Cisco

Exam 300-320

Designing Cisco Network Service Architectures

Version: 9.0

[Total Questions: 304]

Question No : 1

A network engineer is designing a network that must incorporate active-active redundancy to eliminate disruption when a link failure occurs between the core and distribution layer. What two technologies will allow this? (Choose two.)

A. Equal Cost Multi-Path (ECMP)
B. Rapid Spanning Tree Protocol Plus (RSTP+)
C. Hot Standby Routing Protocol (HSRP)
D. Rapid Spanning Tree Protocol (RSTP)
E. Multichassis EtherChannel (MEC)

Answer: C,E

Question No : 2

An engineer is designing an address plan. Which IPv6 prefix removes any consideration regarding the number of hosts per subnet?

A. /32
B. /48
C. /64
D. /96

Answer: C

Question No : 3

A network designer needs to explain the advantages of route summarization to a client. Which two options are advantages that should be included in the explanation? (Choose two.)

A. Increases security by advertising fake networks
B. Reduces routing table size
C. Advertises detailed routing tables
D. Utilizes the routers full CPU capacity

E. Reduces the upstream impact of a flapping interface

Answer: B,E

Question No : 4

In which OSI layer does IS-IS operate?

A. Layer 1
B. Layer 2
C. Layer 3
D. Layer 4

Answer: C

Question No : 5

Which protocol should be configured if a network administrator has the following requirements?

• Multiple physical gateways participating simultaneously in packet forwarding.

• All hosts in the VLAN configured with the same default gateway address.

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

Answer: D

Question No : 6

A company requires redundancy for its multihomed BGP external connections. What two features can be configured on the WAN routers to automate failover for both outbound and inbound traffic? (Choose two.)

A. AS path prepending
B. local preference
C. floating static route
D. HSRP
E. MED
F. weight

Answer: A,D

Question No : 7

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

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

Answer: A

Question No : 8

Which statement is the most accurate regarding IPsec VPN design for an Enterprise Campus environment?

A. VPN device IP addressing must align with the existing Campus addressing scheme.
B. The choice of a hub-and-spoke or meshed topology ultimately depends on the number of remotes.
C. Sizing and selection of the IPsec VPN headend devices is most affected by the throughput bandwidth requirements for the remote offices and home worker
D. Scaling considerations such as headend configuration, routing protocol choice, and topology have the broadest impact on the design.

Answer: D

Question No : 9

Which of the following is true concerning best design practices at the switched Access layer of the traditional layer2 Enterprise Campus Network?

A. Cisco NSF with SSO and redundant supervisors has the most impact on the campus in the Access layer
B. Provide host-level redundancy by connecting each end device to 2 separate Access switches
C. Offer default gateway redundancy by using dual connections from Access switches to redundant Distribution layer switches using a FHRP
D. Include a link between two Access switches to support summarization of routing information from the Access to the Distribution layer

Answer: A

Question No : 10

Which of these is a recommended practice with trunks?

A. use ISL encapsulation
B. use 802.1q encapsulation
C. set ISL to desirable and auto with encapsulation negotiate to support ILS protocol negotiation
D. use VTP server mode to support dynamic propagation of VLAN information across the network

Answer: B

Question No : 11

What Nexus technology avoids blocking links between the access layer and the aggregation layer in a data center network design?

A. FCoE
B. LACP
C. vPC
D. FEX

Answer: C

Question No : 12 DRAG DROP

Drag the characteristic on the left to the corresponding IPSec VPN solution on the right.

Use a single GRE interface for static meshing with each spoke with Keepalive support		Easy VPN
Supports Multicast and dynamic peer discovery with on-demand tunnel creation		GRE over IPSEC
Provide end-to-end security for voice, video, and data in a native (nontunneled) mode		DMVPN
Easy to maintain, with no support required for dynamic routing, multicast, or dynamic meshing		VTI
Use a virtual interface for static meshing		GET VPN

Answer:

Drag the characteristic on the left to the corresponding IPSec VPN solution on the right.

Use a single GRE interface for static meshing with each spoke with Keepalive support		Easy to maintain, with no support required for dynamic routing, multicast, or dynamic meshing
Supports Multicast and dynamic peer discovery with on-demand tunnel creation		Use a single GRE interface for static meshing with each spoke with Keepalive support
Provide end-to-end security for voice, video, and data in a native (nontunneled) mode		Supports Multicast and dynamic peer discovery with on-demand tunnel creation
Easy to maintain, with no support required for dynamic routing, multicast, or dynamic meshing		Use a virtual interface for static meshing
Use a virtual interface for static meshing		Provide end-to-end security for voice, video, and data in a native (nontunneled) mode

Question No : 13

Which of the following is a recommended practice of a data center core?

A. Server-to-server traffic always remains in the core layer.
B. The core infrastructure should be in Layer 3.
C. Core layer should run BGP along with an IGP because iBGP has a lower administrative distance than any IGP.
D. The Cisco Express Forwarding hashing algorithm is the default, based on the IP address and Layer 4 port.

Answer: B

Question No : 14

Which multicast implementation strategy provides load sharing and redundancy by configuring intradomain RPs as MSDP peers?

A. anycast RP
B. auto-RP
C. bootstrap router
D. static RP

Answer: A

Question No : 15

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

Answer: B

Question No : 16

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

Answer: B

Question No : 17

Which option is a common cause of congestion found in a campus network?

A. input serialization delay

B. output serialization delay

C. Rx-queue starvation

D. Tx-queue starvation

Answer: D

Question No : 18

Which three statements about Network Attached Storage are correct? (Choose three.)

A. Data is accessed using NFS or CIFS.

B. Data is accessed at the block level.

C. NAS is referred to as captive storage.

D. Storage devices can be shared between servers.

E. A NAS implementation is not as fast as a DAS implementation.

Answer: A,D,E

Question No : 19

Refer to the exhibit. Which option should be the default gateway for the PC1 that is shown?
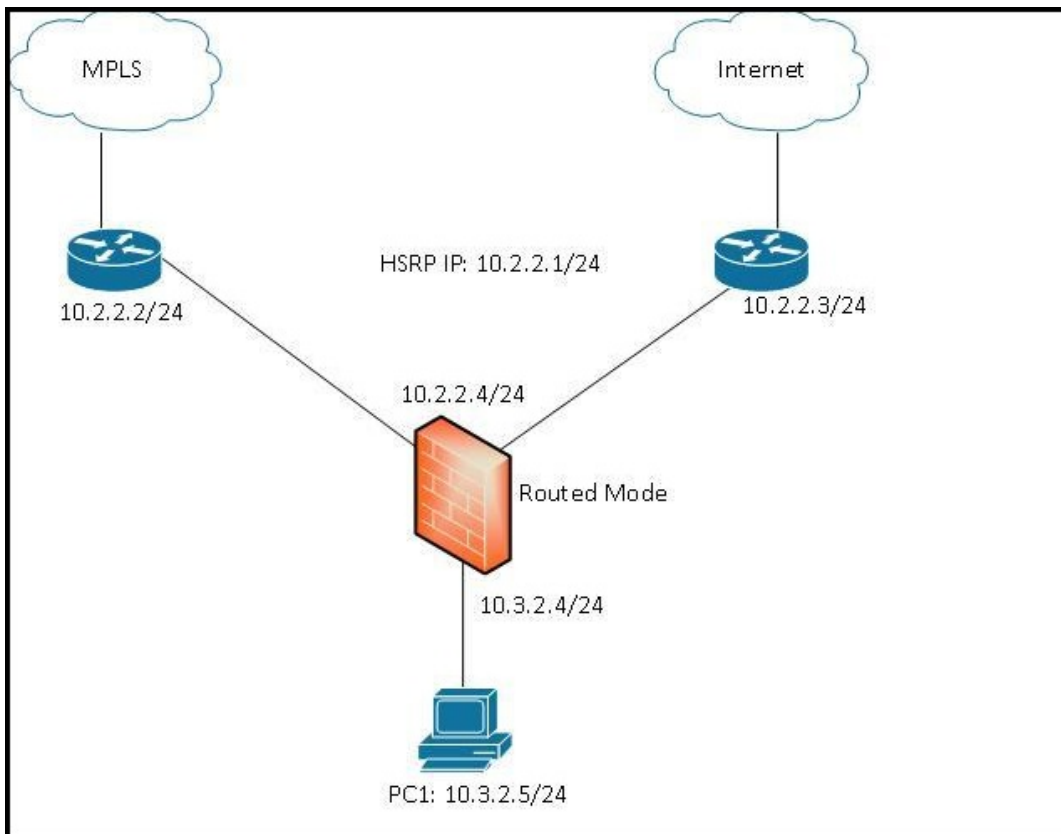
A. 10.3.2.4
B. 10.2.2.2
C. 10.2.2.1
D. 10.2.2.3

Answer: A

Question No : 20

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.

Answer: C

Question No : 21

There are 3 steps to confirm whether a range of IP addresses can be summarized. Which of the following is used in each of these 3 steps?

A. The first number in the contiguous block of addresses
B. The last number in the contiguous block of addresses
C. The size of the contiguous block of addresses
D. The subnet mask of the original network address

Answer: C

Question No : 22

In base e-Commerce module designs, where should firewall perimeters be placed?

A. core layer
B. Internet boundary
C. aggregation layer
D. aggregation and core layers
E. access and aggregation layers

Answer: A

Question No : 23

Which type of application traffic typically requires prioritization across networks and may use a DSCP value of 34 (AF41)?

A. voice
B. interactive video
C. call signaling
D. routing
E. streaming video
F. network management

Answer: B

Question No : 24