350-501.pre.exam.102q - DEMO

Number: 350-501
Passing Score: 800
Time Limit: 120 min

350-501

Implementing and Operating Cisco Service Provider Network Core Technologies

Exam A

QUESTION 1
DRAG DROP

Drag and drop the OSs from the left onto the correct descriptions on the right.

Select and Place:

Correct Answer:

Section: Architecture
Explanation

Explanation/Reference:
Reference: https://specialties.bayt.com/en/specialties/q/276369/what-is-the-key-difference-between-ios-ios-xe-and-ios-xr-for-cisco-devices/

QUESTION 2

Refer to the exhibit. P3 and PE4 are at the edge of the service provider core and serve as ABR routers. Aggregation areas are on either side of the core.
Which statement about the architecture is true?

A. To support seamless MPLS, the BGP route reflector feature must be disabled.
B. If each area is running its own IGP, BGP must provide an end-to-end MPLS LSP.
C. If each area is running its own IGP, the ABR routers must redistribute the IGP routing table into BGP.
D. To support seamless MPLS, TDP must be used as the label protocol.

Correct Answer: B
Section: Architecture
Explanation

Explanation/Reference:
Reference: https://www.cisco.com/c/en/us/td/docs/switches/lan/catalyst9600/software/release/16-12/configuration_guide/mpls/b_1612_mpls_9600_cg/configuring_seamless_mpls.html

QUESTION 3 Which component is similar to an EVPN instance?

A. router distinguisher
B. MPLS label
C. IGP router ID
D. VRF

Correct Answer: D
Section: Architecture
Explanation

Explanation/Reference:

QUESTION 4

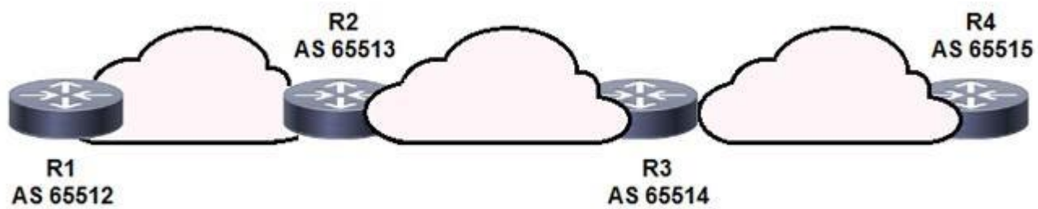
Why do Cisco MPLS TE tunnels require a link-state routing protocol?

A. The link-state database provides segmentation by area, which improves the path-selection process.
B. The link-state database provides a data repository from which the tunnel endpoints can dynamically select a source ID.
C. Link-state routing protocols use SPF calculations that the tunnel endpoints leverage to implement the tunnel.
D. The tunnel endpoints use the link-state database to evaluate the entire topology and determine the best path.

Correct Answer: D
Section: Architecture
Explanation

Explanation/Reference:

QUESTION 5



Refer to the exhibit. BGPsec is implemented on R1, R2, R3, and R4. BGP peering is established between neighboring autonomous systems.

Which statement about implementation is true?

A. BGP updates from the iBGP peers are appended with a community of local-as.
B. BGP updates from the all BGP peers are appended with a community of no-export.
C. BGP updates from the eBGP peers are appended with an additional AS path value that is statically set by the domain administrator.
D. BGP updates from the eBGP peers are appended with a BGPsec attribute sequence that includes a public key hash and digital signature.

Correct Answer: D
Section: Architecture
Explanation

Explanation/Reference:

QUESTION 6 You are configuring MPLS traffic-engineering tunnels in the core. Which two ways exist for the tunnel path across the core? (Choose two.)

A. The dynamic path option is supported only with IS-IS.
B. Tunnels can be configured with dynamic path or explicitly defined path.
C. A zero bandwidth tunnel is not a valid option.
D. The bandwidth statement creates a “hard” reservation on the link.
E. Tunnel links inherit IGP metrics by default unless overridden.

Correct Answer: BE
Section: Architecture
Explanation

Explanation/Reference:

QUESTION 7
Which configuration mode do you use to apply the **mpls ldp graceful-restart** command in IOS XE Software?

A. MPLS LDP neighbor
B. interface
C. MPLS
D. global

Correct Answer: D
Section: Architecture
Explanation

Explanation/Reference:
Reference: https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/mp_ha/configuration/xe-3s/mp-ha-xe-3s-book/mp-ldp-grace-rstrt.html

QUESTION 8
After you analyze your network environment, you decide to implement a full separation model for Internet access and MPLS L3VPN services.

For which reason do you make this decision?

A. It enables EGP and IGP to operate independently.
B. It enables you to choose whether to separate or centralize each individual service.
C. It is easier to manage a system in which services are mixed.
D. It requires only one edge router.

Correct Answer: A
Section: Architecture
Explanation

Explanation/Reference:

QUESTION 9 Which statement about the Cisco MPLS TE forwarding adjacency feature is true?

A. It enables the MPLS core to use EIGRP as the routing protocol.
B. It enables the Cisco MPLS TE tunnel to be advertised into the running IGP.
C. It enables the tailend router to advertise routes to the headend router over the tunnel.
D. It enables the headend and tailend routers to establish a bidirectional tunnel.

Correct Answer: B
Section: Architecture
Explanation

Explanation/Reference:
Reference: https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/mp_te_path_setup/configuration/xe-16/mp-te-path-setup-xe-16-book/mpls-traffic-engineering-forwarding-adjacency.pdf

QUESTION 10 While implementing TTL security, you issue the **PE(config-router-af)#neighbor 2.2.2.2 ttl-security hops 2** command.

After you issue this command, which BGP packets does the PE accept?

A. to 2.2.2.2, with a TTL of 2 or more
B. from 2.2.2.2, with a TTL of less than 2
C. to 2.2.2.2, with a TTL of less than 253
D. from 2.2.2.2, with a TTL of 253 or more

Correct Answer: D
Section: Architecture
Explanation

Explanation/Reference:
Reference: https://www.cisco.com/c/en/us/td/docs/ios/12_2sx/feature/guide/fsxebtsh.html#wp1059215

QUESTION 11

```
ip flow-export destination 192.168.1.2
ip flow-export version 9

interface gigabitethernet0/1
 ip flow ingress
```

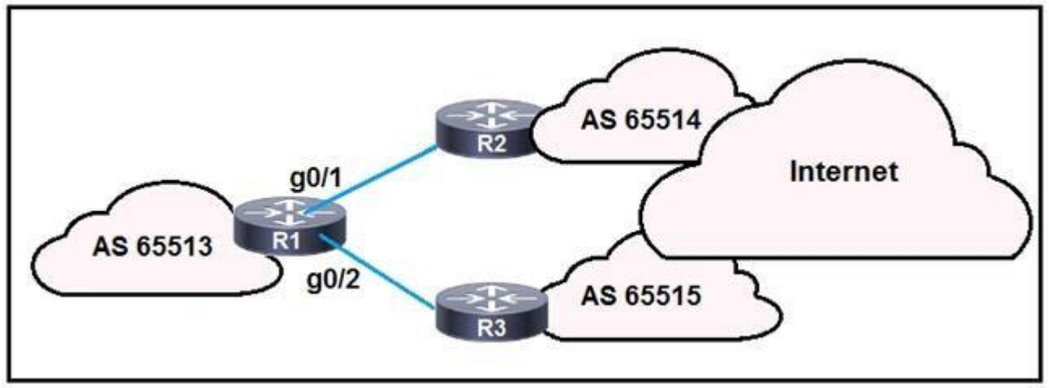
Refer to the exhibits. Which information is provided for traceback analysis when this configuration is applied?

A. source interface
B. packet size distribution
C. IP sub flow cache
D. BGP version

Correct Answer: C
Section: Architecture
Explanation

Explanation/Reference:

QUESTION 12



Refer to the exhibit. R1 is connected to two service providers and is under a DDoS attack.

Which statement about this design is true if URPF in strict mode is configured on both interfaces?

A. R1 drops all traffic that ingresses either interface that has a FIB entry that exits a different interface.
B. R1 drops destination addresses that are routed to a null interface on the router.
C. R1 permits asymmetric routing as long as the AS-PATH attribute entry matches the connected AS.
D. R1 accepts source addresses on interface gigabitethernet0/1 that are private addresses.

Correct Answer: A

Section: Architecture
Explanation
Explanation/Reference:

QUESTION 13

```
ip cef
interface gigabitethernet0/1
        ip verify unicast source reachable-via any
```

Refer to the exhibit. Router 1 was experiencing a DDoS attack that was traced to interface gigabitethernet0/1.

Which statement about this configuration is true?

A. Router 1 accepts all traffic that ingresses and egresses interface gigabitethernet0/1.
B. Router 1 drops all traffic that ingresses interface gigabitethernet0/1 that has a FIB entry that exits a different interface.
C. Router 1 accepts source addresses that have a match in the FIB that indicates it is reachable through a real interface.
D. Router 1 accepts source addresses on interface gigabitethernet0/1 that are private addresses.

Correct Answer: C
Section: Architecture
Explanation

Explanation/Reference:
Reference: https://www.cisco.com/c/en/us/td/docs/switches/datacenter/sw/4_1/nx-os/security/configuration/guide/sec_nx-os-cfg/sec_urpf.html

QUESTION 14


```
Router 1:

ip route 192.168.1.0 255.255.255.0 null 0 tag 1

route-map ddos
  match tag 1
  set local preference 150
  set community no export

route-map ddos permit 20

router bgp 65513
  redistribute static route-map ddos

Router 2:

Interface gigabitethernet0/1
  ip verify unicast reverse-path
```

Refer to the exhibit. An engineer is preparing to implement data plane security configuration.

Which statement about this configuration is true?

A. Router 2 is the router receiving the DDoS attack.
B. Router 1 must be configured with uRPF for the RTBH implementation to be effective.
C. Router 1 is the trigger router in a RTBH implementation.
D. Router 2 must configure a route to null 0 for network 192.168.1.0/24 for the RTBH implementation to be complete.

Correct Answer: A
Section: Architecture
Explanation

Explanation/Reference:

QUESTION 15 Which configuration modifies Local Packet Transport Services

hardware policies? A.

```
configure
lpts police
exception invalid rate 400
protocol cdp rate 50
protocol arp rate 5000
```

```
configure
 lpts pifib police hardware
 flow ospf unicast default rate 200
 flow bgp configured rate 200
 flow bgp default rate 100
 !
 lpts pifib police hardware location 0/2
 flow ospf unicast default rate 100
 flow bgp configured rate 300
 flow icmp application rate 100
 flow icmp default rate 100
 !
```

```
configure
 lpts pifib hardware police
 flow ospf unicast default rate 200
 flow bgp configured rate 200
 flow bgp default rate 100
 !
 lpts pifib hardware police location 0/2/CPU0
 flow ospf unicast default rate 100
 flow bgp configured rate 300
 flow icmp application rate 100
 flow icmp default rate 100
 !
```

B. C.

D.
```
configure
lpts punt police location 0/0/CPU0
exception invalid rate 400
protocol cdp rate 50
protocol arp rate 5000
protocol ipv4 options rate 100
exception icmp rate 200
```

Correct Answer: C
Section: Architecture
Explanation

Explanation/Reference:
Reference: https://www.cisco.com/c/en/us/td/docs/routers/crs/software/crs_r4-1/addr_serv/command/reference/b_ipaddr_cr41crs/b_ipaddr_cr41crs_chapter_0111.html#wp1754734006

QUESTION 16 Which additional feature does MPLS DiffServ tunneling support?

A. matching EXP and DSCP values
B. PHB layer management
C. using GRE tunnels to hide markings
D. interaction between MPLS and IGP

Correct Answer: B
Section: Architecture
Explanation

Explanation/Reference:
Reference: https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/mp_te_diffserv/configuration/15-mt/mp-te-diffserv-15-mt-book/mp-diffserv-tun-mode.html

QUESTION 17
You are creating new Cisco MPLS TE tunnels. Which type of RSVP message does the headend router send to reserve bandwidth on the path to the tailend router?

A. path
B. tear
C. error
D. reservation

Correct Answer: A
Section: Architecture
Explanation

Explanation/Reference:
Reference: https://packetpushers.net/rsvp-te-protocol-deep-dive/

QUESTION 18 Which statement describes the advantage of a Multi-Layer control plane?

A. It provides multivendor configuration capabilities for Layer 3 to Layer 1.
B. It automatically provisions, monitors, and manages traffic across Layer 0 to Layer 3.
C. It supports dynamic wavelength restoration in Layer 0.
D. It minimizes human error configuring converged networks.

Correct Answer: A
Section: Architecture

Explanation
Explanation/Reference:

QUESTION 19
DRAG DROP

Drag and drop the technologies from the left onto the correct definitions on the right.

Select and Place:

Correct Answer:

Section: Architecture
Explanation

Explanation/Reference:

QUESTION 20
An engineer is setting up overlapping VPNs to allow VRF ABC and XYZ to communicate with VRF CENTRAL but wants to make sure that VRF ABC and XYZ cannot communicate.

Which configuration accomplishes these objectives? A.

```
vrf ABC
  address-family ipv4 unicast
    import route-target
      65000:1111
      65000:4444
    !
    export route-target
      65000:1111
      65000:3333
    !
vrf XYZ
  address-family ipv4 unicast
    import route-target
      65000:2222
      65000:4444
    !
    export route-target
      65000:2222
      65000:3333
    !
vrf CENTRAL
  address-family ipv4 unicast
    import route-target
      65000:3333
    !
    export route-target
      65000:4444
    !
```

```
vrf ABC
  address-family ipv4 unicast
    import route-target
      65000:1111
    !
    export route-target
      65000:1111
    !
vrf XYZ
  address-family ipv4 unicast
    import route-target
      65000:2222
    !
    export route-target
      65000:2222
      65000:1111
    !
vrf CENTRAL
  address-family ipv4 unicast
    import route-target
      65000:3333
      65000:1111
      65000:2222
    !
    export route-target
      65000:3333
      65000:1111
      65000:2222
```

```
vrf ABC
  address-family ipv4 unicast
    import route-target
      65000:1111
      65000:4444
    !
    export route-target
      65000:1111
      65000:3333
    !
vrf XYZ
  address-family ipv4 unicast
    import route-target
      65000:2222
      65000:3333
    !
    export route-target
      65000:2222
      65000:4444
    !
vrf CENTRAL
  address-family ipv4 unicast
    import route-target
      65000:3333
    !
    export route-target
      65000:4444
    !
```


B. C.

```
vrf ABC
  address-family ipv4 unicast
    import route-target
      65000:1111
      65000:3333
    !
    export route-target
      65000:1111
      65000:3333
    !
vrf XYZ
  address-family ipv4 unicast
    import route-target
      65000:2222
      65000:3333
    !
    export route-target
      65000:2222
      65000:3333
    !
vrf CENTRAL
  address-family ipv4 unicast
    import route-target
      65000:3333
    !
    export route-target
      65000:3333
    !
```

D.

Correct Answer: B
Section: Architecture
Explanation

Explanation/Reference:

QUESTION 21

```
Router 1:

ip route 192.0.2.0 255.255.255.0 null 0
ip route 192.168.1.0 255.255.255.0 null 0 tag 1

route-map ddos
  match tag 1
  set ip next-hop 192.0.2.1
  set local-preference 150
  set community no export

route-map ddos permit 20

router bgp 65513
  redistribute static route-map ddos

Router 2:

ip route 192.0.2.0 255.255.255.0 null 0
```

Refer to the exhibit. An engineer is preparing to implement data plane security configuration.
Which statement about this configuration is true?

A. Router 1 and Router 2 advertise the route to 192.0.2.0 to all BGP peers.
B. All traffic to 192.168.1.0/24 is dropped.
C. All traffic is dropped.
D. Router 1 drops all traffic with a local-preference set to 150.

Correct Answer: A
Section: Architecture
Explanation

Explanation/Reference:

QUESTION 22 Which MPLS design attribute can you use to provide Internet access to a major customer through a separate dedicated VPN?

A. The Internet gateway router is connected as a PE router to the MPLS backbone.
B. The CE router supports VRF-Lite and the full BGP routing table.
C. The Internet gateway inserts the full Internet BGP routing table into the Internet access VPN.
D. The customer that needs the Internet access service is assigned to the same RTs as the Internet gateway.

Correct Answer: D
Section: Architecture
Explanation

Explanation/Reference:

QUESTION 23

Which configuration enables BGP FlowSpec client function and installation of policies on all local interfaces?

A. **flowspec address-family ipv4 local-install interface-all**
B. **flowspec address-family ipv4 install interface-all local**
C. **flowspec address-family ipv4 install interface-all**
D. **flowspec address-family ipv4 local-install all-interface**

Correct Answer: A
Section: Architecture
Explanation

Explanation/Reference:
Reference: https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/iproute_bgp/configuration/xe-16-6/irg-xe-16-6-book/C3PL-BGP-Flowspec-Client.html

QUESTION 24

```
CE1#
interface FastEthernet/0/0/1
description **** HUB CE non router ****
ip address 10.0.12.1 255.255.255.0

router ospf 100
log-adjacency-changes
network 10.0.12.0 0.0.255.255 area 0

CE2#
interface Serial0/0/9
description **** SPOKE CE router ****
encapsulation ppp
ip address 10.0.12.12 255.255.255.0

router ospf 100
log-adjacency-changes
network 10.0.12.0 0.0.255.255 area 0
```

Refer to the exhibit. A network engineer is configuring customer edge routers to finalize a L2VPN over MPLS deployment. Assume that the AToM L2VPN service that connects the two CEs is configured correctly on the service provider network.

Which action causes the solution to fail?

A. OSPF does not work with L2VPN services.
B. The routing protocol network types are not compatible.
C. A loopback with a /32 IP address has not been used.
D. The xconnect statement has not been defined.

Correct Answer: B
Section: Architecture

Explanation

Explanation/Reference:

QUESTION 25 An engineer working for telecommunication company needs to secure the LAN network using a prefix list.

Which best practice should the engineer follow when he implements a prefix list?

A. An engineer must identify the prefix list with a number only.
B. The final entry in a prefix list must be /32.
C. An engineer must include only the prefixes for which he needs to log activity.
D. An engineer must use nonsequential sequence numbers in the prefix list so that he can insert additional entries later.

Correct Answer: D
Section: Architecture
Explanation

Explanation/Reference:

QUESTION 26

```
interface gigabitethernet1/0
xconnect 192.168.0.1 12 encapsulation mpls pw-class cisco
```

Refer to the exhibit. Which effect of this configuration is true?

A. It enables MPLS on the interface.
B. It creates a pseudowire class named cisco.
C. It enables AToM on interface gigabitethernet1/0.
D. It enables tagging for VLAN 12 on the interface.

Correct Answer: C
Section: Architecture
Explanation

Explanation/Reference:
Reference: https://community.cisco.com/t5/service-providers-documents/configuration-example-atom-any-transport-over-mpls-for-like-to/ta-p/3144810

QUESTION 27

```
PE-A#show ip bgp vpnv4 vrf Customer-A neighbors 10.10.10.2 routes
  BGP table version is 13148019, local router ID is 10.10.10.10
  Status codes: s suppressed, d damped, h history, * valid, > best, i - internal,
                r RIB-failure, S Stale, m multipath, b backup-path, f RT-Filter,
                x best-external, a additional-path, c RIB-compressed,
  Origin codes: i - IGP, e - EGP, ? - incomplete
  RPKI validation codes: V valid, I invalid, N Not found

     Network          Next Hop         Metric LocPrf Weight Path
 Route Distinguisher: 65000:1111 (default for vrf Customer-A)
 *>    192.168.0.0/19    10.10.10.2           0         0 4282 65001 ?
 *>    192.168.0.0/17    10.10.10.2           0         0 4282 65001 ?
 *>    192.168.0.0/16    10.10.10.2           0         0 4282 65001 ?

Total number of prefixes 5

PE-A#config t
  Enter configuration commands, one per line. End with CNTL/Z.
  PE-A(config)#ip prefix-list ALLOW permit 192.168.0.0/16 ge 17 le 19
  PE-A(config)#router bgp 65000
  PE-A(config-router)#address-family ipv4 vrf Customer-A
  PE-A(config-router-af)#neighbor 10.10.10.2 prefix-list ALLOW in
```

Refer to the exhibit. Which three outcomes occur if the prefix list is added to the neighbor? (Choose three.)

A. 192.168.0.0/16 is denied.
B. 192.168.0.0/16 is permitted.C. 192.168.0.0/19 is permitted
D. 192.168.0.0/19 is denied.
E. 192.168.0.0/17 is permitted
F. 192.168.0.0/17 is denied.

Correct Answer: ACF
Section: Architecture
Explanation

Explanation/Reference:

QUESTION 28 A network engineer must enable the helper router to terminate the OSPF graceful restart process if it detects any changes in the LSA.

Which command enables this feature?

A. **nsf ietf helper disable**
B. **nsf cisco helper disable**
C. **nsf ietf helper strict-lsa-checking**
D. **nsf cisco enforce global**

Correct Answer: A
Section: Networking
Explanation
Explanation/Reference:
Reference: https://www.cisco.com/c/en/us/td/docs/ios/12_4t/ip_route/configuration/guide/tgrhelp.html

QUESTION 29

```
R1:
interface FastEthernet0/0
ip address 10.1.12.1 255.255.255.0
duplex full
end
!
!
!
R1(config)#interface FastEthernet0/0
R1(config-if)#ospfv3 1 area 1 ipv4
% IPv6 routing not enabled
```

Refer to the exhibit. A network engineer is implementing an OSPF configuration. Based on the output, which statement is true?

A. OSPFv3 does not run for IPv4 on FastEthernet0/0 until IPv6 routing is enabled on the router and IPv6 is enabled on interface FastEthernet0/0.
B. In the **ospfv3 1 area 1 ipv4** command, area 0 must be configured instead of area 1.
C. OSPFv3 cannot be configured for IPv4; OSPFv3 works only for IPv6.
D. "IPv6 routing not enabled" is just an informational message and OSPFv3 runs for IPv4 on interface FastEthernet0/0 anyway.

Correct Answer: C
Section: Networking
Explanation

Explanation/Reference:

QUESTION 30

```
R1
router bgp 65000
  router-id 192.168.1.1
  neighbor 192.168.1.2 remote-as 65012
  neighbor 192.168.1.2 local-as 65112
```

Refer to the exhibit. A network engineer is implementing a BGP protocol. Which effect of the local-as keyword in this configuration is true?

A. It enables peer 192.168.1.2 to establish a BGP relationship with R1 using AS 65012 without additional configuration.
B. It enables peer 192.168.1.2 to establish a BGP relationship with R1 using AS 65112 and the VPNv4 address family.
C. It enables peer 192.168.1.2 to establish a BGP relationship with R1 using AS 65012 and the VPNv4 address family.
D. It enables peer 192.168.1.2 to establish a BGP relationship with R1 using AS 65112 without additional configuration.

Correct Answer: D
Section: Networking
Explanation

Explanation/Reference:
QUESTION 31

```
RP/0/0/CPU0:router# show bgp neighbors 192.168.2.2

BGP neighbor is 192.168.2.2, remote AS 1, local AS 140, external link
  Remote router ID 0.0.0.0
    BGP state = Idle
    Last read 00:00:00, hold time is 180, keepalive interval is 60 seconds
    Received 0 messages, 0 notifications, 0 in queue
    Sent 0 messages, 0 notifications, 0 in queue
    Minimum time between advertisement runs is 15 seconds

  For Address Family: IPv4 Unicast
    BGP neighbor version 0
    Update group: 0.1
    eBGP neighbor with inbound or outbound policy; defaults to 'drop'
    Route refresh request: received 0, sent 0
    0 accepted prefixes
    Prefix advertised 0, suppressed 0, withdrawn 0, maximum limit 524288
    Threshold for warning message 75%

    Connections established 0; dropped 0
    Last reset 00:02:03, due to BGP neighbor initialized
    External BGP neighbor not directly connected.
```


Refer to the exhibit. Based on the show command output, which result is true after BGP session is established?

A. The IOS XR router advertises and accepts all routes to and from eBGP neighbor 192.168.2.2.
B. The IOS XR router advertises all routes to the neighbor 192.168.2.2, but it does not accept any routes from 192.168.2.2.
C. No routes are accepted from the neighbor 192.168.2.2, nor are any routes advertised to it.
D. The IOS XR router does not advertises any routes to the neighbor 192.168.2.2, but it accepts any routes from 192.168.2.2.

Correct Answer: C
Section: Networking
Explanation

Explanation/Reference:

QUESTION 32

```
R1
router isis
   net 49.0012.1111.1111.1111.00
   is-type level-1
   area-password cisco
R2
router isis
   net 49.0022.1111.1111.1112.00
   is-type level-1-2
   area-password cisco
```

Refer to the exhibit Which effect of this configuration is true?

A. The two routers fail to form a neighbor relationship because they have different IS-IS area types.
B. The two routers successfully form a neighbor relationship.
C. The two routers fail to form a neighbor relationship because the authentication configuration is missing.
D. The two routers fail to form a neighbor relationship because their system IDs are different.

Correct Answer: B
Section: Networking
Explanation

Explanation/Reference:

QUESTION 33

```
R1
router ospf 1
        area 2 stub no-summary

R2
router ospf 1
        area 3 nssa
```

Refer to the exhibit. In which way does router R1 operate differently than router R2?

A. R1 sends LSA types 5 and 7, while R2 sends type 1, 2, and 7 LSAs.
B. R1 sends LSA type 2 only, while R2 sends type 1 and type 7 LSAs.
C. R1 sends LSA type 2 only and R2 sends LSA type 1 only.
D. R1 sends LSA types 1 and 2, while R2 sends type 1,2, and 7 LSAs.

Correct Answer: D
Section: Networking
Explanation

Explanation/Reference:

QUESTION 34

```
router ospf 1
        nsf ietf restart interval 90
```

Refer to the exhibit. Which purpose of implementing NSF with this configuration is true?

A. The router uses NSF to handle RP switchover while allowing neighbor relationships to remain up.
B. The router uses NSF to reduce neighbor-relationship downtime during RP switchover.
C. The router uses NSF to load balance traffic on a routed EtherChannel.
D. The router uses NSF to load balance traffic between two links, with the primary link alternating every 90 seconds.

Correct Answer: A
Section: Networking
Explanation

Explanation/Reference:

QUESTION 35 Which task must be performed first to implement BFD in an IS-IS environment?

A. Configure BFD in an interface configuration mode.
B. Disable Cisco Express Forwarding on all interfaces running routing protocols other than IS-IS.
C. Configure all IS-IS routers as Level 2 devices.
D. Configure BFD under the IS-IS process.

Correct Answer: D
Section: Networking
Explanation

Explanation/Reference:
Reference: https://www.cisco.com/c/en/us/td/docs/ios/12_0s/feature/guide/fs_bfd.html#wp1131797

QUESTION 36 Which two IS-IS parameters must match before two Level 2 peers can form an adjacency? (Choose two.)

A. hello timer setting
B. authentication settings
C. area ID
D. system ID
E. MTU

Correct Answer: BE
Section: Networking
Explanation

Explanation/Reference:
Reference: https://www.cisco.com/c/en/us/support/docs/ip/integrated-intermediate-system-to-intermediate-system-is-is/200293-IS-IS-Adjacency-and-Area-Types.html

QUESTION 37
A customer of an ISP requests support to setup a BGP routing policy. Which BGP attribute should be configured to choose specific BGP speakers as preferred points for the customer AS?

A. lowest multi-exit discriminator
B. highest local preference outbound
C. lowest local preference inbound
D. highest local preference inbound

Correct Answer: B
Section: Networking
Explanation

Explanation/Reference:

QUESTION 38 Which three OSPF parameters must match before two devices can establish an OSPF adjacency? (Choose three.)

A. IP address
B. subnet mask
C. interface cost
D. process ID
E. area number

F. hello timer setting

Correct Answer: BEF
Section: Networking
Explanation

Explanation/Reference:

QUESTION 39

```
R1
interface fastethernet1/0
        ip address 192.168.2.14 255.255.255.0
        ip ospf message-digest-key 1 md5 cisco
        ip ospf authentication message-digest
```

Refer to the exhibit. Which condition must be met by the OSPF peer of router R1 before the two devices can establish communication?

A. The OSPF peer must use clear-text authentication.
B. The OSPF peer must be configured as an OSPF stub router.
C. The interface on the OSPF peer may have a different key ID, but it must use the same key value as the configured interface.
D. The interface on the OSPF peer must use the same key ID and key value as the configured interface.

Correct Answer: D
Section: Networking
Explanation

Explanation/Reference:
Reference: https://networklessons.com/ospf/how-to-configure-ospf-md5-authentication

QUESTION 40
DRAG DROP

Drag and drop the OSPF area types from the left onto the correct statements on the right.

Select and Place:

Correct Answer:

Section: Networking
Explanation

Explanation/Reference:

QUESTION 41

```
router bgp 1
network 192.168.1.2 mask 255.255.255.255
neighbor 192.168.1.1 remote-as 64512
neighbor 192.168.1.1 update-source Loopback0
neighbor 192.168.1.1 send-label
```

Refer to the exhibit. Which statement about the neighbor statements for 192.168.1.1 is true?

A. The router sends BGP labels for its prefixes to this peer.
B. The router must have TDP configured for the send-label command to operate.
C. The neighbor router receives at least four labels from this router.
D. The router sends only a label for the prefix for Loopback0.

Correct Answer: A
Section: Networking
Explanation

Explanation/Reference:

QUESTION 42

```
R1
router isis
   net 52.0011.0000.0000.0001.00
   is-type level-2

interface gigabitethernet0/1
   ip address 192.168.0.1 255.255.255.0
   ip router isis

R2
router isis
   net 52.0022.0000.0000.0002.00
   is-type level-1

interface gigabitethernet0/1
   ip address 192.168.0.2 255.255.255.0
   ip router isis
```

Refer to the exhibit. Which statement about the status of the neighbor relationship between R1 and R2 is true?

A. The neighbor relationship is down because the two routers are configured with different area types.
B. The neighbor relationship is down because the two routers are in the same subnet.
C. The neighbor relationship is up because R2 is level 1 and level 2 router.
D. The neighbor relationship is down because R2 is operating as a Level 1 router and the two routers are in different areas.

Correct Answer: A
Section: Networking
Explanation

Explanation/Reference:

QUESTION 43

```
PE-A
 !
 interface FastEthernet0/0
  ip address 10.10.10.1 255.255.255.252
  ip ospf authentication null
  ip ospf 1 area 0
  duplex full
 end

!
 router ospf 1
  log-adjacency-changes
  passive-interface Loopback0
  network 10.10.10.0 0.0.0.3 area 0
  default-metric 200
 !
```

```
PE-B
 !
 interface FastEthernet0/0
  ip address 10.10.10.2 255.255.255.252
  ip ospf authentication null
  ip mtu 1400
  ip ospf 1 area 0
  duplex half
 end
 !

R1#sho run | b router ospf
 router ospf 1
  log-adjacency-changes
  passive-interface Loopback10
  network 10.10.10.0 0.0.0.255 area 0
  default-metric 100
```

Refer to the exhibit. Which configuration prevents the OSPF neighbor from establishing?

A. default-metric
B. duplex
C. network statement
D. mtu

Correct Answer: D
Section: Networking
Explanation

Explanation/Reference:

QUESTION 44

```
R1:
!
interface FastEthernet0/0
   ip address 10.1.12.1 255.255.255.0
   duplex full
!
router ospf 1
   network 0.0.0.0 255.255.255.255 area 0
R2:
!
interface FastEthernet0/0
   ip address 10.1.12.2 255.255.255.252
   duplex full
!
router ospf 1
   network 0.0.0.0 255.255.255.255 area 0
```

Refer to the exhibit. R1 and R2 are directly connected with Fast Ethernet interfaces and have the above configuration applied OSPF adjacency is not formed. When the **debug ip ospf hello** command is issued on R1, these log messages are seen:

```
*Mar 6 21:57:33.051: OSPF-1 HELLO Fa0/0: Mismatched hello parameters from 10.1.12.2
*Mar 6 21:57:33.051: OSPF-1 HELLO Fa0/0: Dead R 40 C 40, Hello R 10 C 10 Mask R
255.255.255.252 C 255.255.255.0
```

Which command can be configured on routers R1 and R2 on f0/0 interfaces to form OSPF adjacency?

A. **ip ospf network point-to-multipoint non-broadcast**
B. **ip ospf network non-broadcast**
C. **ip ospf network broadcast**
D. **ip ospf network point-to-point**

Correct Answer: D
Section: Networking
Explanation

Explanation/Reference:
Reference: https://community.cisco.com/t5/routing/ospf-point-to-point-links/td-p/1913398

QUESTION 45 Which two tasks must you perform when you implement LDP NSF on your network?
(Choose two.)

A. Enable NSF for BGP.
B. Implement direct connections for LDP peers.
C. Enable NSF for EIGRP.
D. Disable Cisco Express Forwarding.
E. Enable NSF for the link-state routing protocol that is in use on the network.

Correct Answer: BE
Section: Networking
Explanation
Explanation/Reference:

QUESTION 46

```
R2#sh cins neighbors detail
Tag TEST:
System Id    Interface    SNPA          State  Holdtime    Type  Protocol
R1           Fa0/0        ca01.2178.0008 Up    89          L1L2  IS-IS
  Area Address(es): 49
  Uptime: 00:03:29
  NSF capable
  Interface name: FastEthernet0/0
```

Refer to the exhibit. On R1, which output does the show isis neighbors command generate? A.

```
Tag TEST:
System Id    Type Interface    IP Address    State Holdtime Circuit Id
R2           L1    Fa0/0       UP    7       R2.01
R2           L2    Fa0/0       UP    9       R2.01
```

B.

```
Tag TEST:
System Id    Type Interface    IP Address    State Holdtime Circuit Id
R2           L2    Fa0/0       UP    7       R2.01
R2           L2    Fa0/0       UP    9       R2.01
```

C.

```
Tag TEST:
System Id    Type Interface    IP Address    State Holdtime Circuit Id
R2           L2    Fa0/0       UP    9       R2.01
```

D.

```
Tag TEST:
System Id    Type Interface    IP Address    State Holdtime Circuit Id
R2           L1    Fa0/0       UP    7       R2.01
```


Correct Answer: A
Section: Networking
Explanation

Explanation/Reference:

QUESTION 47

```
R1
interface fastethernet1/0
     ip address 192.168.1.3 255.255.255.0
router bgp 65000
     router-id 192.168.1.1
     neighbor 192.168.1.2 remote-as 65012

R2
interface fastethernet1/0
     ip address 192.168.1.2 255.255.255.0
router bgp 65012
     router-id 192.168.1.1
     neighbor 192.168.1.3 remote-as 65000
     neighbor 192.168.1.3 local-as 65112
```

Refer to the exhibit. Assume all other configurations are correct and the network is otherwise operating normally.

Which conclusion can you draw about the neighbor relationship between routers R1 and R2?

A. The neighbor relationship is up.
B. The neighbor relationship will be up only if the two devices have activated the correct neighbor relationships under the IPv4 address family.
C. The neighbor is down because the **local-as** value for R2 is missing in the R1 **neighbor** statement.
D. The neighbor relationship is down because R1 believes R2 is in AS 65012.

Correct Answer: D
Section: Networking
Explanation

Explanation/Reference:

QUESTION 48

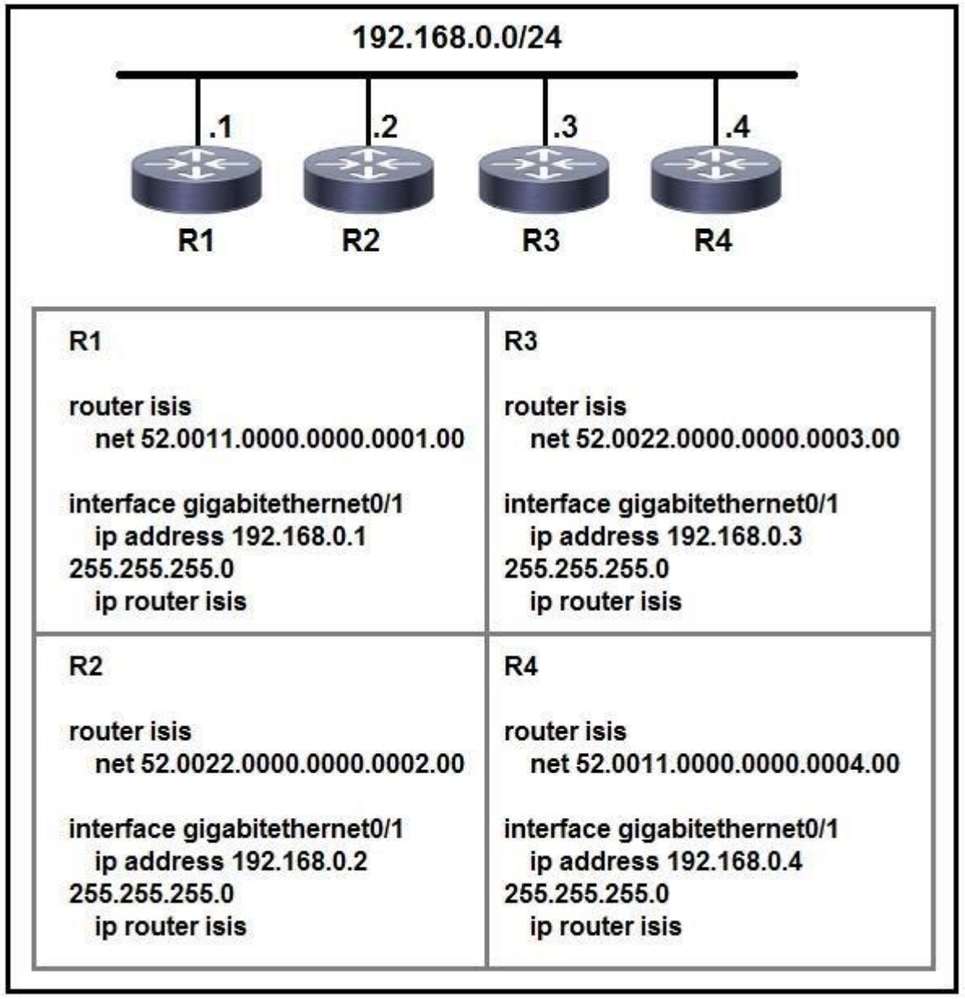
```
R1

router bgp 65000
  router-id 192.268.1.1
  neighbor 192.168.1.2 remote-as 65001
  neighbor 192.168.1.2 password cisco
```

Refer to the exhibit Router R1 and its peer R2 reside on the same subnet in the network. If an engineer implements this configuration to R1, how does it make connections to R2?

A. R1 establishes TCP connections that are authenticated with a clear-text password.
B. R1 establishes UDP connections that are authenticated with an MD5 password.
C. R1 establishes UDP connections that are authenticated with a clear-text password.
D. R1 establishes TCP connections that are authenticated with an MD5 password.

Correct Answer: D
Section: Networking
Explanation

Explanation/Reference:
QUESTION 49



Refer to the exhibit. Which two statements about the IS-IS topology are true? (Choose two.)

A. R1 and R4 are Level 2 neighbors.
B. All four routers are operating as Level 1-2 routers.
C. All four routers are operating as Level 2 routers only.
D. All four routers are operating as Level 1 routers only.
E. R1 and R2 are Level 2 neighbors.

Correct Answer: AB
Section: Networking
Explanation

Explanation/Reference:

QUESTION 50

```
"*Apr 30 14:33:43.619: %CLNS-4-AUTH_FAIL: ISIS: LAN IIH authentication
failed".
```

```
R1#show isis neighbors

Tag TEST:
System Id     Type Interface     IP Address      State Holdtime Circuit Id
R2            L2   Fa0/0         UP    9         R2.01

R2#show isis neighbors

Tag TEST:
System Id     Type Interface     IP Address      State Holdtime Circuit Id
R2            L1   Fa0/0         INIT  22        R2.01
R2            L2   Fa0/0         UP    24        R2.01
```

Refer to the exhibits. R1 and R2 are directly connected and IS-IS routing has been enabled between R1 and R2. R1 generates the above log message periodically.

Based on this output, which statement is true?

A. IS-IS neighbor authentication is failing for Level 2 PDUs only.
B. IS-IS neighbor authentication is failing for Level 2 first and then for Level 1 PDUs.
C. IS-IS neighbor authentication is failing for Level 1 and Level 2 PDUs.
D. IS-IS neighbor authentication is failing for Level 1 PDUs only.

Correct Answer: D
Section: Networking
Explanation

Explanation/Reference:

QUESTION 51 Which BGP attribute is used first when determining the best path?

A. origin
B. AS path
C. local preferenceD. weight

Correct Answer: D
Section: Networking
Explanation

Explanation/Reference:

QUESTION 52

```
PE-A#config t
PE-A(config)#interface FastEthernet0/0
PE-A(config-if)#ip ospf message-digest-key 1 md5 44578611
PE-A(config-if)#ip ospf authentication message-digest

PE-B#config t
PE-B(config)#interface FastEthernet0/0
```

Refer to the exhibit. An engineer wants to authenticate the OSPF neighbor between PE-A and PE-B using MD5.

Which command on PE-B successfully completes the configuration?

A. **PE-B(config-if)#ip ospf message-digest-key 1 md5 44578611 PE-B(config-if)#ip ospf authentication null**

B. **PE-B(config-if)#ip ospf message-digest-key 1 md5 44578611 PE-B(config-if)#ip ospf authentication key-chain 44578611**

C. **PE-B(config-if)#ip ospf message-digest-key 1 md5 44568611 PE-B(config-if)#ip ospf authentication null**

D. **PE-B(config-if)#ip ospf message-digest-key 1 md5 44578611 PE-B(config-if)#ip ospf authentication message-digest**

Correct Answer: D
Section: Networking
Explanation

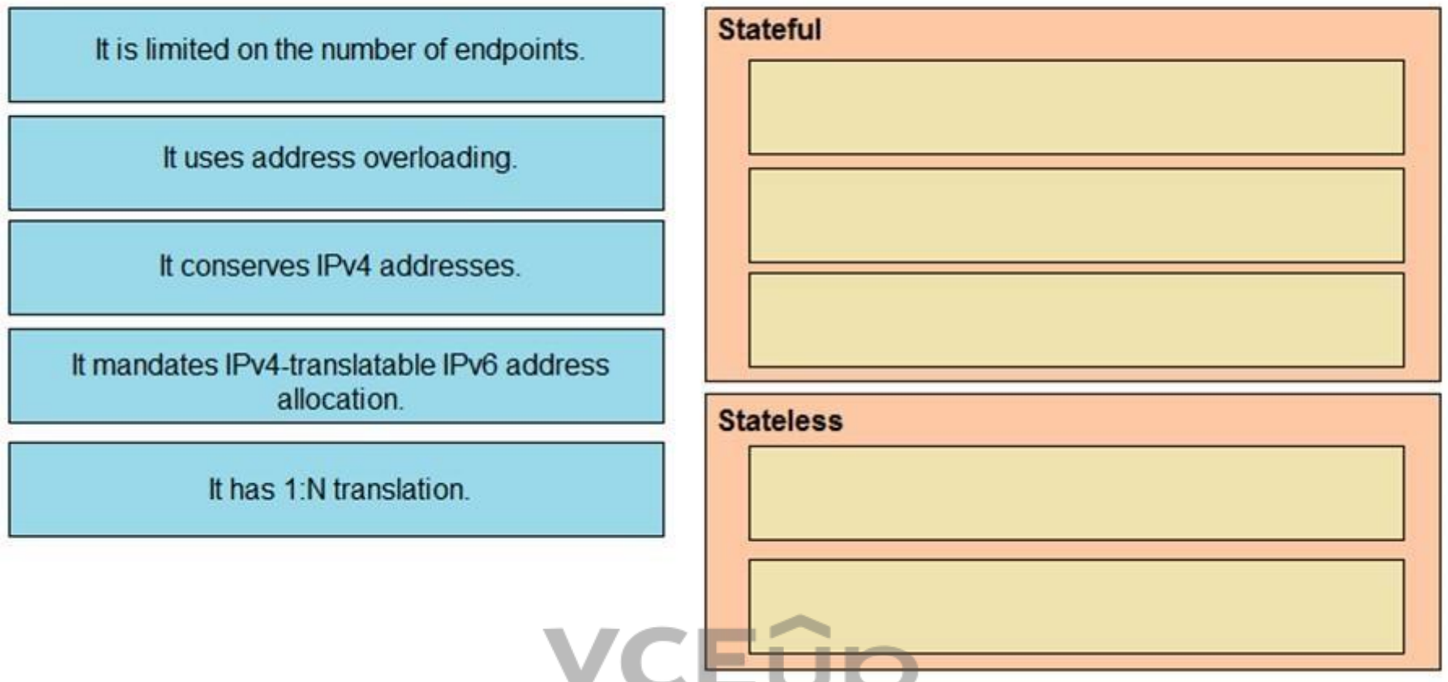
Explanation/Reference:

QUESTION 53
DRAG DROP

Drag and drop each NAT64 description from the left onto the correct NAT64 type on the right.

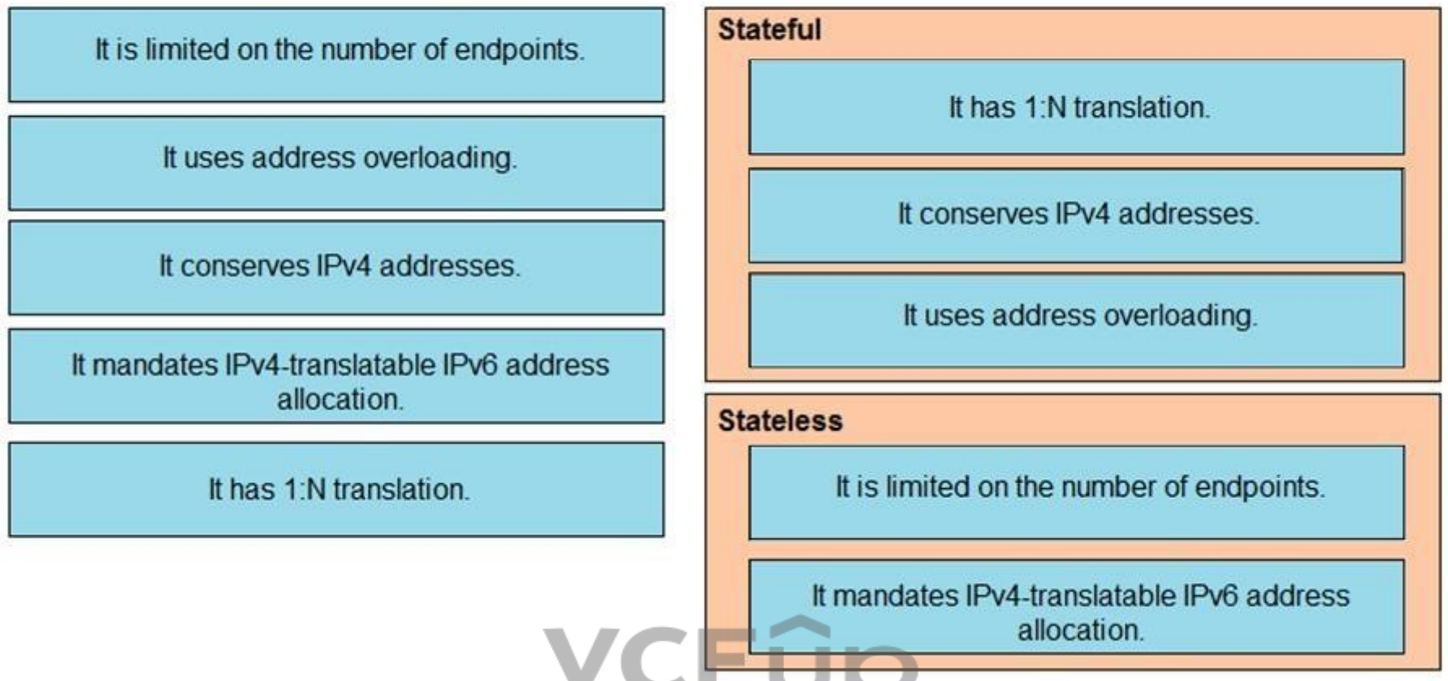
Select and Place:

Answer Area



Correct Answer:

Answer Area



Section: Networking
Explanation

Explanation/Reference:
Reference: https://www.cisco.com/c/en/us/products/collateral/ios-nx-os-software/enterprise-ipv6-solution/white_paper_c11-676277.html

QUESTION 54
DRAG DROP

Drag and drop the functionalities from the left onto the correct target fields on the right.

Select and Place:

Correct Answer:

Section: Networking
Explanation

Explanation/Reference:

QUESTION 55
How much must the MTU be increased when configuring the 802.1q VLAN tag?

A. 2 bytes
B. 4 bytesC. 8 bytes
D. 12 bytes

Correct Answer: B
Section: Networking
Explanation

Explanation/Reference:
Reference: https://www.cisco.com/c/en/us/support/docs/lan-switching/8021q/17056-741-4.html

QUESTION 56 Egress PE NAT is being used via a single centralized router to provide Internet access to L3VPN customers.

Which description of the NAT operation is true?

A. The NAT table contains a field to identify the inside VRF of a translation.
B. Multiple address pools are needed for the same L3VPN because each site has a separate NAT.
C. The different L3VPNs using the Internet access must not have IP overlaps internally.
D. Users in different VRFs cannot share the same outside global IP address.

Correct Answer: A
Section: Networking
Explanation

Explanation/Reference:
Reference: https://www.cisco.com/c/en/us/support/docs/ip/network-address-translation-nat/112084-ios-nat-mpls-vpn-00.html

QUESTION 57

```
interface gigabitethernet1/0/1
  switchport mode access
  switchport access vlan 5
  channel-group 1 mode desirable
```


Refer to the exhibit. An engineer is preparing to implement link aggregation configuration.

Which statement about this configuration is true?

A. The switch port negotiates an EtherChannel if it receives LACP packets from a connected peer running passive mode.
B. The switch port actively sends packets to negotiate an EtherChannel using PAgP.
C. The switch port passively negotiates an EtherChannel if it receives PAgP packets from a connected peer.
D. The switch port accepts LACP and PAgP packets from a connected peer and negotiate an EtherChannel using the common EtherChannel mode.

Correct Answer: B
Section: Networking
Explanation

Explanation/Reference:
Reference: https://www.cisco.com/en/US/docs/switches/metro/me3600x_3800x/trash/swethchl.html

QUESTION 58 You are writing an RPL script to accept routes only from certain autonomous systems. Consider this code:

```
RP/0/RP0/CPU0:router(config-rpl)# if as-path in (ios-regex '.*77$')
RP/0/RP0/CPU0:router(config-rpl-if)# pass
RP/0/RP0/CPU0:router(config-rpl-if)# endif
```

If you apply this code to BGP filters, which effect does the code have on your router?
A. denies routes from AS 7070
B. allows routes from AS 7077

C. denies routes from AS 7007
D. allows routes from AS 770

Correct Answer: B
Section: Networking
Explanation

Explanation/Reference:

QUESTION 59 Which regular expression query modifier function indicates the start of a string?

A. +
B. ^
C. $
D. [^]

Correct Answer: B
Section: Networking
Explanation

Explanation/Reference:

QUESTION 60 How can shared services in an MPLS Layer 3 VPN provide Internet access to the Customers of a central service provider?

A. Static routes on CE routers allow route leakage from a PE global routing table.
B. The CE router can establish a BGP peering to a PE router and use the PE device to reach the Internet.
C. The customer VRF uses route targets to import and export routes to and from a shared services VRF.
D. Route distinguishers are used to identify the routes that CEs can use to reach the Internet.

Correct Answer: C
Section: MPLS and Segment Routing Explanation

Explanation/Reference:
Reference: https://community.cisco.com/t5/service-providers-documents/providing-internet-access-for-mpls-l3-vpns/ta-p/3109924

QUESTION 61

```
R1

ip cef distributed
mpls ldp graceful-restart
interface GigabitEthernet 0/0/1
  mpls ip
  mpls label protocol ldp
```

Refer to the exhibit Which effect of this configuration is true?

A. R1 can support a peer that is configured for LDP SSO/NSF as the peer recovers from an outage.
B. R1can support a graceful restart operation on the peer, even if graceful restart is disabled on the peer.
C. R1 can failover to any peer.
D. R1 can failover only to a peer that is configured for LDF SSO/NSF.

Correct Answer: A
Section: MPLS and Segment Routing Explanation

Explanation/Reference:
Reference: https://www.cisco.com/en/US/docs/general/Test/kwoodwar/fsgr29s.html

QUESTION 62 You are testing the capabilities of MPLS OAM ping. Which statement is true?

A. An LSP is not required for the reply to reach the ingress MPLS router.
B. An LSP breakage results in the ingress MPLS router never receiving any reply.
C. MPLS OAM ping works solely with P2P LSPs.
D. MPLS OAM ping works solely with Cisco MPLS TE.

Correct Answer: B
Section: MPLS and Segment Routing Explanation

Explanation/Reference:

QUESTION 63 In an MPLS network, which protocol can be used to distribute a Segment Prefix?

A. LDP
B. EIGRP
C. OSPF
D. RSVP-TE

Correct Answer: C
Section: MPLS and Segment Routing Explanation

Explanation/Reference:

QUESTION 64

```
RP/0/0/CPU0:iosxrv-1#show mpls ldp discovery brief
Sat Apr 2 22:43:11.362 UTC

Local LDP Identifier: 192.168.0.2:0

Discovery Source    VRF Name       Peer LDP Id         Holdtime
Session
-----------------   -----------    -----------------   --------  ---
Gi0/0/1             default        192.168.0.3:0       15          Y
Gi0/0/2             default        192.168.0.4:0       15          Y
Gi0/0/3             default        192.168.0.5:0       15          Y
Tgt:192.168.0.1     default        192.168.0.1:0       90          Y
Tgt:192.168.0.3     default        192.168.0.3:0       90          Y
Tgt:192.168.0.5     default        -                   -           N
```

Refer to the exhibit. With which router does IOSXRV-1 have LDP session protection capability enabled but session hold up is not active?

A. 192.168.0.4
B. 192.168.0.5
C. 192.168.0.1

D. 192.168.0.3

Correct Answer: B
Section: MPLS and Segment Routing Explanation

Explanation/Reference:

QUESTION 65

```
mpls label protocol ldp
mpls ldp router-id loopback 0
mpls ip
ip cef
```

Refer to the exhibit. A network operator working for service provider with an employee id: 1234:56:789 applied this configuration to a router.

Which additional step should the engineer use to enable LDP?

A. Enable MPLS LDP on the interface.
B. Disable Cisco Express Forwarding globally.
C. Delete the static router ID.
D. Configure the **both** keyword to enable LDP globally.

Correct Answer: A
Section: MPLS and Segment Routing Explanation

Explanation/Reference:

QUESTION 66
Which utility can you use to locate MPLS faults?
A. MPLS LSP ping
B. QoS
C. MPLS traceroute
D. EEM

Correct Answer: C
Section: MPLS and Segment Routing Explanation

Explanation/Reference:

QUESTION 67 When configuring traffic engineering tunnels in Cisco MPLS core network, you see the traffic is not tacking the expected path in the core.

Which command do you use to quickly check path of a TE tunnel?

A. **traceroute <tunnel destination IP>**
B. **show mpls traffic-engineering tunnels**
C. **Ping <tunnel destination IP>**
D. **traceroute mpls ipv4 <tunnel destination>**

Correct Answer: D
Section: MPLS and Segment Routing Explanation

Explanation/Reference:

QUESTION 68
DRAG DROP

Drag and drop the LDP features from the left onto the correct usages on the right.

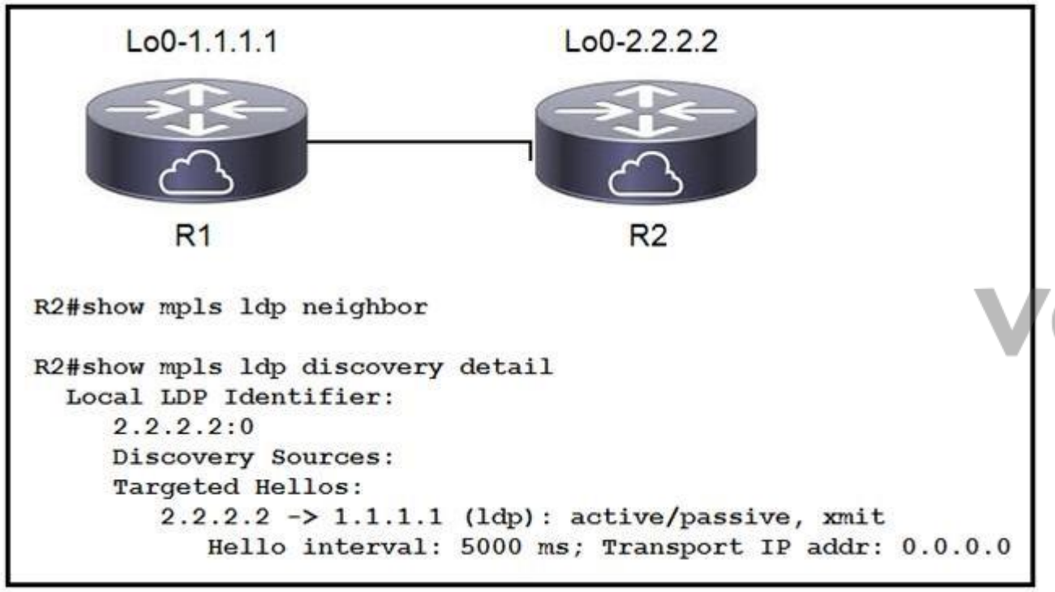
Select and Place:

Correct Answer:

Section: MPLS and Segment Routing Explanation

Explanation/Reference:

QUESTION 69



Refer to the exhibit. When implementing an LDP protocol, an engineer experienced an issue between two directly connected routers and noticed that no LDP neighbor exists for 1.1.1.1.

Which factor should be the reason for this situation?

A. LDP needs to be enabled on the R2 loopback interface.
B. LDP needs to be enabled on the R2 physical interface.
C. R2 does not see any hellos from R1.
D. R2 sees the wrong type of hellos from R1.

Correct Answer: B
Section: MPLS and Segment Routing Explanation

Explanation/Reference:

QUESTION 70

```
mpls traffic-eng tunnels

segment-routing mpls
connected-prefix-sid-map
 address-family ipv4
  192.168.1.1/32 index 10 range 1
  exit-address-family

set-attributes
  address-family ipv4
  sr-label-preferred
  exit-address-family

interface Loopback1
 ip address 192.168.1.1 255 255.255.255
 ip router isis 1

int gig0/0
 ip address 192.168.1.2 255.255.255.0
  ip router isis 1
  mpls traffic-eng tunnels
  isis network point-to-point

router isis 1
  net 50.0000.0000.0000.0001.00
  metric-style wide
  is-type level-1
  segment-routing mpls
  segment-routing prefix-sid-map advertise-local
  mpls traffic-eng router-id Loopback1
  mpls traffic-eng level-1
```

Refer to the exhibit. Which statement about this configuration is true?

A. It requires a dynamic Cisco MPLS TE path to be configured for the tunnel to run.
B. It requires OSPF to also be running to have optimized Cisco MPLS TE tunnels.
C. It is the configuration for the head-end router of a Cisco MPLS TE tunnel with segment routing.
D. It requires an explicit Cisco MPLS TE path to be configured for the tunnel to run.

Correct Answer: C
Section: MPLS and Segment Routing Explanation

Explanation/Reference:

QUESTION 71 Which statement about segment routing prefix segments is true?

A. It is the longest path to a node.
B. It is linked to an adjacency SID that is globally unique within the router.
C. It is linked to a prefix SID that is globally unique within segment routing domain.
D. It requires using EIGRP to operate.

Correct Answer: C
Section: MPLS and Segment Routing Explanation

Explanation/Reference:
Reference: https://www.cisco.com/c/en/us/td/docs/routers/asr9000/software/segment-routing/configuration/guide/b-seg-routing-cg-asr9k/b-seg-routing-cg-asr9k_chapter_010.pdf

QUESTION 72

```
RP/0/RSP0/CPU0:JFK-PE#show mpls ldp bindings 192.168.10.10/32
Fri Nov 11 21:02:33.124 UTC
192.168.10.10/32, rev 2
     Local bindings: label: ImpNull
     Remote bindings: (2 peers)
          Peer                Label
          ---------------     ------------
          10.10.10.2:0        562656
          10.10.10.5:0        378337
```

Refer to the exhibit. After implementing a new design for the network, a technician reviews the pictures CLI output as part of the MOP.

Which two elements describe what the technician can ascertain from the ImpNull output? (Choose two.)

A. Ultimate Hop Popping is in use for the prefix displayed.
B. Penultimate Hop Popping is in use for the prefix displayed.
C. Label 0 is used for the prefix displayed, but will not be part of the MPLS label stack for packets destined for 192.168.10.10.
D. Label 3 is in use for the prefix displayed and will be part of the MPLS label stack for packets destined for 192.168.10.10.
E. Label 0 is used for the prefix displayed and will be part of the MPLS label stack for packets destined for 192.168.10.10.

Correct Answer: BE
Section: MPLS and Segment Routing Explanation

Explanation/Reference:

QUESTION 73 A router RP is configured to perform MPLS LDP graceful restart.

Which three steps are included when the RP sends an LDP initialization message to a neighbor to establish an LDP session? (Choose three.)

A. Learn from Neighbor (N) flag, set to 1
B. Recovery Time field
C. Type-9 LSA
D. Reconnect Timeout field
E. Graceful restart capability in OPEN message
F. Learn from Network (L) flag, set to 1

Correct Answer: BDF
Section: MPLS and Segment Routing Explanation

Explanation/Reference:
Reference: https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/mp_ha/configuration/xe-16-8/mp-ha-xe-16-8-book/nsf-sso-mpls-ldp-and-ldp-graceful-restart.html

QUESTION 74

```
class-map WEB
   match protocol http
```

Refer to the exhibit. Which statement describes the effect of this configuration?
A. It matches HTTP traffic for use in a policy map.
B. It applies a service policy to all interfaces remarking HTTP traffic.

C. It creates an ACL named WEB that filters HTTP traffic.
D. It modifies the default policy map to allow all HTTP traffic through the router.

Correct Answer: A
Section: Services
Explanation

Explanation/Reference:

QUESTION 75
A regional MPLS VPN provider operates in two regions and wants to provide MPLS L3VPN service for a customer with two sites in these separate locations. The VPN provider approaches another organization to provide backbone carrier services so that the provider can connect to these two locations.

Which statement about this scenario is true?

A. When edge routers at different regional sites are connected over the global carrier backbone, MP-eBGP must run between the routers to exchange the customer VPNv4 routes.
B. When eBGP is used for label exchange using the send-label option, MPLS-BGP forwarding is configured under the global ABC CSC PE-to-CE interface.
C. When BGP is used for both route and label exchange, the **neighbor a.b.c.d send-label** command is used under the address-family VPNv4 command mode.
D. When IGP is used for route exchange and LDP for label exchange, MPLS is enabled only on the VRF interface on the backbone-carrier PE side.

Correct Answer: B
Section: Services
Explanation

Explanation/Reference:

QUESTION 76


```
route-policy ciscotest
   if destination in acl10 then
      pass
   else
      set local-preference 300
   endif
end-policy end
```

Refer to the exhibit. A network engineer is implementing a BGP routing policy. Which effect of this configuration is true?

A. All traffic that matches acl10 is allowed without any change to its local-preference.
B. All traffic that matches acl10 is dropped without any change to its local-preference.
C. If traffic matches acl10, it is allowed and its local-preference is set to 300.
D. All traffic is assigned a local-preference of 300 regardless of its destination.

Correct Answer: A
Section: Services
Explanation

Explanation/Reference:

QUESTION 77

```
class-map match-any class1
match-protocol ipv4
match qos-group 4
```

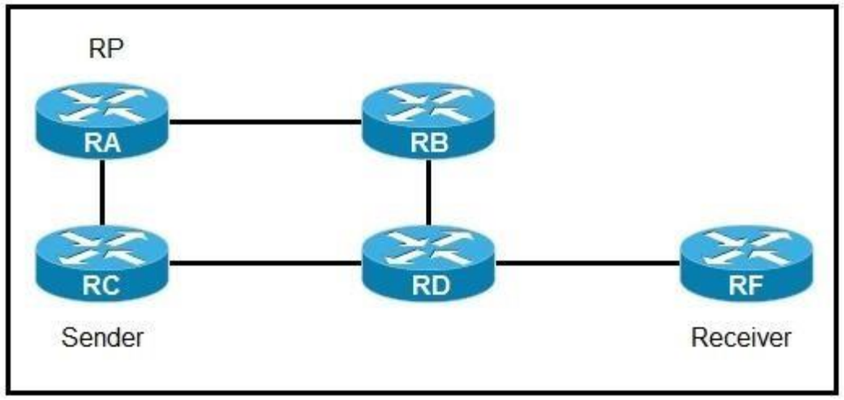
Refer to the exhibit. A network engineer is implementing QoS services. Which two statements about the qos-group keyword on Cisco IOS XR are true? (Choose two.)

A. It marks packets for end-to-end QoS policy enforcement across the network.
B. QoS group marking occurs on the ingress.
C. The QoS group numbering corresponds to priority level.
D. QoS group can be used in fabric QoS policy as match criteria.
E. It cannot be used with priority traffic class.

Correct Answer: BD
Section: Services
Explanation

Explanation/Reference:

QUESTION 78



Refer to the exhibit. If router A is the RP, which PIM mode can you configure so that devices will send multicast traffic toward the RP?

A. PIM-SM
B. BIDIR-PIM
C. PIM-SSM
D. PIM-DM

Correct Answer: A
Section: Services
Explanation

Explanation/Reference:

QUESTION 79

```
route-policy qppb-as6000
if as-path in (ios-regex '61100, 61200, 61300') then
set qos-group 10

router bgp 100 bgp
table-policy qppb-as6000
```

Refer to the exhibit. Which statement supports QPPB implementation?

A. QPPB policies affect only egress traffic.
B. QoS policies rely exclusively on BGP attributes to manipulate traffic.
C. QoS policies are identified in the MPLS forwarding table.
D. QoS policies use BGP to gain full coverage on the network.

Correct Answer: D
Section: Services
Explanation

Explanation/Reference:

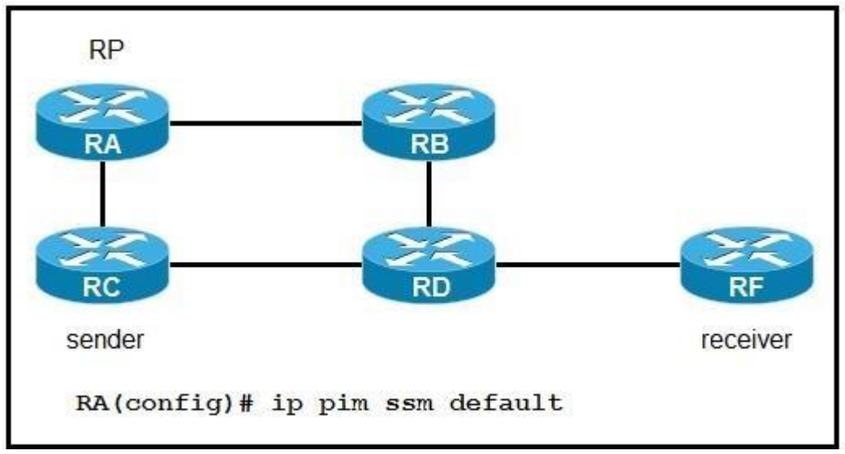
QUESTION 80 Why do packet loops occur during the configuration of BIDIR-PIM?

A. The network does not support BIDIR-PIM.
B. The network is partially upgraded to support BIDIR-PIM.
C. The router has not been configured to advertise itself.
D. No interface for carrying traffic for multicast groups has been configured.

Correct Answer: B
Section: Services
Explanation

Explanation/Reference:
Reference: https://www.cisco.com/c/en/us/td/docs/switches/lan/catalyst9600/software/release/16-12/configuration_guide/ip_mcast_rtng/b_1612_ip_mcast_rtng_9600_cg/configuring_pim.html

QUESTION 81



Refer to the exhibit. If router RA is configured as shown, which IPv4 multicast address space does it use?

A. 224.0.0.0/8
B. 225.0.0.0/8
C. 232.0.0.0/8
D. 239.0.0.0/8

Correct Answer: C
Section: Services
Explanation

Explanation/Reference:
Reference: https://www.cisco.com/c/en/us/td/docs/switches/lan/catalyst3850/software/release/3se/multicast/configuration_guide/b_mc_3se_3850_cg/b_mc_3se_3850_cg_chapter_01011.html

QUESTION 82
DRAG DROP

Drag and drop the functions from the left onto the correct Path Computation Element Protocol roles on the right.

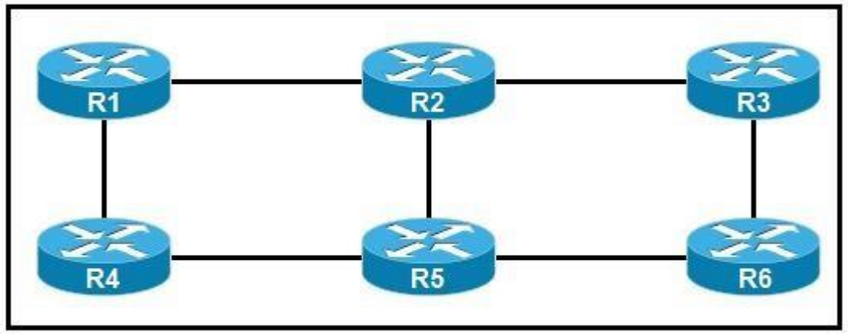
Select and Place:

Correct Answer:

Section: Services
Explanation

Explanation/Reference:

QUESTION 83



Refer to the exhibit. You are configuring an administrative domain in the given multi-vendor environment with PIM-SM.

Which feature can you implement so that devices can dynamically learn the RP?

A. BSR
B. BIDIP-PIM
C. Auto-RP
D. SSM

Correct Answer: C
Section: Services
Explanation

Explanation/Reference:
QUESTION 84
DRAG DROP

Drag and drop the multicast concepts from the left onto the correct descriptions on the right.

Select and Place:

Correct Answer:

Section: Services
Explanation

Explanation/Reference:

QUESTION 85

```
PE-A#config t
PE-A(config)#class-map VOIP
PE-A(config-cmap)#match precedence 5
PE-A(config-cmap)#policy-map MARK-TRAFFIC
PE-A(config-pmap)#class VOIP
```

Refer to the exhibit. Which command is used to complete this configuration for QoS class-based marking?

A. **PE-A(config-pmap-c)#set dscp ef**
B. **PE-A(config-pmap-c)#priority**
C. **PE-A(config-pmap-c)#random-detect**
D. **PE-A(config-pmap-c)#fair-queue**

Correct Answer: A
Section: Services
Explanation

Explanation/Reference:

QUESTION 86

```
ip flow-export source loopback 0
ip-flow-export destination 192.168.1.1
ip-flow-export version 9 origin-as
```

Refer to the exhibit. Export statistics received do not include the BGP next hop.

Which statement about the NetFlow export statistics is true?

A. Loopback 0 must be participating in BGP for it to be included in the export statistics.
B. To include the BGP next hop in the export statistics, those keywords must be included with the version 9 entry.
C. The origin AS and the peer-as will be included in the export statistics.
D. Only the origin AS of the source router will be included in the export statistics.

Correct Answer: B
Section: Automation and Assurance
Explanation

Explanation/Reference:

Reference: https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/netflow/configuration/xe-16-12/nf-xe-16-12-book/cfg-nflow-data-expt-xe.html

QUESTION 87

```
snmp-server community ciscotest ro 2
```

Refer to the exhibit. What is significant about the number 2 in the configuration?

A. It indicates two SNMP managers can read and write with the agent using community string ciscotest.
B. It dictates the number of sessions that can be open with the SNMP manager.
C. It is the numeric name of the ACL that contains the list of SNMP managers with access to the agent.
D. It represents the version of SNMP running.

Correct Answer: C
Section: Automation and Assurance
Explanation

Explanation/Reference:

QUESTION 88 How can a network administrator secure rest APIs?

A. They can have a general administrator login for multiple users to access that has command entries logged.
B. They can authenticate user sessions and provide the appropriate privilege level.
C. They can ensure that user sessions are authenticated using TACACS+ only.
D. They can allow read and write privileges to all users.

Correct Answer: B
Section: Automation and Assurance
Explanation

Explanation/Reference:

QUESTION 89 What is the difference between SNMP and model-driven telemetry?

A. SNMP uses the YANG data modeling language.
B. Telemetry uses traps and inform messages to deliver data to a network administrator on a polling basis.
C. Telemetry allows for modeled network data to be pushed to the network administrator on an as-needed basis.
D. SNMP pushes network data to the network administrator whenever it is queried.

Correct Answer: C
Section: Automation and Assurance
Explanation

Explanation/Reference:

QUESTION 90

```
snmp-server host 192.168.1.1 version 2c public
```

Refer to the exhibit. A network administrator wants to enhance the security for SNMP for this configuration.

Which action can the network administrator implement?

A. Add a community string to the existing entry.
B. Maintain the configuration but switch to an encrypted password for device access through SSH.
C. Re-configure to use SNMPv2 with MD5 authentication.
D. Re-configure to use SNMPv3.

Correct Answer: D
Section: Automation and Assurance
Explanation

Explanation/Reference:

QUESTION 91

```
ip flow-export source loopback 0
ip flow-export destination 192.168.1.1
ip flow-export version 5 origin-as
```

Refer to the exhibit. If the NetFlow configuration is updated to version 9, which additional piece of information can be reported?

A. IPv4 flow information
B. BGP AS information
C. IPv6 flow information
D. flow sequence numbers

Correct Answer: C
Section: Automation and Assurance
Explanation

Explanation/Reference:
Reference: https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/ipv6/configuration/12-2sx/ipv6-12-2sx-book/ip6-netflow.html

QUESTION 92 Which service is a VNF role?

A. Network
B. Firewall
C. Storage
D. Compute

Correct Answer: A
Section: Automation and Assurance
Explanation

Explanation/Reference:

QUESTION 93

```
telemetry model-driven
subscription cisco
sensor-group-id ciscotest sample-interval 60000
commit
```

Refer to the exhibit. This configuration is being applied on an IOS XR router.

Which statement about this configuration is true?

A. It is used to enable gRPC.
B. It is used to create a streaming subscription with a 600-second interval.
C. It is used to set up configuration to poll network data.
D. It is used to create a streaming subscription with a 60-Second interval.

Correct Answer: D
Section: Automation and Assurance
Explanation

Explanation/Reference:
Reference: https://www.cisco.com/c/en/us/td/docs/routers/asr9000/software/telemetry/b-telemetry-cg-asr9000-62x/b-telemetry-config-guide-asr9000_chapter_01.html **QUESTION**

94

```
POST https://router1:8000/api/mo/uni/Descriptions.xml
```

Refer to the exhibit. What does the REST API command do?

A. It removes the information identified by Descriptions.xml.
B. It executes the information specified in Descriptions.xml.
C. It retrieves the information requested by Descriptions.xml.
D. It displays the information identified by Descriptions.xml.

Correct Answer: C
Section: Automation and Assurance
Explanation

Explanation/Reference:

QUESTION 95

```
https://192.168.1.100/api/mo/uni/tn-ciscotest.xml
```

Refer to the exhibit. What is the URL used for with REST API?

A. It is used to initiate an FTP session to save a running configuration of a device.
B. It is used to send a message to the APIC to perform an operation on a managed object or class operator.
C. It is used to contact a URL filter to determine the efficacy of a web address.
D. It is used to send a TACACS + authentication request to a server.

Correct Answer: B
Section: Automation and Assurance
Explanation
Explanation/Reference:

QUESTION 96 Which two uses of the YANG data modeling language are true?
(Choose two.)

A. It can be used to model the configuration used by NETCONF operations.
B. It can be used to access a device by HTTP.

C. It can be used to replace the OSI model for troubleshooting.
D. It can be used to shape state data of network elements.
E. It can be used to replace RESTCONF as a mechanism to install and manipulate configuration.

Correct Answer: AC
Section: Automation and Assurance
Explanation

Explanation/Reference:
Reference: https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/prog/configuration/1611/b_1611_programmability_cg/configuring_yang_datamodel.pdf

QUESTION 97

```
<tag/>
```

Refer to the exhibit. What does this value mean when it is received in XML?

A. It indicates a value assigned by a network administrator to tag a route.
B. It indicates a break in a sequence.
C. It means a data field is blank.
D. It shows the ending of the script.

Correct Answer: D
Section: Automation and Assurance
Explanation

Explanation/Reference:

QUESTION 98
What do Ansible and SaltStack have in common?

A. They both have agents running on the client machine.
B. They both can be designed with more than one master server.
C. They both use DSL configuration language.
D. They both use YAML configuration language.

Correct Answer: D
Section: Automation and Assurance
Explanation

Explanation/Reference:
Reference: https://www.edureka.co/blog/chef-vs-puppet-vs-ansible-vs-saltstack/

QUESTION 99

```
        <data>
<rpc-reply>
```

Refer to the exhibit. This output is included at the end of an output that was provided by a device using NETCONF.

What does the code show?

A. It shows that the full configuration is being modeled by YANG.
B. It shows NETCONF uses remote procedure calls.
C. It shows the hostname of the device as rpc-reply.
D. It shows that the running configuration is blank.

Correct Answer: B
Section: Automation and Assurance
Explanation

Explanation/Reference:

QUESTION 100 Which statement about Network Services Orchestrator (NSO) is true?

A. It must use SDN as an overlay for addressing.
B. It uses YANG modeling language to automate devices.
C. It is used only in service provider environments.
D. It can be used only with XML coding.

Correct Answer: B
Section: Automation and Assurance
Explanation

Explanation/Reference:

QUESTION 101

```
Router 1:

netconf-yang
netconf-yang feature candidate-datastore
```


Refer to the exhibit. Which statement describes this configuration?

A. Router 1 has a new data store to collect SNMP information, but configuration must still be done at the CLI only.
B. Router 1 can be remotely managed by the CLI using Telnet.
C. Router 1 has its running configuration locked so changes can be made only when the administrator issues a kill session.
D. Router 1 has a temporary data store where a copy of the running configuration can be manipulated and verified before committing the configuration.

Correct Answer: D
Section: Automation and Assurance
Explanation

Explanation/Reference:
Reference: https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/prog/configuration/169/b_169_programmability_cg/configuring_yang_datamodel.html

QUESTION 102

```
telemetry model-driven
sensor-group cisco
sensor-path Cisco-IOS-XR-infra-statsd-oper:infra-statistics/interfaces/interface/latest/generic-counters
commit
```

Refer to the exhibit. This configuration is being applied on an IOS XR route.

Which statement about this configuration is true?

A. It is used to create a sensor-group and has a list of YANG models for streaming.

B. It is used to create a subscription to specify the streaming interval.
C. It is used to identify MIB entries and has a list of YANG models.
D. It is used to identify traps for SNMP polling.

Correct Answer: A
Section: Automation and Assurance
Explanation

Explanation/Reference:
Reference; https://www.cisco.com/c/en/us/td/docs/routers/ncs6000/software/telemetry/b-telemetry-cg-ncs6000-62x/b-telemetry-cg-ncs6000-62x_chapter_010.pdf