

300-32

Number: 300-320
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300-320

Designing Cisco Network Service Architectures

Version 4.0

Exam A**QUESTION 1**

Which route summarization most efficiently reduces perceived network complexity that is composed of subnetworks ranging from 172.16.20.0/24 to 172.16.36.0/24?

- A. 172.16.8.0/21
- B. 172.16.8.0/19
- C. 172.16.20.0/20
- D. 172.16.0.0/18
- E. 172.16.20.0/19

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 2

What is the recommended subnet between two sites that have a point-to-point connection to conserve IP addresses?

- A. 255.255.255.0
- B. 255.255.252.0
- C. 255.255.255.252
- D. 255.255.255.240

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 3

EIGRP uses which algorithm to build a routing table?

- A. Dijkstra's algorithm
- B. Floyd-Warshall algorithm
- C. Diffusing Update Algorithm

D. Johnson's algorithm

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 4

What is the maximum number of routers that each OSPF area (including the backbone) should contain?

- A. 30
- B. 10
- C. 50
- D. 100

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 5

What is the maximum number of neighbors that a router should have in an OSPF area?

- A. 5
- B. 30
- C. 60
- D. 99

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 6

```
R1(config)# router ospf 2
R1(config)# network 10.10.10.0 0.0.0.255 area 1
R1(config)# network 20.20.20.0 0.0.0.255 area 2
R1(config)# router-id 15.15.15.15
R2(config)# router ospf 10
R2(config)# network 10.10.10.0 0.0.0.255 area 1
R2(config)# network 20.20.20.0 0.0.0.255 area 2
R2(config)# router-id 16.16.16.16
```

Refer to the exhibit. Based on the configuration, why are routers R1 and R2 not exchanging OSPF routes?

- A. The OSPF process numbers are different.
- B. There is no backbone area configured.
- C. The router IDs are different.
- D. OSPF is not enabled on the interfaces.

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 7

An engineer notices that many BGP peers utilize the same configuration parameters. What can the engineer configure to simplify BGP neighbor statements and generate more efficient BGP peer updates?

- A. peer groups
- B. policy templates
- C. session templates
- D. peer address families

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 8

What is the correct state between two BGP peers that are neighbors?

- A. active
- B. operational
- C. established
- D. up

Correct Answer: C

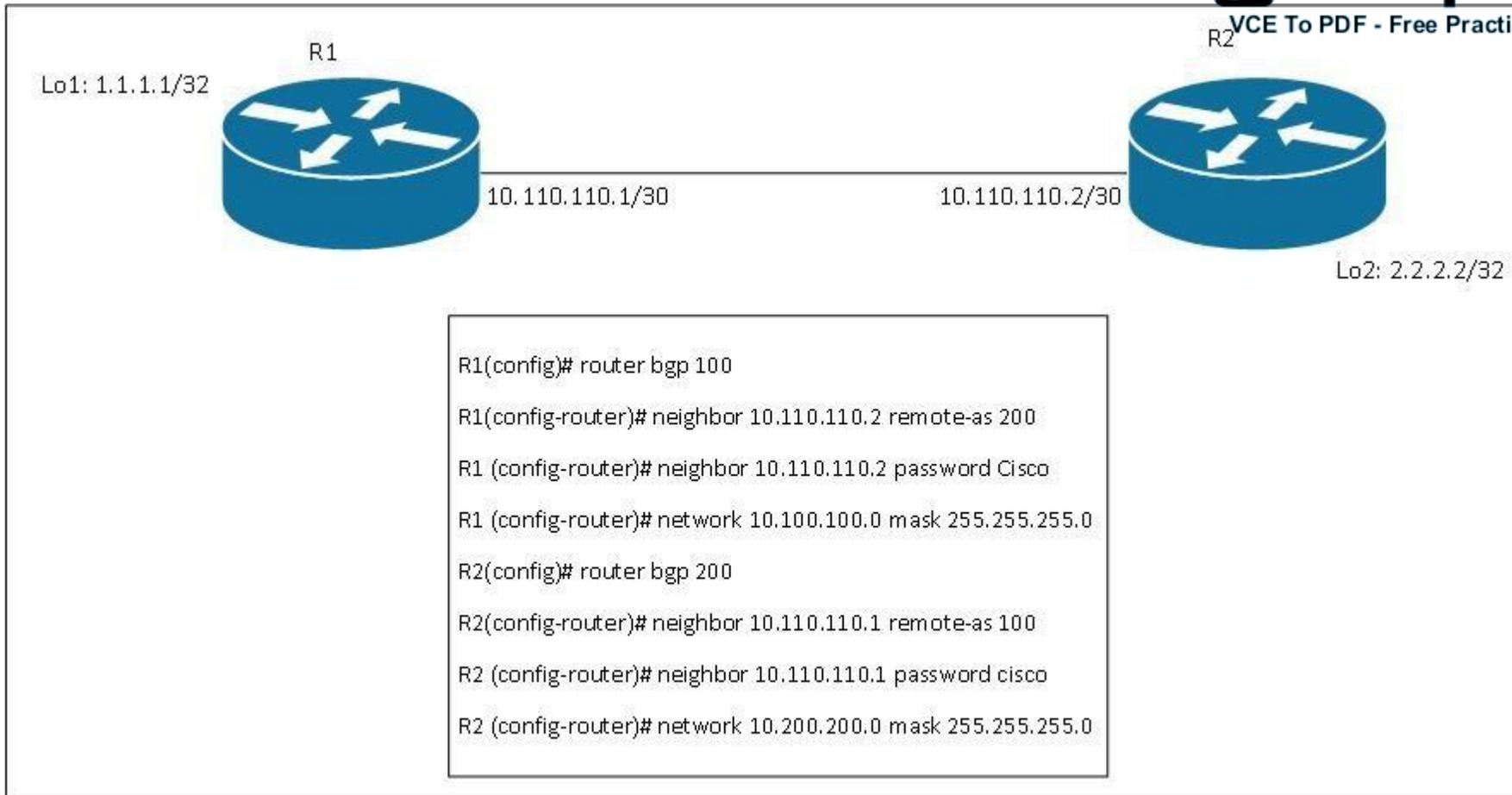
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Explanation

Explanation/Reference:

QUESTION 9

Refer to the exhibit. A network engineer manually reconfigures the BGP configuration on newly upgraded router R1. However, the BGP neighbor relationship does not come up with the directly connected neighbor router. What is causing the failure of the BGP neighbor relationship between routers R1 and R2?



- A. An incorrect neighbor IP address for router R2 is configured on router R1.
- B. An incorrect neighbor AS number is configured on router R1 for router R2.
- C. The wrong BGP authentication password is configured on router R1.
- D. Router R1 must configure the R2 loopback address as the neighbor IP address.

Correct Answer: C

Section: (none)
Explanation

Explanation/Reference:

QUESTION 10

Which option is a primary requirement for the deployment of an IPv6-enabled network via the native method (dual-stack model) within the enterprise campus environment?

- A. hardware-based switching support for IPv6 forwarding on all campus switches
- B. restriction of IPv6-enabled devices to the core layer
- C. manual implementation of tunneling between IPv6-incompatible devices in an IPv4-over-IPv6 tunnel
- D. disabling of multicast in the distribution layer prior to implementation of IPv6

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 11

Which multicast address must be available for FHRP advertisements in a multivendor environment?

- A. 224.0.0.9
- B. 224.0.0.18
- C. 224.0.0.102
- D. 224.0.0.2

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 12

Which feature must be configured for the VRRP-enabled router to regain the master VRRP status upon recovery from a failure?

- A. priority

- B. authentication
- C. pre-emption
- D. Stateful Switchover

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 13

Which protocol should be configured if a network administrator wants to configure multiple physical gateways to participate simultaneously in packet forwarding?

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

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 14

Which Nexus feature enables you to support server connectivity with one topology and address requirement for both high availability and high bandwidth?

- A. vPC
- B. vPC+
- C. Stackwise
- D. EvPC

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 15

Which technology can block interfaces and provide a loop-free topology?

- A. STP
- B. VSS
- C. VLAN
- D. vPC

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 16

Which technology allows network managers to centrally manage the VLAN database?

- A. VTP
- B. VLAN
- C. VSS
- D. vPC

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 17

Which technology allows multiple instances of a routing table to coexist on the same router simultaneously?

- A. VRF
- B. Cisco virtual router
- C. instanced virtual router
- D. IS-IS

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 18

Which first-hop redundancy protocol that was designed by Cisco allows packet load sharing among groups of redundant routers?

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

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 19

Which routing protocol provides the fastest convergence and greatest flexibility within a campus environment?

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

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 20

A network engineer wants to connect two sites via a WAN technology and to securely pass multicast traffic over this WAN technology. Which WAN technology should be configured?

- A. IPsec
- B. GRE
- C. pure MPLS
- D. GRE over IPsec

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 21

A network manager wants to securely connect a new remote site to the existing headquarters site using a VPN technology that meets security requirements. Which VPN technology should be used?

- A. GRE
- B. IPsec
- C. remote-access VPN
- D. L2TP VPN

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 22

Which VPN technology is tunnel-less?

- A. GET VPN
- B. DMVPN
- C. MPLS
- D. IPsec VPN

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:**QUESTION 23**

Which type of connectivity is required for VPLS?

- A. full mesh
- B. partial mesh
- C. star
- D. bus
- E. ring

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:**QUESTION 24**

Which protocol should be run on the LAN side of two edge routers (that are terminating primary and backup WAN circuits) to provide quick failover in case of primary WAN circuit failure?

- A. VTP
- B. STP
- C. VRRP
- D. RIP

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:**QUESTION 25**

Which Cisco feature can be run on a Cisco router that terminates a WAN connection, to gather and provide WAN circuit information that helps switchover to dynamically back up the WAN circuit?

- A. Cisco Express Forwarding

- B. IP SLA
- C. passive interface
- D. traffic shaping

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 26

Which protocol is best when there are circuit connections with two different ISPs in a multihoming scenario?

- A. VRRP
- B. BGP
- C. IPsec
- D. SSL

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 27

Private lines make use of which connection type based on cell switching?

- A. ATM
- B. ISP MPLS VPN
- C. VTI
- D. VPLS

Correct Answer: A

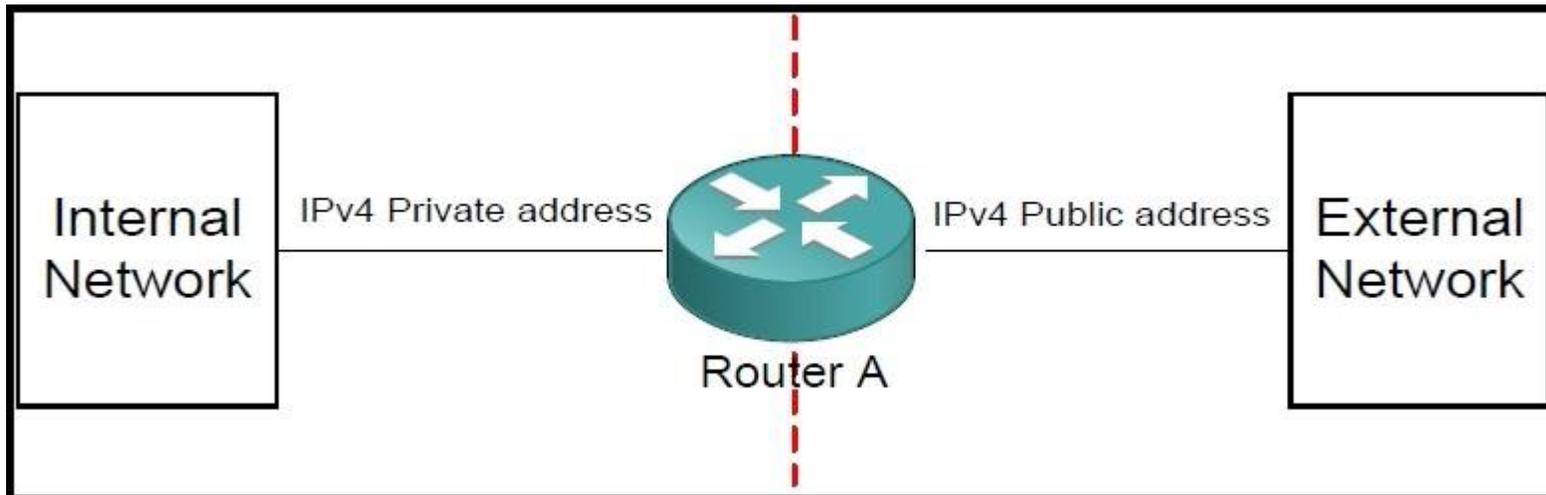
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Explanation

Explanation/Reference:

QUESTION 28

Refer to the exhibit. Which functionality must be enabled on router A to connect two networks for translating private addresses into "legal" public addresses on a one-for-one basis?



- A. PAT
- B. NAT
- C. VLAN
- D. GARP
- E. PPP

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 29

Which technology fulfills these requirements?

- Utilize a connection that must support a range of traffic, voice, video, and data.
- This traffic must also support transmission via a fixed blank 53-byte cell.

- A. PPP
- B. Frame Relay
- C. ATM
- D. MPLS
- E. X.25

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 30

Which option is used as a top-of-rack device that is managed by its parent device, providing ease of management?

- A. Cisco Nexus 2000
- B. Cisco Nexus 5000
- C. Cisco Nexus 7000
- D. Cisco Nexus 9000

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 31

Which option provides software modularity in Cisco NX-OS software in the data center design?

- A. The ip routing command enables all of the features in the Cisco NX-OS.
- B. All of the features are enabled by default in the Cisco NX-OS.
- C. Individual features must be manually enabled to start the process.
- D. The Cisco NX-OS has a management VRF that is enabled by default.

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:**QUESTION 32**

What is an advantage of using the vPC feature in a data center environment?

- A. VSS is a requirement.
- B. Multiple instances of control plane are formed.
- C. The control plane and management plane remain separate.
- D. Cisco FabricPath technology does not have to be configured.

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:**QUESTION 33**

Which option is a benefit of the vPC+ feature?

- A. Cisco FabricPath is not required in the network domain.
- B. This feature provides fault domain separation.
- C. Nonfabric devices, such as a server or a classic Ethernet switch, can be connected to two fabric switches that are configured with vPC.
- D. The control plane and management plane are combined into one logical plane.

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:**QUESTION 34**

A network administrator wants to provide high availability in a data center environment by making sure that there is no reconvergence of Layer 2 and Layer 3 protocols when there is a Layer 3 switch failure. Which Cisco Nexus feature fulfills this purpose?

- A. ISSU
- B. VSS
- C. vPC

D. MEC

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 35

A company has hired an entry-level network administrator for its new data center. The company CIO wants to give the administrator limited access on the newly configured Cisco Nexus 7000. Which feature should be used to allow limited access?

- A. NAC
- B. VDC
- C. RBAC
- D. vPC

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 36

Which option prevents the dropping of asymmetrically routed packets in active/active failover paired firewalls?

- A. Nothing can be done to prevent this from happening.
- B. Configure different policies on both firewalls.
- C. Assign similar interfaces on each firewall to the same asymmetric routing group.
- D. Assign similar interfaces on each firewall to a different asymmetric routing group.

Correct Answer: C

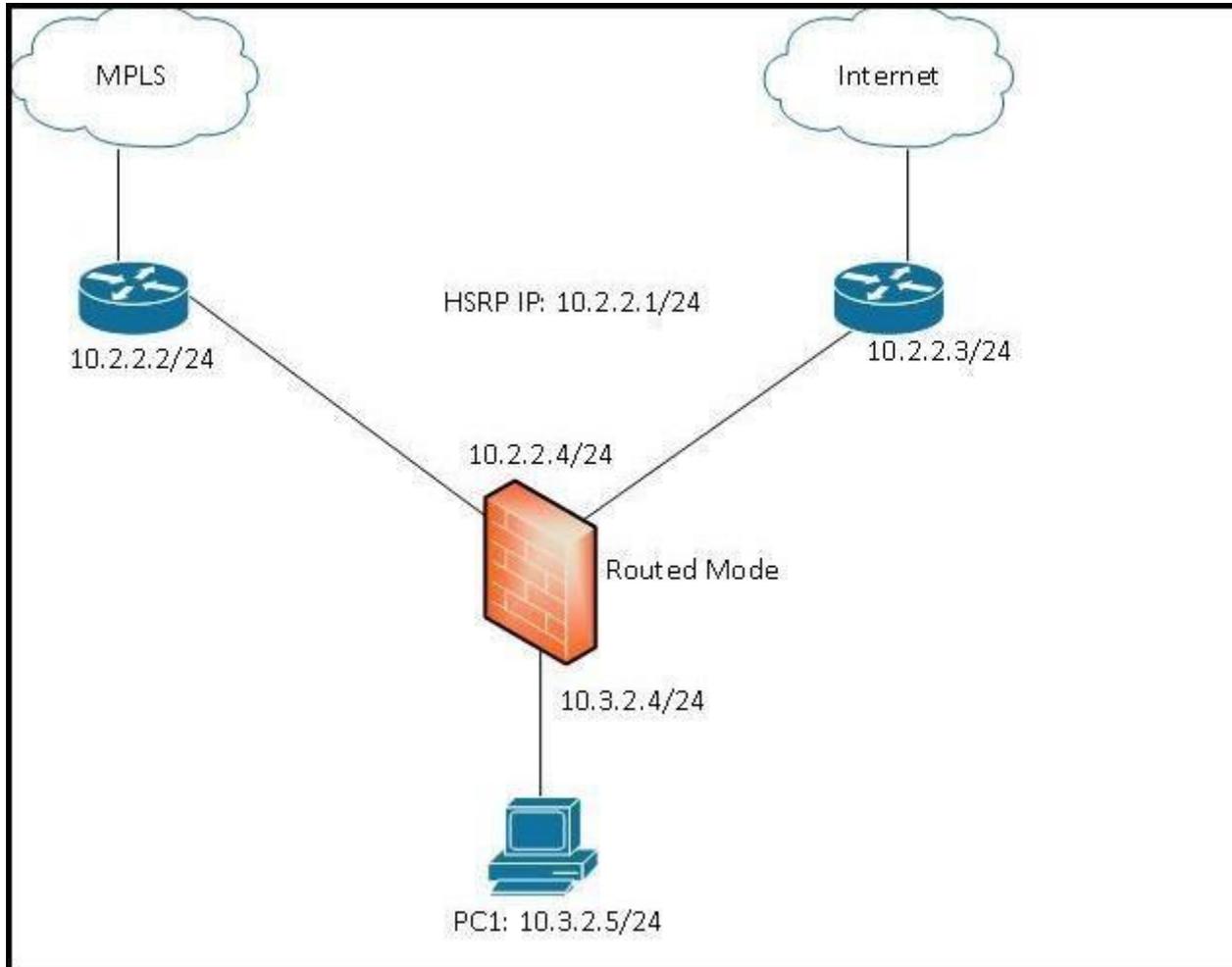
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Explanation

Explanation/Reference:

QUESTION 37

Refer to the exhibit. Which option should be the default gateway for the PC1 that is shown?



- A. 10.3.2.4
- B. 10.2.2.2
- C. 10.2.2.1
- D. 10.2.2.3

Correct Answer: A

Section: (none)
Explanation

Explanation/Reference:

QUESTION 38

The network engineering team is interested in deploying NAC within the enterprise network to enhance security. What deployment model should be used if the team requests that the NAC be logically inline with clients?

- A. Layer 2 in-band
- B. Layer 2 out-of-band
- C. Layer 3 in-band
- D. Layer 3 out-of-band

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 39

Which authentication framework is used in wireless networks and point-to-point connections?

- A. EAP
- B. L2TP
- C. TKIP
- D. PPP

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 40

What is one reason to implement Control Plane Policing?

- A. allow OSPF routing protocol to advertise routes

- B. protect the network device route processor from getting overloaded by rate limiting the incoming control plane packets
- C. allow network devices to generate and receive packets
- D. protect the data plane packets

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 41

Port security supports which type of port?

- A. SPAN destination port
- B. EtherChannel port-channel port
- C. nonnegotiating trunk port
- D. DTP-enabled trunk port

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 42

Which protocol is required for end-to-end signaling in an IntServ QoS architecture?

- A. RSVP
- B. DSCP
- C. ToS
- D. LLQ
- E. DiffServ

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 43

Which QoS architecture provides scalability of implementation?

- A. IntServ
- B. DiffServ
- C. LLQ
- D. RSVP

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 44

Which architecture provides a way to deliver end-to-end QoS as required by real-time voice and video business applications?

- A. IntServ
- B. DiffServ
- C. LLQ
- D. ToS
- E. DSCP

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 45

CoS is applied for Layer 2 markings in an Ethernet environment. Which protocol must be configured on the Layer 2 switch port for CoS to work?

- A. MPLS
- B. IEEE 802.1W
- C. IEEE 802.1Q
- D. IEEE 802.1S

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 46

Which protocol is used in an in-band network and why?

- A. UDP, because it is connectionless
- B. SSH, because the username and password are encrypted
- C. Telnet, because the username and password are sent in clear
- D. MSDP, because it uses TCP as its transport protocol

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 47

Which option can be implemented to manipulate the election of PIM DR to force multicast traffic to a certain path?

- A. Assign a lower PIM DR priority to the PIM DR interface.
- B. Assign a lower IP address to the PIM DR interface.
- C. Assign a higher PIM DR priority to the PIM DR interface.
- D. Increase the cost on the PIM DR interface.

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 48

What network technology provides Layer 2 high availability between the access and distribution layers?

- A. HSRP
- B. MEC
- C. EIGRP
- D. GLBP

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 49

On which two types of links should routing protocol peerings be established according to best practice? (Choose two.)

- A. distribution links
- B. end user links
- C. transit links
- D. core links

Correct Answer: CD

Section: (none)

Explanation

Explanation/Reference:

QUESTION 50

A network engineer has implemented a looped triangle switch block design. What element must be included in the design?

- A. first hop redundancy protocol
- B. Layer 2 links between access switches
- C. single uplinks between access and distribution switches
- D. VLANs that span access switches
- E. Layer 3 links between distribution switches

Correct Answer: A

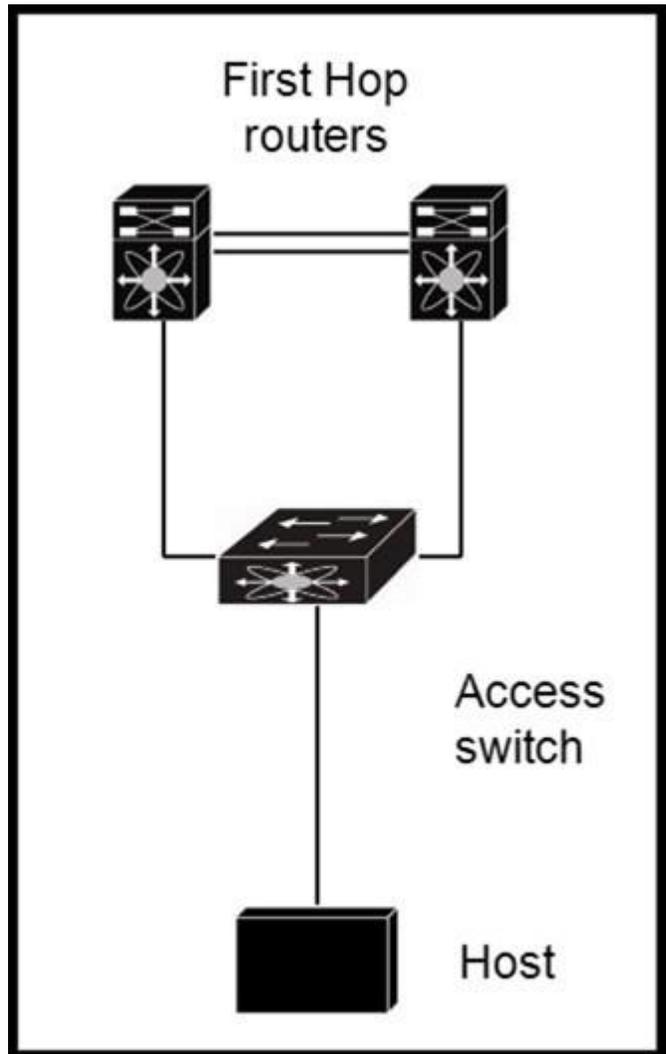
Section: (none)

Explanation

Explanation/Reference:

QUESTION 51

Refer to the exhibit. Which two features can enable high availability for first-hop Layer 3 redundancy? (Choose two.)



- A. VPC
- B. IGMP V2
- C. VRRP
- D. PIM
- E. HSRP

Correct Answer: CE

Section: (none)

Explanation

Explanation/Reference:

QUESTION 52

To which network layer should Cisco Express Forwarding be tuned to support load balancing and to make more informed forwarding decisions?

- A. Layer 1
- B. Layer 2
- C. Layer 3
- D. Layer 4
- E. Layer 5
- F. Layer 6
- G. Layer 7

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference: