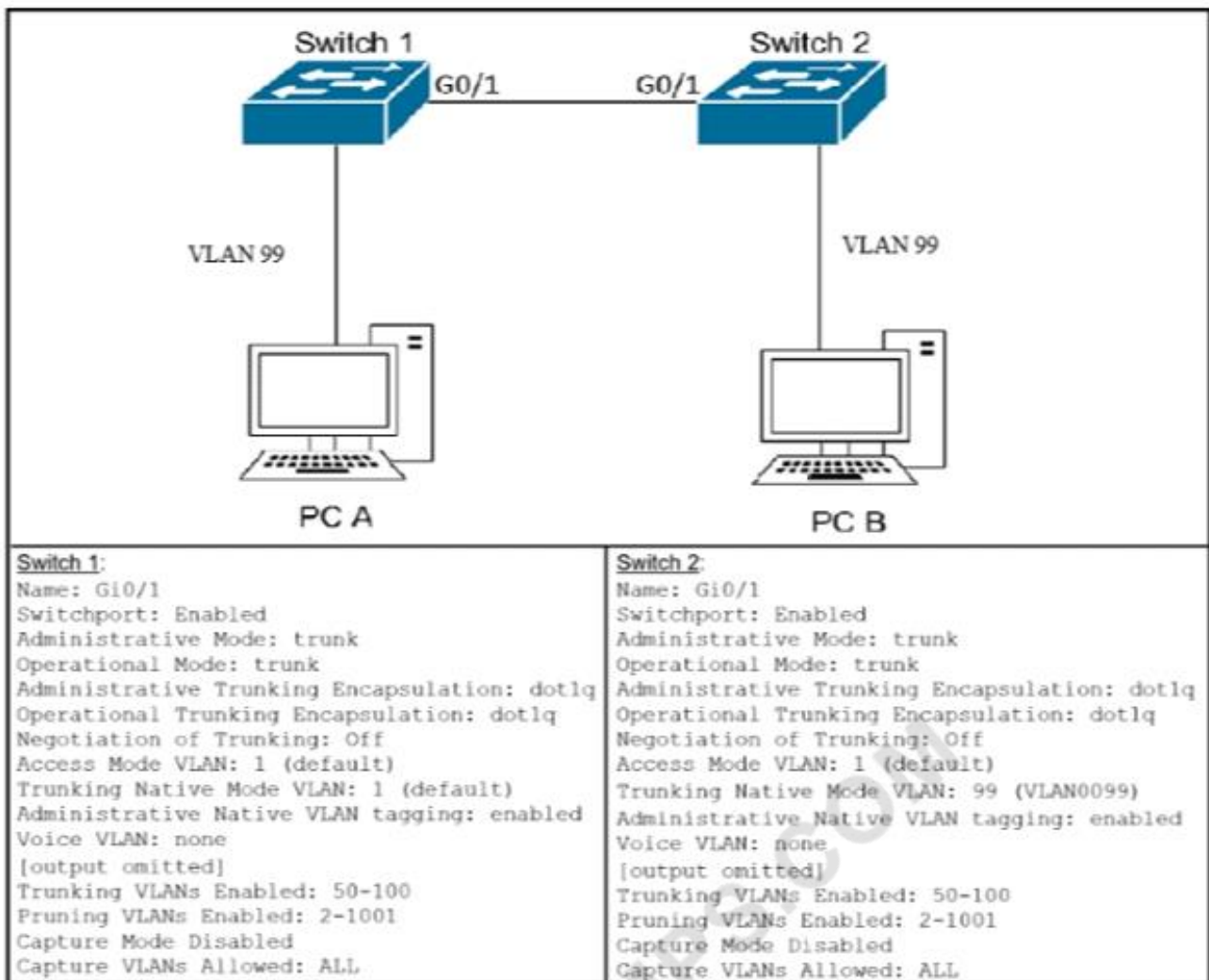
https://en.wikipedia.org/wiki/802.11_Frame_Types

NO.87 Which two minimum parameters must be configured on an active interface to enable OSPFv2 to operate? (Choose two)

- A. OSPF area
- B. OSPF MD5 authentication key
- C. IPv6 address
- D. OSPf process ID
- E. OSPf stub flag

Answer: A,D

NO.88 Refer to the Exhibit.



After the switch configuration the ping test fails between PC A and PC B Based on the output for switch 1. which error must be corrected?

- A. There is a native VLAN mismatch
- B. Access mode is configured on the switch ports.
- C. The PCs are in the incorrect VLAN
- D. All VLANs are not enabled on the trunk

Answer: A

NO.89 Which action is taken by a switch port enabled for PoE power classification override?

- A. When a powered device begins drawing power from a PoE switch port a syslog message is generated
- B. As power usage on a PoE switch port is checked data flow to the connected device is temporarily paused
- C. If a switch determines that a device is using less than the minimum configured power it assumes the device has failed and disconnects
- D. If a monitored port exceeds the maximum administrative value for power, the port is shutdown and err-disabled

Answer: D

Reference:

https://www.cisco.com/c/en/us/td/docs/switches/lan/catalyst6500/ios/12-2SX/configuration/guide/book/power_over_ethernet.pdf

NO.90 What are two characteristics of a controller-based network? (Choose two)

- A. The administrator can make configuration updates from the CLI
- B. It uses northbound and southbound APIs to communicate between architectural layers
- C. It moves the control plane to a central point.
- D. It decentralizes the control plane, which allows each device to make its own forwarding decisions
- E. It uses Telnet to report system issues.

Answer: B,C

NO.91 Refer to the exhibit.

```
Atlanta#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Atlanta(config)#aaa new-model
Atlanta(config)#aaa authentication login default local
Atlanta(config)#line vty 0 4
Atlanta(config-line)#login authentication default
Atlanta(config-line)#exit
Atlanta(config)#username ciscoadmin password adminadmin123
Atlanta(config)#username ciscoadmin privilege 15
Atlanta(config)#enable password cisco123
Atlanta(config)#enable secret testing1234
Atlanta(config)#end
```

Which password must an engineer use to enter the enable mode?

- A. adminadmin123
- B. default
- C. testing 1234
- D. cisco123

Answer: C

NO.92 Which QoS Profile is selected in the GUI when configuring a voice over WLAN deployment?

- A. Bronze
- B. Platinum
- C. Silver
- D. Gold

Answer: B

Reference:

<https://www.cisco.com/c/en/us/support/docs/wireless-mobility/wireless-lan-wlan/81831-qos-wlc-lap.html>

NO.93 A router running EIGRP has learned the same route from two different paths Which parameter does the router use to select the best path?

- A. cost
- B. administrative distance

- C. metric
- D. as-path

Answer: C

NO.94 Refer to the exhibit.



Refer to the exhibit. After the configuration is applied, the two routers fail to establish an OSPF neighbor relationship. what is the reason for the problem?

- A. The OSPF router IDs are mismatched.
- B. Router2 is using the default hello timer.
- C. The network statement on Router1 is misconfigured.
- D. The OSPF process IDs are mismatched.

Answer: B

NO.95 How do TCP and UDP differ in the way they provide reliability for delivery of packets?

- A. TCP is a connectionless protocol that does not provide reliable delivery of data, UDP is a connection-oriented protocol that uses sequencing to provide reliable delivery.
- B. TCP does not guarantee delivery or error checking to ensure that there is no corruption of data UDP provides message acknowledgement and retransmits data if lost.
- C. TCP provides flow control to avoid overwhelming a receiver by sending too many packets at once, UDP sends packets to the receiver in a continuous stream without checking for sequencing
- D. TCP uses windowing to deliver packets reliably; UDP provides reliable message transfer between

hosts by establishing a three-way handshake

Answer: C

NO.96 Which output displays a JSON data representation?

- ☐ {
 "response", {
 "taskId", {};
 "url", "string"
 };
 "version", "string"
}
- ☐ {
 "response": {
 "taskId": {};
 "url": "string"
 };
 "version": "string"
}
- ☐ {
 "response"- {
 "taskId"- {};
 "url"- "string"
 };
 "version"- "string"
}
- ☐ {
 "response": {
 "taskId": {};
 "url": "string"
 };
 "version": "string"
}

A. Option A

B. Option B

C. Option C

D. Option D

Answer: B

NO.97 Refer to the exhibit.

```
R1# show ip route | begin gateway
Gateway of last resort is 209.165.200.246 to network 0.0.0.0
S* 0.0.0.0/0 [1/0] via 209.165.200.246, Serial0/1/0
    is directly connected, Serial0/1/0
    172.16.0.0/16 is variably subnetted, 3 subnets, 3 masks
S   172.16.0.0/24 [1/0] via 207.165.200.250, Serial0/0/0
O   172.16.0.128/25 [110/38443] via 207.165.200.254, 00:00:23, Serial0/0/1
D   172.16.0.192/29 [90/3184439] via 207.165.200.254, 00:00:25, Serial0/0/1
    209.165.200.0/24 is variably subnetted, 4 subnets, 2 masks
C   209.165.200.248/30 is directly connected, Serial0/0/0
L   209.165.200.249/32 is directly connected, Serial0/0/0
C   209.165.200.252/30 is directly connected, Serial0/0/1
L   209.165.200.253/32 is directly connected, Serial0/0/1
```

With which metric was the route to host 172.16.0.202 learned?

- A. 0
- B. 110
- C. 38443
- D. 3184439

Answer: C

NO.98 A packet is destined for 10.10.1.22. Which static route does the router choose to forward the packet?

- A. ip route 10.10.1.0 255.255.255.240 10.10.255.1
- B. ip route 10.10.1.16 255.255.255.252 10.10.255.1
- C. ip route 10.10.1.20 255.255.255.252 10.10.255.1
- D. ip route 10.10.1.20 255.255.255.254 10.10.255.1

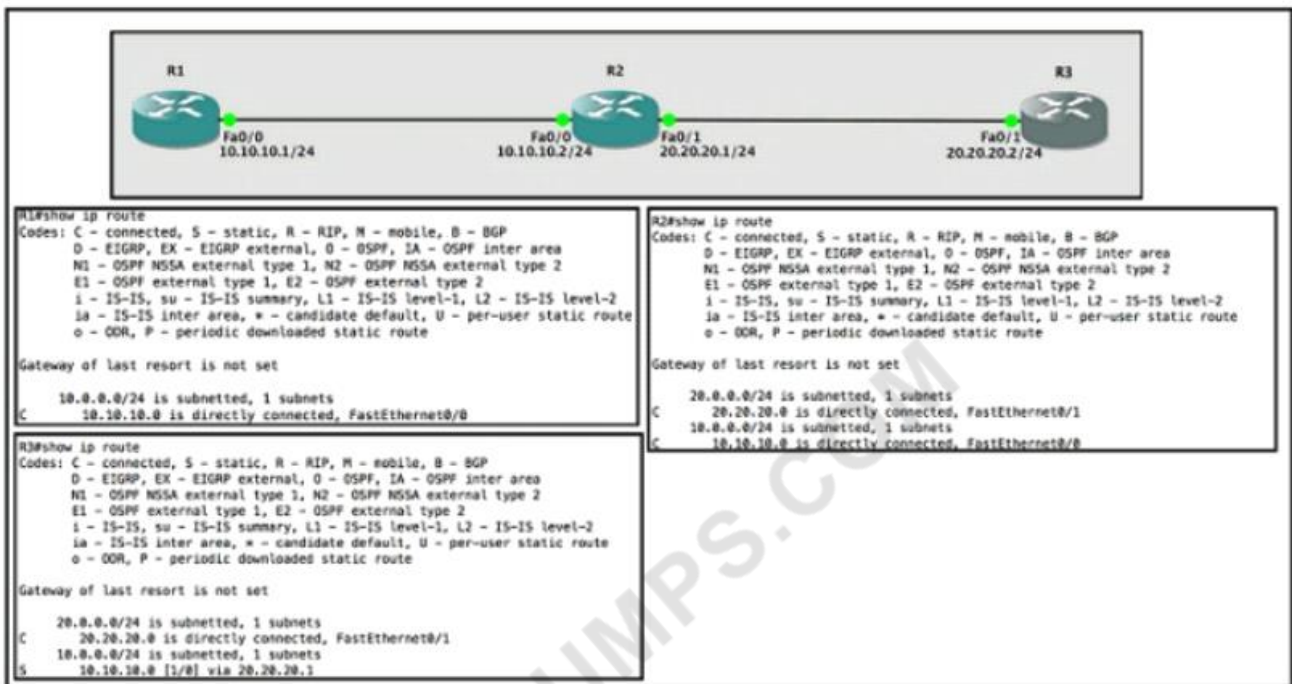
Answer: C

NO.99 An email user has been lured into clicking a link in an email sent by their company's security organization. The webpage that opens reports that it was safe but the link could have contained malicious code. Which type of security program is in place?

- A. Physical access control
- B. Social engineering attack
- C. brute force attack
- D. user awareness

Answer: B

NO.100 Refer to the exhibit.



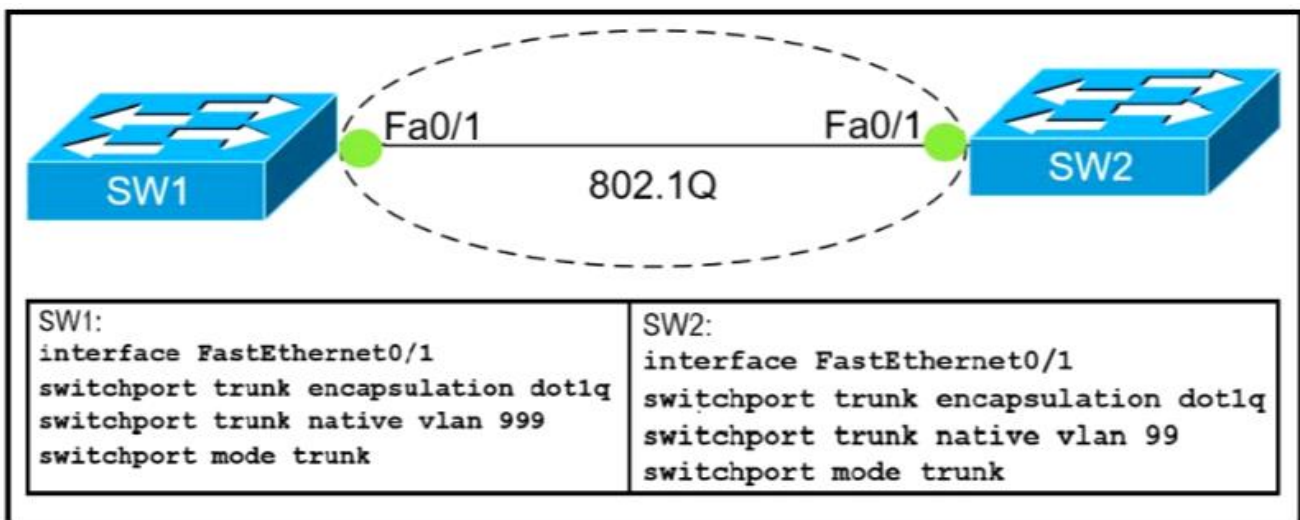
Router R1 Fa0/0 cannot ping router R3 Fa0/1.

Which action must be taken in router R1 to help resolve the configuration issue?

- A. set the default network as 20.20.20.0/24
- B. set the default gateway as 20.20.20.2
- C. configure a static route with Fa0/1 as the egress interface to reach the 20.20.20.0/24 network
- D. configure a static route with 10.10.10.2 as the next hop to reach the 20.20.20.0/24 network

Answer: D

NO.101 Refer to Exhibit.



Which action do the switches take on the trunk link?

- A. The trunk does not form and the ports go into an err-disabled status.
- B. The trunk forms but the mismatched native VLANs are merged into a single broadcast domain.
- C. The trunk does not form, but VLAN 99 and VLAN 999 are allowed to traverse the link.
- D. The trunk forms but VLAN 99 and VLAN 999 are in a shutdown state.

Answer: B

NO.102 Which IPv6 address block sends packets to a group address rather than a single address?

- A. 2000::/3
- B. FC00::/7
- C. FE80::/10
- D. FF00::/8

Answer: D

NO.103 Two switches are connected and using Cisco Dynamic Trunking Protocol SW1 is set to Dynamic Desirable What is the result of this configuration?

- A. The link is in a down state.
- B. The link is in an error disables state
- C. The link is becomes an access port.
- D. The link becomes a trunk port.

Answer: D

NO.104 Drag and drop the WLAN components from the left onto the correct descriptions on the right.

access point	device that manages access points
virtual interface	device that provides Wi-Fi devices with a connection to a wired network
dynamic interface	used for out of band management of a WLC
service port	used to support mobility management of the WLC
wireless LAN controller	applied to the WLAN for wireless client communication

Answer:

access point	wireless LAN controller
virtual interface	access point
dynamic interface	service port
service port	virtual interface
wireless LAN controller	dynamic interface

NO.105 Which function does an SNMP agent perform?

- A. it sends information about MIB variables in response to requests from the NMS
- B. it requests information from remote network nodes about catastrophic system events.
- C. it manages routing between Layer 3 devices in a network
- D. it coordinates user authentication between a network device and a TACACS+ or RADIUS server

Answer: A

NO.106 Refer to the exhibit.

Router#

Capability Codes: R - Router, T - Trans Bridge, B - Source Route Bridge
S - Switch, H - Host, I - IGMP, r - Repeater, P - Phone,
D - Remote, C - CVTA, M - Two-port Mac Relay

Device ID	Local Intf	Holdtme	Capability	Platform	Port ID
10.1.1.2	Gig 37/3	176	R I	CPT 600	Gig 36/41
10.1.1.2	Gig 37/1	174	R I	CPT 600	Gig 36/43
10.1.1.2	Gig 36/41	134	R I	CPT 600	Gig 37/3
10.1.1.2	Gig 36/43	134	R I	CPT 600	Gig 37/1
10.1.1.2	Ten 3/2	132	R I	CPT 600	Ten 4/2
10.1.1.2	Ten 4/2	174	R I	CPT 600	Ten 3/2

Which command provides this output?

- A. show ip route
- B. show ip interface
- C. show interface
- D. show cdp neighbor

Answer: D

NO.107 Refer to the exhibit.

Gateway of last resort is 10.12.0.1 to network 0.0.0.0

```
O*E2   0.0.0.0/0 [110/1] via 10.12.0.1, 00:00:01, GigabitEthernet0/0
        10.0.0.0/8 is variably subnetted, 2 subnets, 2 masks
C       10.0.0.0/24 is directly connected, GigabitEthernet0/0
L       10.0.0.2/32 is directly connected, GigabitEthernet0/0
C       10.13.0.0/24 is directly connected, GigabitEthernet0/1
L       10.13.0.2/32 is directly connected, GigabitEthernet0/1
```

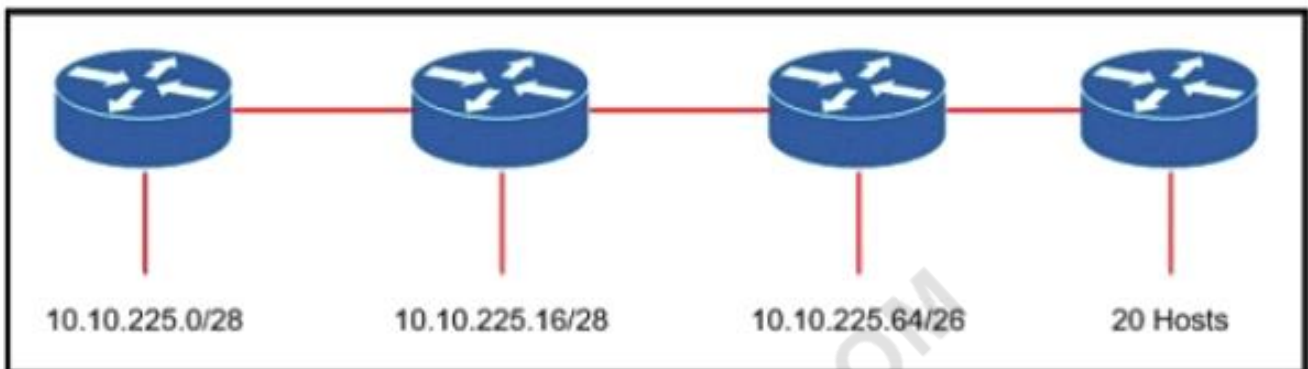
If configuring a static default route on the router with the ip route 0.0.0.0 0.0.0.0 10.13.0.1 120

command how does the router respond?

- A. It ignores the new static route until the existing OSPF default route is removed
- B. It immediately replaces the existing OSPF route in the routing table with the newly configured static route
- C. It starts load-balancing traffic between the two default routes
- D. It starts sending traffic without a specific matching entry in the routing table to GigabitEthernet0/1

Answer: A

NO.108 Refer to the exhibit.



Refer to the exhibit. An engineer must add a subnet for a new office that will add 20 users to the network. Which IPv4 network and subnet mask combination does the engineer assign to minimize wasting addresses?

- A. 10.10.225.48 255.255.255.240
- B. 10.10.225.32 255.255.255.240
- C. 10.10.225.48 255.255.255.224
- D. 10.10.225.32 255.255.255.224

Answer: D

NO.109 Refer to the exhibit.

```
[root@HostTest ~]# ip route
default via 192.168.1.193 dev eth1 proto static
192.168.1.0/26 dev eth1 proto kernel scope link src 192.168.1.200 metric 1

[root@HostTest ~]# ip addr show eth1
eth1: mtu 1500 qdisc pfifo_fast qlen 1000
link/ether 00:0C:22:83:79:A3 brd ff:ff:ff:ff:ff:ff
inet 192.168.1.200/26 brd 192.168.1.255 scope global eth1
inet6 fe80::20c:29ff:fe89:79b3/64 scope link
valid_lft forever preferred_lft forever
```

Drag and drop the networking parameters from the left onto the correct values on the right.

Check the answer below

Below is the correct order.

default gateway
subnet mask
NIC MAC address
NIC vendor OUI
host IP address

Answer Area

Answer:

default gateway
subnet mask
NIC MAC address
NIC vendor OUI
host IP address

Answer Area

NIC MAC address
default gateway
subnet mask
host IP address
NIC vendor OUI

NO.110 An engineer must configure a WLAN using the strongest encryption type for WPA2-PSK. Which cipher fulfills the configuration requirement?

- A. WEP
- B. RC4
- C. AES
- D. TKIP

Many routers provide WPA2-PSK (TKIP), WPA2-PSK (AES), and WPA2-PSK (TKIP/AES) as options. TKIP is actually an older encryption protocol introduced with WPA to replace the very-insecure WEP encryption at the time. TKIP is actually quite similar to WEP encryption. TKIP is no longer considered secure, and is now deprecated. In other words, you shouldn't be using it.

AES is a more secure encryption protocol introduced with WPA2 and it is currently the strongest encryption type for WPA2-PSK.

Answer: C

NO.111 Which command automatically generates an IPv6 address from a specified IPv6 prefix and MAC address of an interface?

- A. ipv6 address dhcp
- B. ipv6 address 2001:DB8:5:112::/64 eui-64
- C. ipv6 address autoconfig
- D. ipv6 address 2001:DB8:5:112::2/64 link-local

Answer: C

NO.112 A corporate office uses four floors in a building

- * Floor 1 has 24 users
- * Floor 2 has 29 users
- * Floor 3 has 28 users
- * Floor 4 has 22 users

Which subnet summarizes and gives the most efficient distribution of IP addresses for the router configuration?

- A. 192.168.0.0/26 as summary and 192.168.0.0/29 for each floor
- B. 192.168.0.0.24 as summary and 192.168.0.0/28 for each floor
- C. 192.168.0.0/23 as summary and 192.168.0.0/25 for each floor
- D. 192.168.0.0/25 as summary and 192.168.0.0/27 for each floor

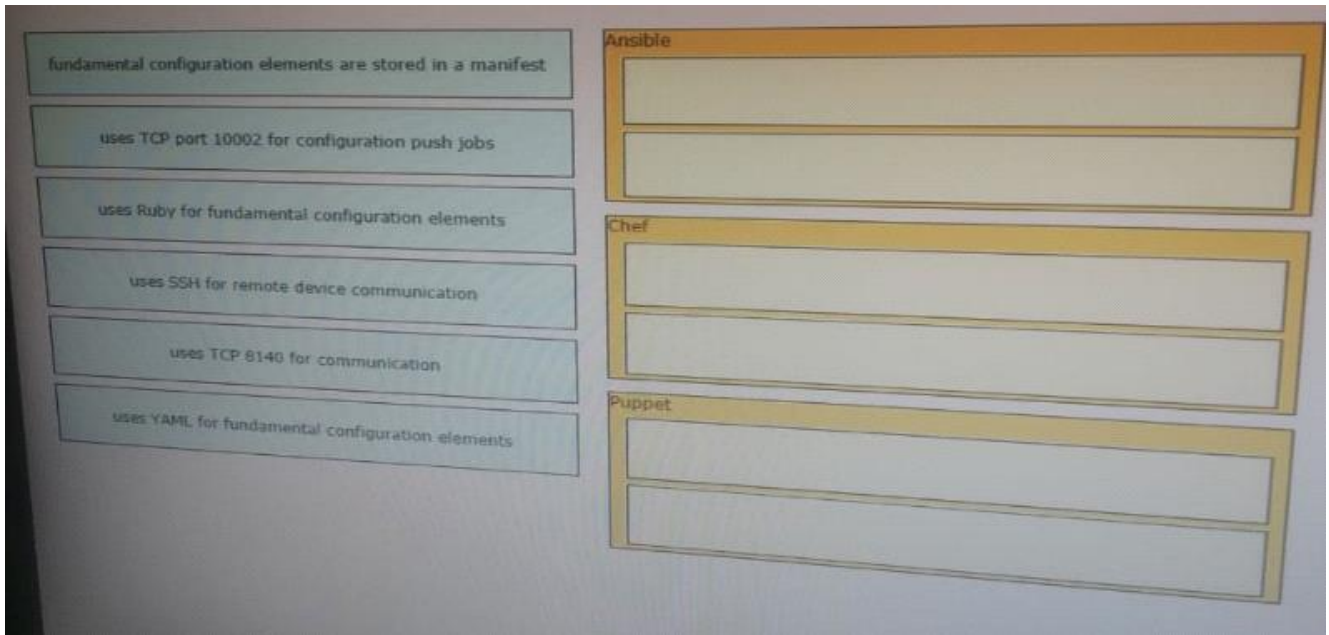
Answer: D

NO.113 By default, how Does EIGRP determine the metric of a route for the routing table?

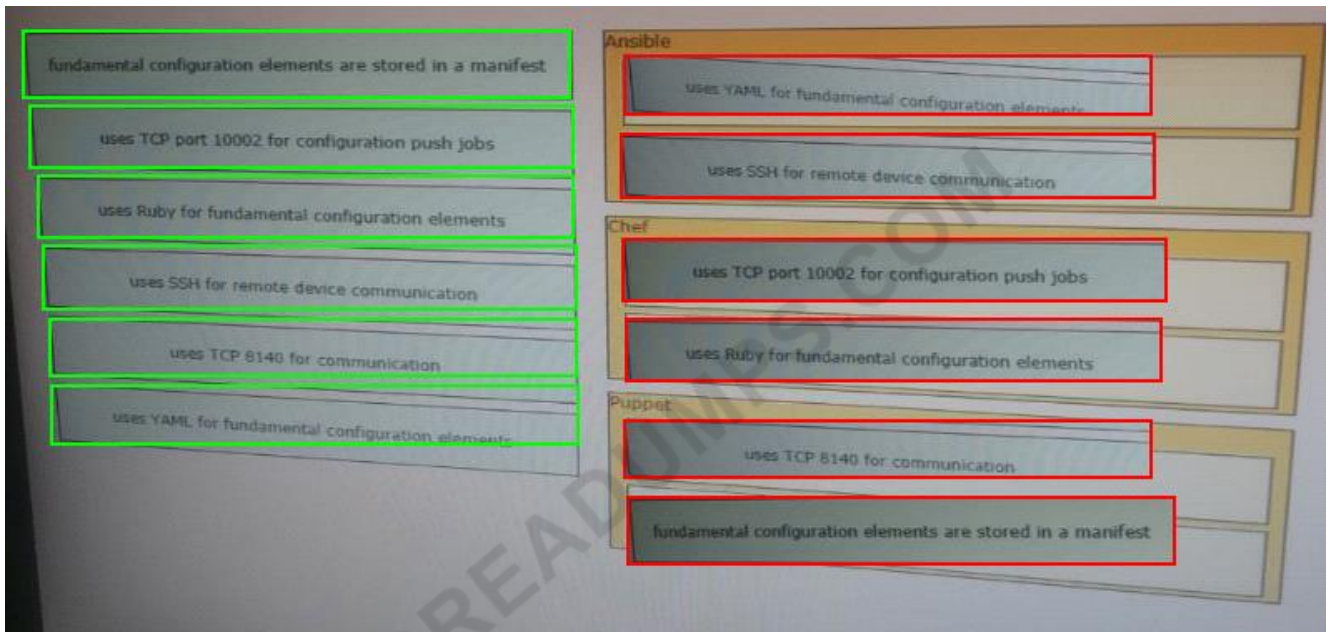
- A. it uses the bandwidth and delay values of the path to calculate the route metric
- B. it uses a default metric of 10 for all routes that are learned by the router
- C. it uses a reference Bandwidth and the actual bandwidth of the connected link to calculate the route metric
- D. it counts the number of hops between the receiving and destination routers and uses that value as the metric

Answer: A

NO.114 Drag drop the descriptions from the left onto the correct configuration-management technologies on the right.



Answer:



NO.115 When configuring a WLAN with WPA2 PSK in the Cisco Wireless LAN Controller GUI, which two formats are available to select? (Choose two)

- A. ASCII
- B. base64
- C. binary
- D. decimal
- E. hexadecimal

Answer: A,E

Reference:

https://www.cisco.com/c/en/us/td/docs/wireless/controller/7-4/configuration/guides/consolidated/b_cg74_CONSOLIDATED/b_cg74_CONSOLIDATED_chapter_01010001.html

NO.116 What is the primary different between AAA authentication and authorization?

- A.** Authentication verifies a username and password, and authorization handles the communication between the authentication agent and the user database.
- B.** Authentication identifies a user who is attempting to access a system, and authorization validates the users password
- C.** Authentication identifies and verifies a user who is attempting to access a system, and authorization controls the tasks the user can perform.
- D.** Authentication controls the system processes a user can access and authorization logs the activities the user initiates

Answer: C

NO.117 Refer to the exhibit.

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Which configuration issue is preventing the OSPF neighbor relationship from being established between the two routers?

- A. R2 is using the passive-interface default command
- B. R1 has an incorrect network command for interface Gi1/0
- C. R2 should have its network command in area 1
- D. R1 interface Gi1/0 has a larger MTU size

Answer: D

NO.118 Refer to the exhibit.

```
R1#show ip interface brief
```

Interface	IP-Address	OK?	Method	Status	Protocol
FastEthernet0/0	unassigned	YES	NVRAM	administratively down	down
GigabitEthernet1/0	192.168.0.1	YES	NVRAM	up	up
GigabitEthernet2/0	10.10.1.10	YES	manual	up	up
GigabitEthernet3/0	10.10.10.20	YES	manual	up	up
GigabitEthernet4/0	unassigned	YES	NVRAM	administratively down	down
Loopback0	172.16.15.10	YES	manual		

What does router R1 use as its OSPF router-ID?

- A. 10.10.1.10
- B. 10.10.10.20
- C. 172.16.15.10
- D. 192.168.0.1

Answer: C

NO.119 Which type of address is the public IP address of a NAT device?

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

Answer: C

NO.120 What makes Cisco DNA Center different from traditional network management applications and their management of networks?

- A. It only supports auto-discovery of network elements in a greenfield deployment.
- B. Its modular design allows someone to implement different versions to meet the specific needs of an organization
- C. It abstracts policy from the actual device configuration
- D. It does not support high availability of management functions when operating in cluster mode

Answer: A

NO.121 What are two southbound APIs? (Choose two)

- A. OpenFlow
- B. NETCONF
- C. Thrift
- D. CORBA
- E. DSC

Answer: A,B

Explanation:

OpenFlow is a well-known southbound API. OpenFlow defines the way the SDN Controller should interact with the forwarding plane to make adjustments to the network, so it can better adapt to

changing business requirements.

The Network Configuration Protocol (NetConf) uses Extensible Markup Language (XML) to install, manipulate and delete configuration to network devices.

NO.122 Refer to the exhibit.

```
ip arp inspection vlan 5-10
interface fastethernet 0/1
 switchport mode access
 switchport access vlan 5
```

What is the effect of this configuration?

- A. All ARP packets are dropped by the switch
- B. Egress traffic is passed only if the destination is a DHCP server.
- C. All ingress and egress traffic is dropped because the interface is untrusted
- D. The switch discards all ingress ARP traffic with invalid MAC-to-IP address bindings.

Answer: D

NO.123 What are two roles of the Dynamic Host Configuration Protocol (DHCP)? (Choose two)

- A. The DHCP server offers the ability to exclude specific IP addresses from a pool of IP addresses
- B. The DHCP client can request up to four DNS server addresses
- C. The DHCP server assigns IP addresses without requiring the client to renew them
- D. The DHCP server leases client IP addresses dynamically.
- E. The DHCP client maintains a pool of IP addresses it can assign.

Answer: C,D

NO.124 Which type of wireless encryption is used for WPA2 in preshared key mode?

- A. TKIP with RC4
- B. RC4
- C. AES-128
- D. AES-256

Answer: D

NO.125 How does CAPWAP communicate between an access point in local mode and a WLC?

- A. The access point must directly connect to the WLC using a copper cable
- B. The access point must not be connected to the wired network, as it would create a loop
- C. The access point must be connected to the same switch as the WLC
- D. The access point has the ability to link to any switch in the network, assuming connectivity to the WLC

Answer: D

NO.126 Refer to the exhibit.


```
SW1#show run int gig 0/1
interface GigabitEthernet0/1
  switchport access vlan 11
  switchport trunk allowed vlan 1-10
  switchport trunk encapsulation dot1q
  switchport trunk native vlan 5
  switchport mode trunk
  speed 1000
  duplex full
```

Which action is expected from SW1 when the untagged frame is received on the GigabitEthernet0/1 interface?

- A. The frame is processed in VLAN 5.
- B. The frame is processed in VLAN 11
- C. The frame is processed in VLAN 1
- D. The frame is dropped

Answer: A

NO.127 Which statement about Link Aggregation when implemented on a Cisco Wireless LAN Controller is true?

- A. To pass client traffic two or more ports must be configured.
- B. The EtherChannel must be configured in "mode active"
- C. When enabled the WLC bandwidth drops to 500 Mbps
- D. One functional physical port is needed to pass client traffic

Answer: D

Reference:

https://www.cisco.com/c/en/us/td/docs/wireless/controller/8-2/config-guide/b_cg82/b_cg82_chapter_010101011.html

NO.128 R1 has learned route 192.168.12.0/24 via IS-IS, OSPF, RIP, and Internal EIGRP Under normal operating conditions, which routing protocol is installed in the routing table?

- A. IS-IS
- B. RIP
- C. Internal EIGRP
- D. OSPF

Answer: C

NO.129 Which two values or settings must be entered when configuring a new WLAN in the Cisco

Wireless LAN Controller GUI? (Choose two)

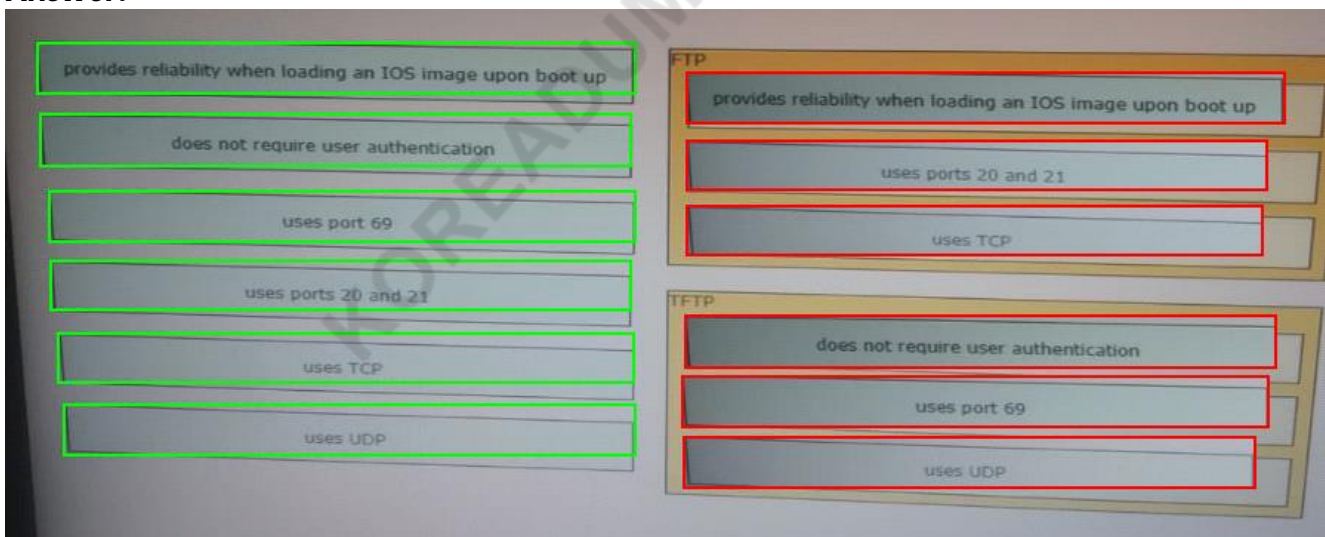
- A. management interface settings
- B. QoS settings
- C. Ip address of one or more access points
- D. SSID
- E. Profile name

Answer: D,E

NO.130 Drag and drop the descriptions of file-transfer protocols from the left onto the correct protocols on the right.



Answer:



NO.131 Drag and drop the threat-mitigation techniques from the left onto the types of threat or attack they mitigate on the right.

Configure BPDU guard.	802.1q double tagging
Configure dynamic ARP inspection.	ARP spoofing
Configure root guard.	unwanted superior BPDUs
Configure VACL.	unwanted BPDUs on PortFast-enabled interfaces

Answer:

Configure BPDU guard.	Configure VACL.
Configure dynamic ARP inspection.	Configure dynamic ARP inspection.
Configure root guard.	Configure BPDU guard.
Configure VACL.	Configure BPDU guard.

NO.132 What are two reasons for an engineer to configure a floating static route? (Choose two)

- A. to automatically route traffic on a secondary path when the primary path goes down
- B. to route traffic differently based on the source IP of the packet
- C. to enable fallback static routing when the dynamic routing protocol fails
- D. to support load balancing via static routing
- E. to control the return path of traffic that is sent from the router

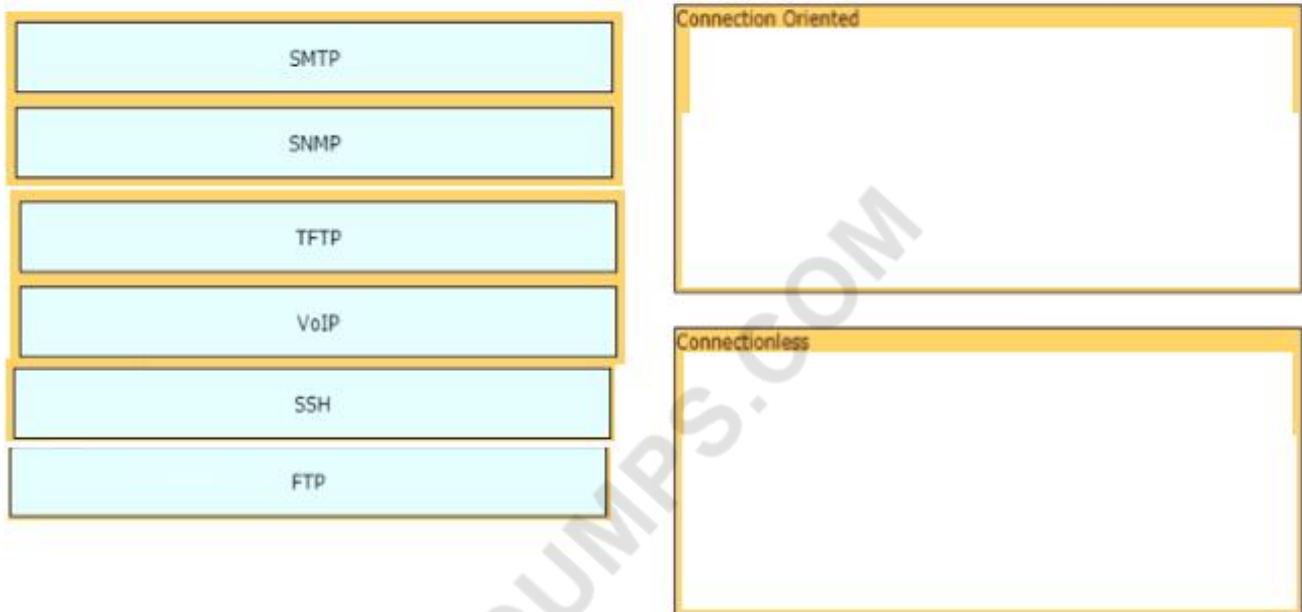
Answer: A,C

NO.133 A network engineer must back up 20 network router configurations globally within a customer environment. Which protocol allows the engineer to perform this function using the Cisco IOS MIB?

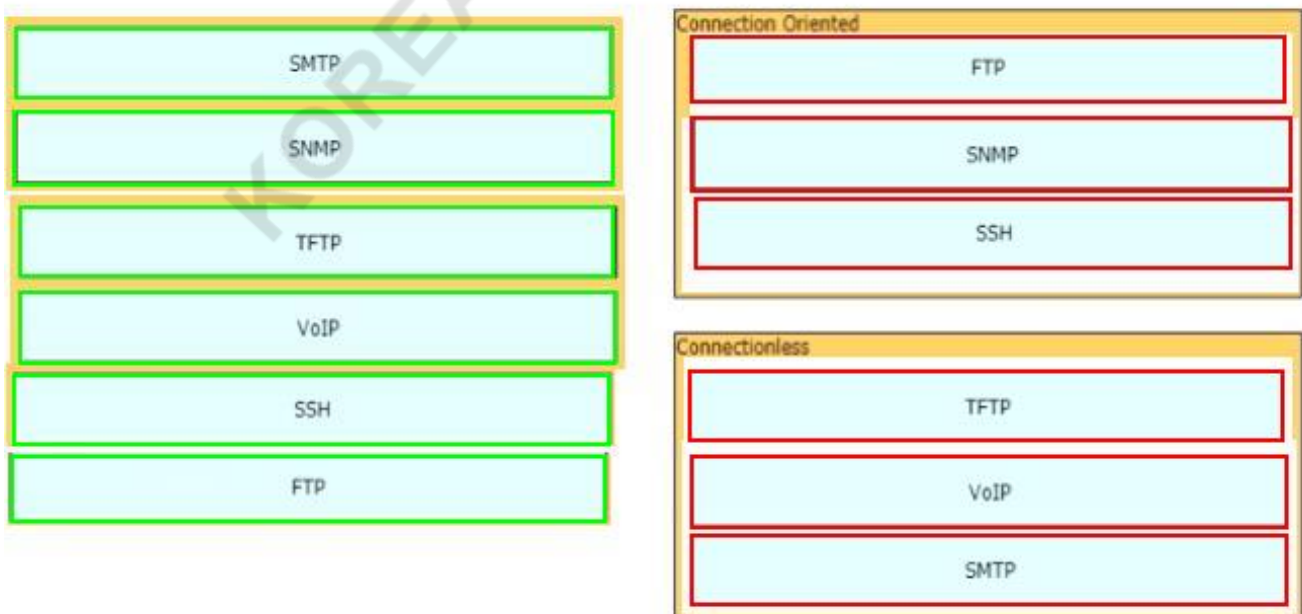
- A. CDP
- B. SNMP
- C. SMTP
- D. ARP

Answer: B

NO.134 Drag and drop the network protocols from the left onto the correct transport services on the right.



Answer:



NO.135 Which two encoding methods are supported by REST APIs? (Choose two)

- A. YAML
- B. JSON
- C. EBCDIC
- D. SGML
- E. XML

Answer: B,E

Explanation:

https://www.cisco.com/c/en/us/td/docs/switches/datacenter/aci/apic/sw/2-x/rest_cfg/2_1_x/b_Cisco_APIC_REST_API_Configuration_Guide/b_Cisco_APIC_REST_API_Configuration_Guide_chapter_01.html Reference:

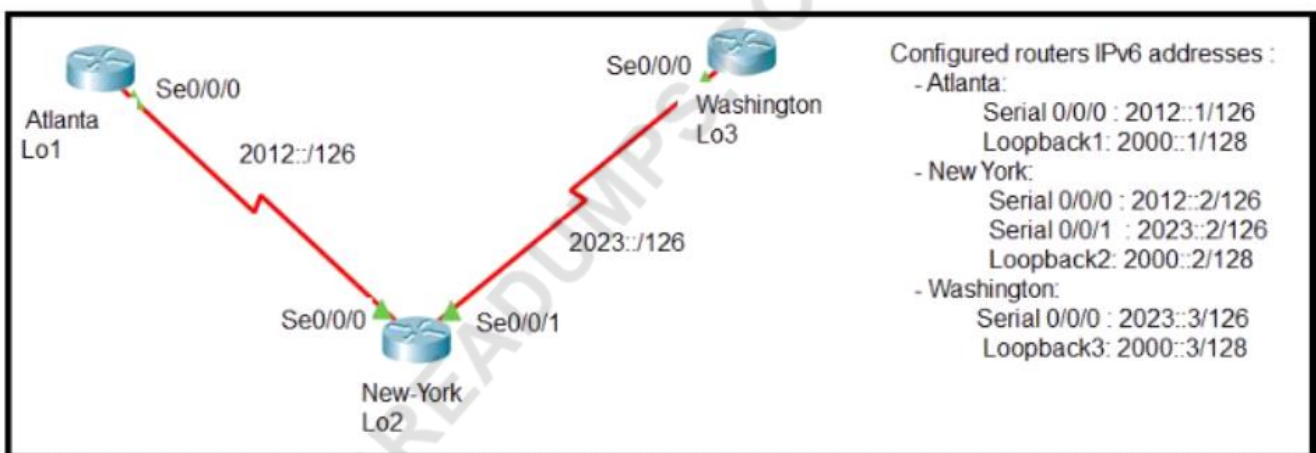
https://www.cisco.com/c/en/us/td/docs/switches/datacenter/nexus1000/sw/5_x/rest_api_config/b_Cisco_N1KV_VMware_REST_API_Config_5x/b_Cisco_N1KV_VMware_REST_API_Config_5x_chapter_010.pdf

NO.136 An engineer configured an OSPF neighbor as a designated router. Which state verifies the designated router is in the proper mode?

- A. Exchange
- B. 2-way
- C. Full
- D. Init

Answer: B

NO.137 Refer to the exhibit.



The New York router is configured with static routes pointing to the Atlanta and Washington sites. Which two tasks must be performed so that the Serial0/0/0 interfaces on the Atlanta and Washington routers can reach one another?

(Choose two.)

- A. Configure the ipv6 route 2023::/126 2012::1 command on the Atlanta router
- B. Configure the ipv6 route 2012::/126 2023::2 command on the Washington router
- C. Configure the ipv6 route 2023::/126 2012::2 command on the Atlanta router
- D. Configure the ipv6 route 2012::/126 2023::1 command on the Washington router
- E. Configure the ipv6 route 2012::/126 s0/0/0 command on the Atlanta router

Answer: B,C

NO.138 Which two capacities of Cisco DNA Center make it more extensible? (Choose two)

- A. adapters that support all families of Cisco IOS software
- B. SDKs that support interaction with third-party network equipment
- C. customized versions for small, medium, and large enterprises
- D. REST APIs that allow for external applications to interact natively with Cisco DNA Center
- E. modular design that is upgradable as needed

Answer: B,D

NO.139 Refer to Exhibit.

```
SW2
vtp domain cisco
vtp mode transparent
vtp password ciscotest
interface fastethernet0/1
  description connection to sw1
  switchport mode trunk
  switchport trunk encapsulation dot1q
```

How does SW2 interact with other switches in this VTP domain?

- A. It processes VTP updates from any VTP clients on the network on its access ports.
- B. It receives updates from all VTP servers and forwards all locally configured VLANs out all trunk ports
- C. It forwards only the VTP advertisements that it receives on its trunk ports.
- D. It transmits and processes VTP updates from any VTP Clients on the network on its trunk ports

Answer: C

Reference:

<https://www.cisco.com/c/en/us/support/docs/lan-switching/vtp/10558-21.html>

NO.140 Which mode allows access points to be managed by Cisco Wireless LAN Controllers?

- A. autonomous
- B. lightweight
- C. bridge
- D. mobility express

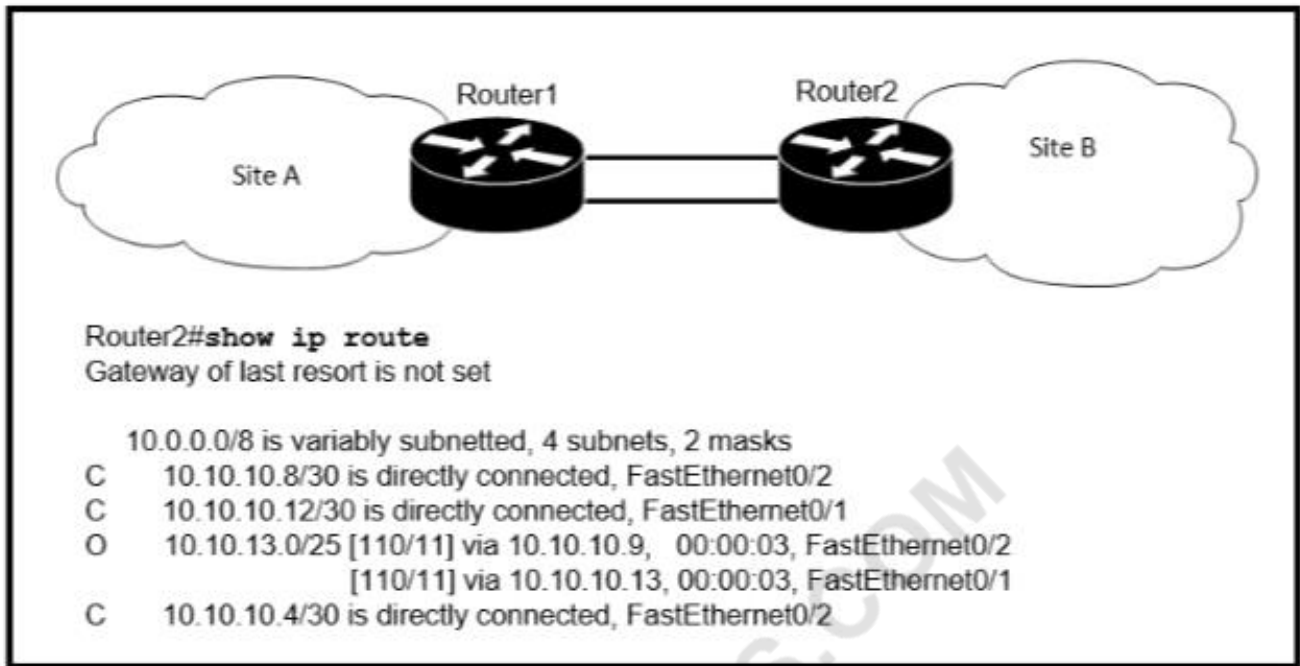
Answer: B

NO.141 Which result occurs when PortFast is enabled on an interface that is connected to another switch?

- A. Spanning tree may fail to detect a switching loop in the network that causes broadcast storms
- B. VTP is allowed to propagate VLAN configuration information from switch to switch automatically.
- C. Root port choice and spanning tree recalculation are accelerated when a switch link goes down
- D. After spanning tree converges PortFast shuts down any port that receives BPDUs.

Answer: A

NO.142 Refer to the exhibit.



If OSPF is running on this network, how does Router 2 handle traffic from Site B to 10.10.13/25 at Site A?

- A. It sends packets out of interface Fa0/2 only.
- B. It sends packets out of interface Fa0/1 only.
- C. It cannot send packets to 10.10.13 128/25
- D. It load-balances traffic out of Fa0/1 and Fa0/2

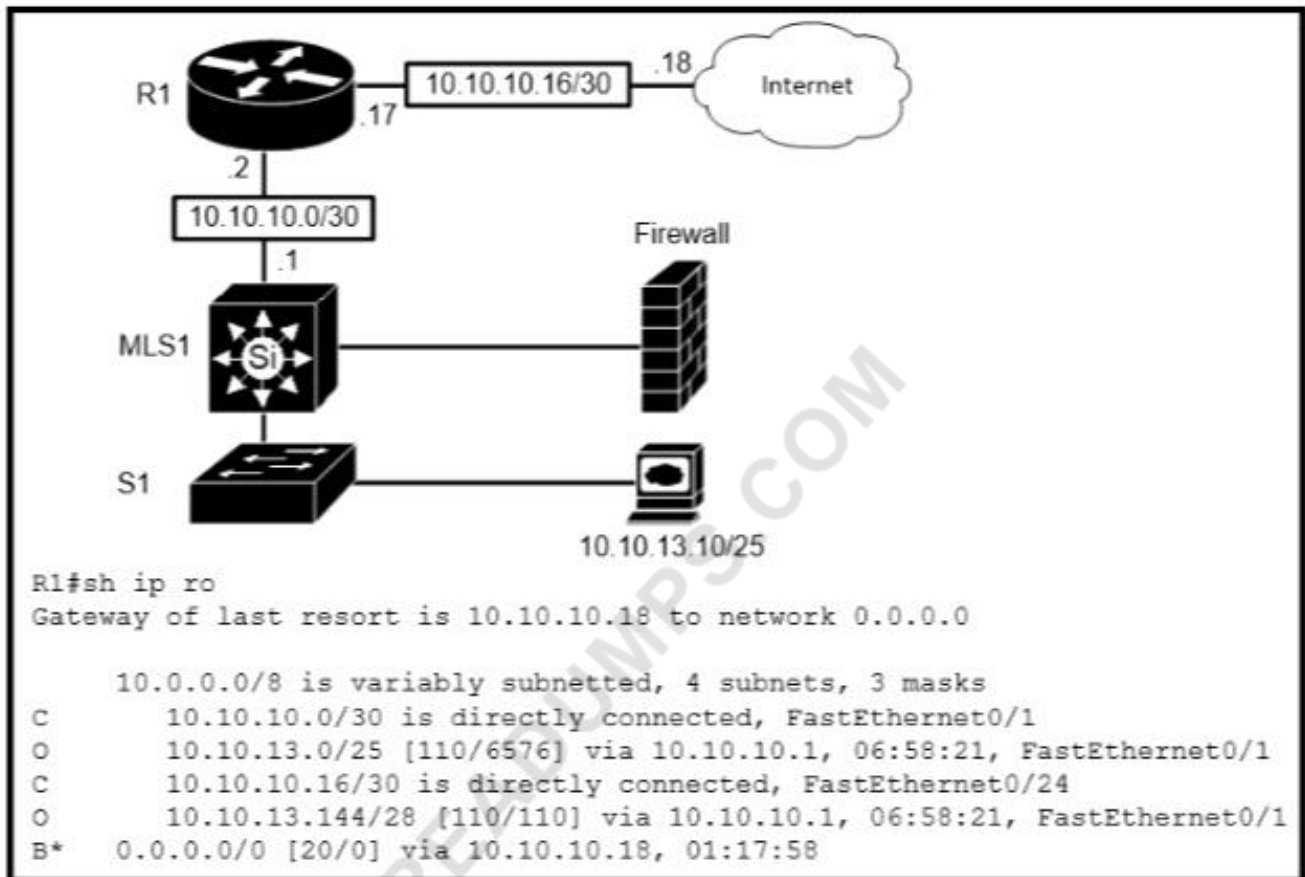
Answer: D

NO.143 What is a difference between local AP mode and FlexConnect AP mode?

- A. Local AP mode causes the AP to behave as if it were an autonomous AP
- B. FlexConnect AP mode fails to function if the AP loses connectivity with the WLC
- C. FlexConnect AP mode bridges the traffic from the AP to the WLC when local switching is configured
- D. Local AP mode creates two CAPWAP tunnels per AP to the WLC

Answer: D

NO.144 Refer to the exhibit.

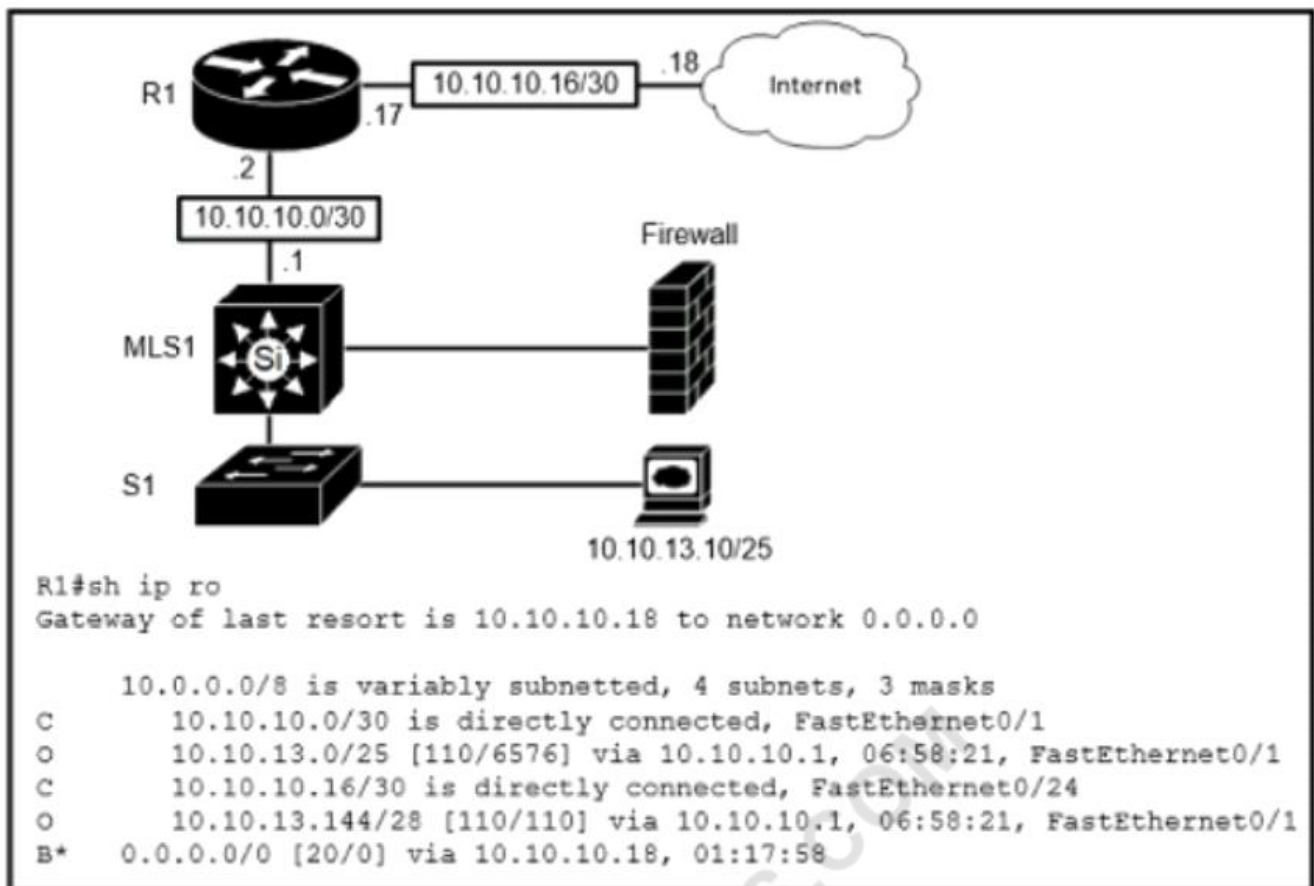


Which type of route does R1 use to reach host 10.10.13.10/32?

- A. floating static route
- B. host route
- C. default route
- D. network route

Answer: D

NO.145 Refer to the exhibit.



Which route type is configured to reach the internet?

- A. host route
- B. default route
- C. floating static route
- D. network route

Answer: B

NO.146 Router A learns the same route from two different neighbors, one of the neighbor routers is an OSPF neighbor and the other is an EIGRP neighbor. What is the administrative distance of the route that will be installed in the routing table?

- A. 20
- B. 90
- C. 110
- D. 115

Answer: B

NO.147 Which MAC address is recognized as a VRRP virtual address?

- A. 0000.5E00.010a
- B. 0005.3711.0975
- C. 0000.0C07.AC99
- D. 0007.C070/AB01

Answer: A

NO.148 How does Cisco DNA Center gather data from the network?

- A.** Network devices use different services like SNMP, syslog, and streaming telemetry to send data to the controller
- B.** Devices establish an IPsec tunnel to exchange data with the controller
- C.** Devices use the call-home protocol to periodically send data to the controller.
- D.** The Cisco CU Analyzer tool gathers data from each licensed network device and streams it to the controller.

Answer: A

NO.149 A user configured OSPF and advertised the Gigabit Ethernet interface in OSPF. By default, which type of OSPF network does this interface belong to?

- A.** point-to-multipoint
- B.** point-to-point
- C.** broadcast
- D.** nonbroadcast

Answer: C

NO.150 What is the difference regarding reliability and communication type between TCP and UDP?

- A.** TCP is reliable and is a connection-oriented protocol; UDP is not reliable and is a connectionless protocol
- B.** TCP is not reliable and is a connection-oriented protocol; UDP is reliable and is a connectionless protocol
- C.** TCP is not reliable and is a connectionless protocol; UDP is reliable and is a connection-oriented protocol
- D.** TCP is reliable and is a connectionless protocol; UDP is not reliable and is a connection-oriented protocol

Answer: A

NO.151 Which two outcomes are predictable behaviors for HSRP? (Choose two)

- A.** The two routers share a virtual IP address that is used as the default gateway for devices on the LAN.
- B.** The two routers negotiate one router as the active router and the other as the standby router
- C.** Each router has a different IP address; both routers act as the default gateway on the LAN, and traffic is load balanced between them.
- D.** The two routers synchronize configurations to provide consistent packet forwarding
- E.** The two routers share the same IP address, and default gateway traffic is load-balanced between them

Answer: A,B

NO.152 An engineer is asked to protect unused ports that are configured in the default VLAN on a switch.

Which two steps will fulfill the request? (Choose two)

- A.** Configure the ports in an EtherChannel.

- B. Administratively shut down the ports
- C. Configure the port type as access and place in VLAN 99
- D. Configure the ports as trunk ports
- E. Enable the Cisco Discovery Protocol

Answer: B,C

NO.153 If a notice-level messaging is sent to a syslog server, which event has occurred?

- A. A network device has restarted
- B. An ARP inspection has failed
- C. A routing instance has flapped
- D. A debug operation is running

Answer: A

NO.154 How does HSRP provide first hop redundancy?

- A. It load-balances traffic by assigning the same metric value to more than one route to the same destination in the IP routing table.
- B. It load-balances Layer 2 traffic along the path by flooding traffic out all interfaces configured with the same VLAN.
- C. It forwards multiple packets to the same destination over different routed links in the data path
- D. It uses a shared virtual MAC and a virtual IP address to a group of routers that serve as the default gateway for hosts on a LAN

Answer: D

NO.155 What is the primary effect of the spanning-tree portfast command?

- A. it enables BPDU messages
- B. It minimizes spanning-tree convergence time
- C. It immediately puts the port into the forwarding state when the switch is reloaded
- D. It immediately enables the port in the listening state

Answer: B

Reference:

https://www.cisco.com/c/en/us/td/docs/switches/lan/catalyst3560/software/release/12-2_55_se/configuration/guide/3560_scg/swstpopt.html