TestKing.640-864 .160 Questions

Number: 640-864
Passing Score: 800
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Testking

640-864

Designing for Cisco Internetwork Solutions Exam

- Fixed the Exhibit size and Drag drops/hot spot questions.
- Still valid , Hurry up guys study and pass this one.
- I have correct many of questions answers. If there is any more then update this vce and re-upload.
- Got this vce from my friend who passed with 98% , each and every stuff in it. I am sharing with you guys.
- Nicely written Questions with many corrections inside.

Sections

1. Describe the Methodology used to design a network
2. Describe network structure and modularity
3. Design Basic Enterprise Campus Networks
4. Design Enterprise Edge and Remote Network Modules
5. Design IP Addressing and Routing Protocols
6. Design network services

Exam A

QUESTION 1
You have a campus network that consists of only Cisco devices. You have been tasked to discover the device platforms, the IOS versions, and an IP address of each device to map the network. Which proprietary protocol will assist you with this task?

A. SNMP
B. TCP
C. CDP
D. ICMP
E. LLDP

Correct Answer: C
Section: Describe the Methodology used to design a network
Explanation

Explanation/Reference:

QUESTION 2
Which three technologies are recommended to be used for WAN connectivity in today's Enterprise Edge designs? (Choose three.)

A. DWDM
B. Metro Ethernet
C. Frame Relay
D. MPLS VPN
E. ISDN
F. DSL
G. Wireless

Correct Answer: ABD
Section: Describe the Methodology used to design a network
Explanation

Explanation/Reference:
Explanation:
There is some discussion about whether ISDN not DWDM should be the answer but it does say TODAYS network

QUESTION 3

When selecting which hardware switches to use throughout an enterprise campus switched network, which consideration is not relevant?

A. whether data link layer switching based upon the MAC address is required
B. the number of shared media segments
C. which infrastructure service capabilities are required
D. whether to support Layer 3 services at the network edge

Correct Answer: B
Section: Design Basic Enterprise Campus Networks
Explanation

Explanation/Reference:
Explanation: Shared media are not used in modern networks; all links are operating full-duplex Link: http://www.cisco.com/en/US/docs/solutions/Enterprise/Campus/campover.html

QUESTION 4
Which two of these practices are considered to be best practices when designing the access layer for the enterprise campus? (Choose two.)

A. Implement all of the services (QoS, security, STP, and so on) in the access layer, offloading the work from the distribution and core layers.
B. Always use a Spanning Tree Protocol; preferred is Rapid PVST+.
C. Use automatic VLAN pruning to prune unused VLANs from trunked interfaces to avoid broadcast propagation.
D. Avoid wasted processing by disabling STP where loops are not possible.
E. Use VTP transparent mode to decrease the potential for operational error.

Correct Answer: BE
Section: Design Basic Enterprise Campus Networks
Explanation

Explanation/Reference:
Explanation:
When designing the building access layer, you must consider the number of users or ports required to size up the LAN switch. Connectivity speed for each host should also be considered. Hosts might be connected using various technologies such as Fast Ethernet, Gigabit Ethernet, or port channels. The planned VLANs enter into the design.

Performance in the access layer is also important. Redundancy and QoS features should be considered.
The following are recommended best practices for the building access layer:

· Limit VLANs to a single closet when possible to provide the most deterministic and highly available topology.
· Use Rapid Per-VLAN Spanning Tree Plus (RPVST+) if STP is required. It provides the faster convergence than traditional 802.1d default timers.

· Set trunks to ON and ON with no-negotiate.
· Manually prune unused VLANs to avoid broadcast propagation (commonly done on the distribution switch).
· Use VLAN Trunking Protocol (VTP) Transparent mode, because there is little need for a common VLAN database in hierarchical networks.
· Disable trunking on host ports, because it is not necessary. Doing so provides more security and speeds up PortFast.
· Consider implementing routing in the access layer to provide fast convergence and Layer 3 load balancing.
· Use the switchport host commands on server and end-user ports to enable PortFast and disable channeling on these ports.
· Use Cisco STP Toolkit, which provides
· PortFast: Bypass listening-learning phase for access ports · Loop GuarD. Prevents alternate or root port from becoming designated in absence of bridge protocol data units (BPDU)
· Root GuarD. Prevents external switches from becoming root · BPDU GuarD. Disables PortFast-enabled port if a BPDU is received Cisco Press CCDA 640-864 Official Certification Guide Fourth Edition, Chapter 3, Page 85

QUESTION 5
The enterprise campus core layer has requirements that are unique from the distribution and access layers. Which of the following is true about the core layer?

A. The core layer provides convergence using Layer 2 and Layer 3 services and features.
B. The core layer provides high availability to support the distribution layer connections to the enterprise edge.
C. The campus core layer is optional.
D. The core layer requires high performance to manage the traffic policing across the backbone.

Correct Answer: C
Section: Design Basic Enterprise Campus Networks
Explanation

Explanation/Reference:

QUESTION 6
Which of these statements is true concerning the data center access layer design?

A. The access layer in the data center is typically built at Layer 3, which allows for better sharing of services across multiple servers.
B. With Layer 2 access, the default gateway for the servers can be configured at the access or aggregation layer.

C. A dual-homing NIC requires a VLAN or trunk between the two access switches to support the dual IP addresses on the two server links to two separate switches.
D. The access layer is normally not required, as dual homing is standard from the servers to the aggregation layer.

Correct Answer: B
Section: Design Basic Enterprise Campus Networks
Explanation

Explanation/Reference:
Explanation: With Layer 2 / 3, capabilities in-built access layer switches can have data & voice VLANs with interfaces; this is helpful in improving routing convergence.
Link:
http://www.cisco.com/application/pdf/en/us/guest/netsol/ns432/c649/ccmigration_09186a00805f ccbf.pdf

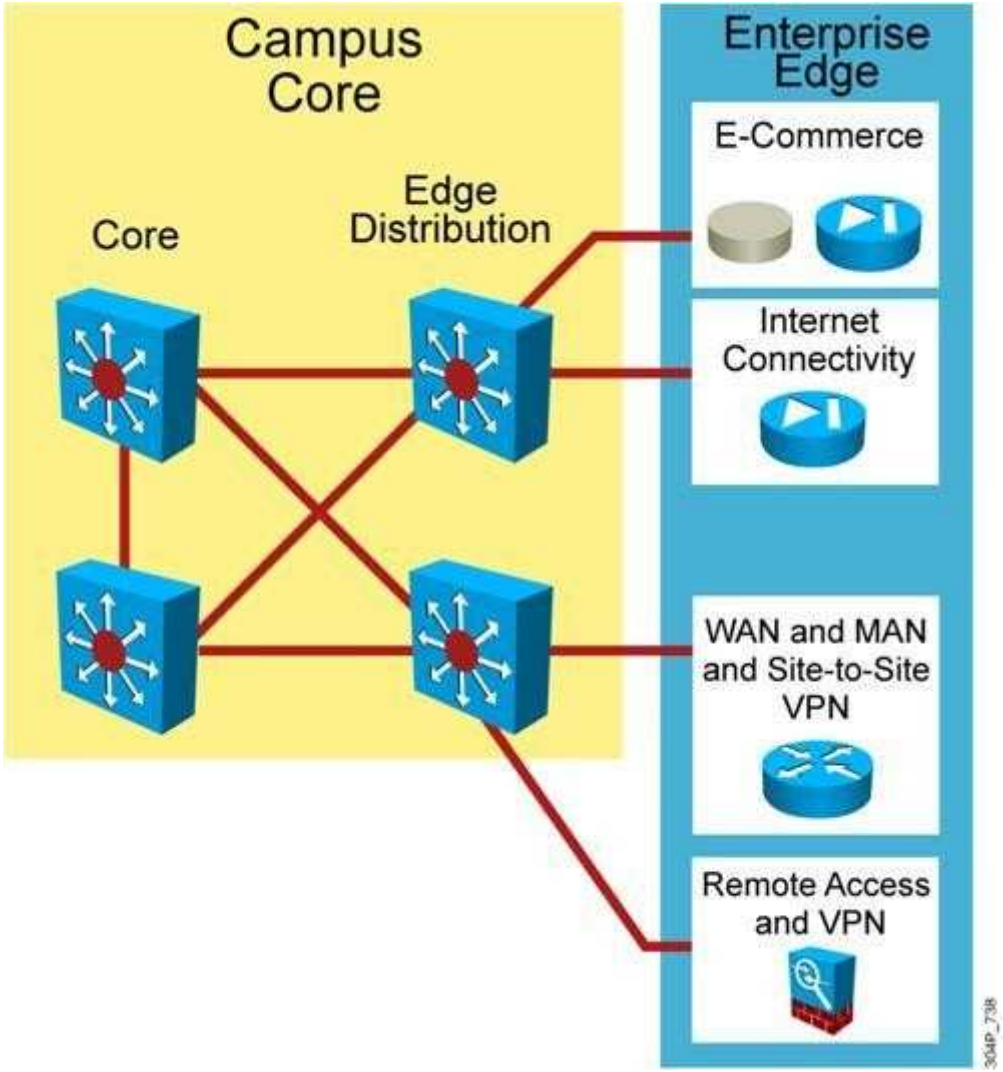
QUESTION 7
Which one of these statements is true concerning the data center distribution (aggregation) layer design?

A. With Layer 3 at the aggregation layer, the physical loops in the topology must still be managed by STP.
B. The boundary between Layer 2 and Layer 3 must reside in the multilayer switches, independent of any other devices such as firewalls or content switching devices.
C. A mix of both Layer 2 and Layer 3 access is sometimes the most optimal.
D. In a small data center, the aggregation layer can connect directly to the campus core, exchanging IP routes and MAC address tables.

Correct Answer: C
Section: Design Basic Enterprise Campus Networks
Explanation

Explanation/Reference:

QUESTION 8
Refer to the exhibit.



Which statement is true concerning enterprise edge distribution switches?

A. The speed of switching is the most critical feature.
B. Security requirements are offloaded to the other modules for performance reasons.

C. Edge distribution switches are only required when using a collapsed core backbone.
D. Enterprise edge distribution switches are similar to the building distribution layer.

Correct Answer: D
Section: Design Basic Enterprise Campus Networks
Explanation

Explanation/Reference:

QUESTION 9
An enterprise campus module is typically made up of four submodules, as described by the Cisco Enterprise Architecture Model. Which two submodules are part of this module?

A. DMZ
B. enterprise branch
C. building distribution
D. server farm/data center
E. MAN

Correct Answer: CD
Section: Design Basic Enterprise Campus Networks
Explanation

Explanation/Reference:

QUESTION 10
Which is a factor in enterprise campus design decisions?

A. network application characteristics
B. routing protocol characteristics
C. switching latency characteristics
D. packet filtering characteristics

Correct Answer: A
Section: Design Basic Enterprise Campus Networks
Explanation

Explanation/Reference:

QUESTION 11
Which network virtualization technology involves creating virtual routers with its own individual routing tables on a physical router?

A. VSS
B. vPC
C. VRF
D. VLAN

Correct Answer: C
Section: Design Basic Enterprise Campus Networks
Explanation

Explanation/Reference:

QUESTION 12
Which protocol is the recommended first-hop redundancy protocol for an existing infrastructure that contains multiple vendors and platforms?

A. HSRP
B. VRRP
C. IGRP
D. OSPF

Correct Answer: B
Section: Design Basic Enterprise Campus Networks
Explanation

Explanation/Reference:

QUESTION 13
Which IGP provides the fastest convergence by default?

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

Correct Answer: A
Section: Design Basic Enterprise Campus Networks
Explanation

Explanation/Reference:

QUESTION 14
Which three are valid Layer 2 access designs? (Choose three.)

A. Looped Triangle
B. Looped Square
C. Looped U
D. Loop-Free Triangle
E. Loop-Free Square
F. Loop-Free U

Correct Answer: ABF
Section: Design Basic Enterprise Campus Networks
Explanation

Explanation/Reference:

QUESTION 15
Which Gigabit Ethernet media type provides the longest reach without a repeater?

A. 1000Base-CX

B. 1000Base-LX
C. 1000Base-SX
D. 1000Base-T

Correct Answer: B
Section: Design Basic Enterprise Campus Networks
Explanation

Explanation/Reference:
DRAG DROP

QUESTION 16
Which three are associated with the distribution layer within the campus design? (Choose three.)

A. access layer aggregation
B. route summarization
C. network trust boundary
D. next-hop redundancy
E. layer 2 switching
F. port security
G. broadcast suppression

Correct Answer: ABD
Section: Design Basic Enterprise Campus Networks
Explanation

Explanation/Reference:

QUESTION 17
When designing using the Cisco Enterprise Architecture, in which Enterprise Campus layer does the Remote Access and VPN module establish its connection?

A. Building Access
B. Campus Core
C. Enterprise Branch
D. Enterprise Data Center

Correct Answer: B

Section: Design Enterprise Edge and Remote Network Modules
Explanation

Explanation/Reference:

QUESTION 18
Which three describe challenges that are faced when deploying an environment for teleworkers? (Choose three.)

A. supporting a mix of technically knowledgeable and nontechnical users
B. simplifying router installation and configuration
C. verifying available power at employee's house for necessary equipment
D. avoiding situations where employees might use nonstandard hardware or configurations
E. reducing daily commuting time to main office location
F. providing access to FTP servers located in main office location
G. implementing leased line connectivity between main office and employee's home location

Correct Answer: ABD
Section: Design Enterprise Edge and Remote Network Modules
Explanation

Explanation/Reference:

QUESTION 19
You need to connect to a remote branch office via an Internet connection. The remote office does not use Cisco equipment. This connection must be secure and must support OSPF. Which of the following can be used to transport data to the branch office?

A. GRE over IPsec
B. IPsec
C. GRE
D. IPsec VTI

Correct Answer: A
Section: Design Enterprise Edge and Remote Network Modules
Explanation

Explanation/Reference:

QUESTION 20
Which two are characteristics of a Lightweight Access Point? (Choose two.)

A. managed via a central wireless LAN controller
B. code upgrade performed via a TFTP server
C. CAPWAP tunnels
D. managed directly via CLI or web interface
E. facilitates the creation of its own WLANs and port mappings

Correct Answer: AC
Section: Design Enterprise Edge and Remote Network Modules
Explanation

Explanation/Reference:

QUESTION 21
Which one of these statements describes why, from a design perspective, a managed VPN approach for enterprise teleworkers is most effective?

A. A managed VPN solution uses a cost-effective, on-demand VPN tunnel back to the enterprise.
B. This solution supports all teleworkers who do not require voice or video.
C. This architecture provides centralized management where the enterprise can apply security policies and push configurations.
D. It provides complete flexibility for remote access through a wireless hotspot or a guest network at a hotel, in addition to a home office.

Correct Answer: C
Section: Design Enterprise Edge and Remote Network Modules
Explanation

Explanation/Reference:

QUESTION 22
What are three key areas that need to be considered when designing a remote data center? (Choose three.)

A. power diversity
B. active directory services
C. Cisco IOS versions

D. data storage
E. applications
F. user access
G. packet routing

Correct Answer: ADE
Section: Design Enterprise Edge and Remote Network Modules
Explanation

Explanation/Reference:

QUESTION 23
If a teleworker is required to access the branch office via a secure IPSEC VPN connection, which technology is recommended to provide the underlying transport?

A. ISDN
B. Metro Ethernet
C. Frame Relay
D. ADSL
E. ATM

Correct Answer: D
Section: Design Enterprise Edge and Remote Network Modules
Explanation

Explanation/Reference:

QUESTION 24
Which model of ISR is utilized for the teleworker design profile?

A. Cisco 1900 Series
B. Cisco 1800 Series
C. Cisco 800 Series
D. Cisco 500 Series

Correct Answer: C
Section: Design Enterprise Edge and Remote Network Modules

Explanation

Explanation/Reference:

QUESTION 25
When designing a WAN backup for voice and video applications, what three types of connections should be used? (Choose three.)

A. Private WAN
B. internet
C. ISDN
D. MPLS
E. dial-up
F. ATM
G. DSL

Correct Answer: ACD
Section: Design Enterprise Edge and Remote Network Modules
Explanation

Explanation/Reference:

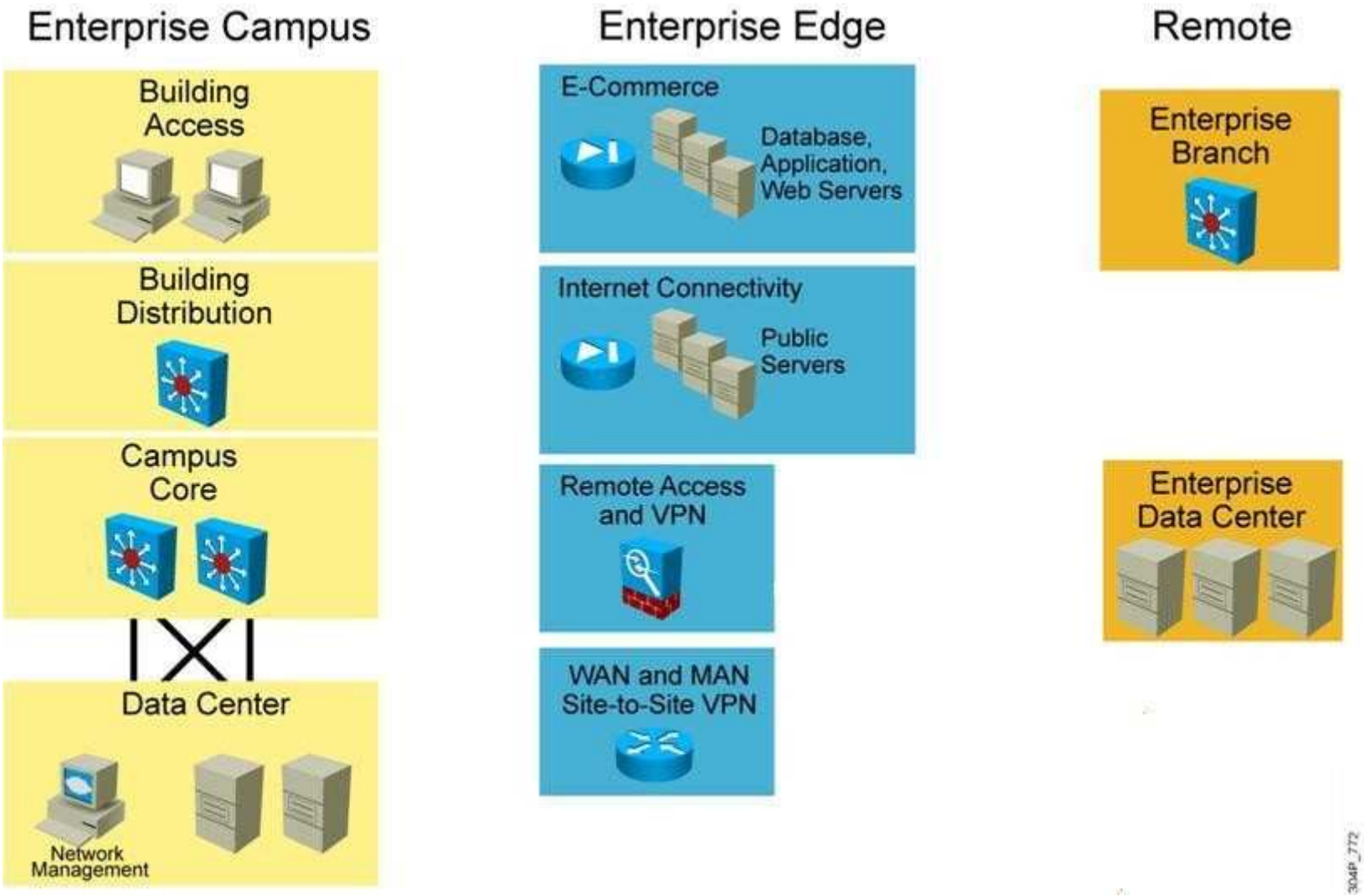
QUESTION 26
Which three options represents the components of the Teleworker Solution? (Choose three.)

A. Cisco Unified IP Phone
B. Cisco 880 Series Router
C. Aironet Office Extend Access Point
D. Catalyst 3560 Series Switch
E. Cisco 2900 Series Router
F. MPLS Layer 3 VPN
G. Leased lines

Correct Answer: ABE
Section: Design Enterprise Edge and Remote Network Modules
Explanation

Explanation/Reference:

QUESTION 27
Refer to the exhibit.



Which three modules would typically utilize public IPv4 addressing? (Choose three.)

A. Access
B. Distribution
C. Core
D. Data Center
E. E-Commerce
F. Internet Connectivity
G. Remote Access/VPN
H. WAN/MAN
I. Branch
J. Branch Data Center

Correct Answer: EFG
Section: Design IP Addressing and Routing Protocols
Explanation

Explanation/Reference:

QUESTION 28
With respect to IPv6 addressing, from a design perspective, which of these statements is it important to keep in mind?

A. IPv6 addressing provides convenience of anycast addressing without any configuration requirements.
B. IPv6 does not use multicast addressing.
C. An IPv6 router will not forward packets from one link to other links if the packet has either a link-local source or a link-local destination address.
D. Dynamic address assignment requires DHCPv6.

Correct Answer: C
Section: Design IP Addressing and Routing Protocols
Explanation

Explanation/Reference:

QUESTION 29
Which consideration is the most important for the network designer when considering IP routing?

A. convergence
B. scalability
C. on-demand routing
D. redistribution

Correct Answer: A
Section: Design IP Addressing and Routing Protocols
Explanation

Explanation/Reference:

QUESTION 30
Your supervisor has asked you to deploy a routing protocol within the lab environment that will allow for unequal cost multipath routing. Which should you choose?

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

Correct Answer: A
Section: Design IP Addressing and Routing Protocols
Explanation

Explanation/Reference:

QUESTION 31
Which two methods are used to reduce the mesh links required between iBGP peers in the same AS? (Choose two.)

A. community
B. router reflectors
C. local preference
D. confederations
E. atomic aggregate
F. MED

Correct Answer: BD
Section: Design IP Addressing and Routing Protocols
Explanation

Explanation/Reference:

QUESTION 32
A company wants to use private IP addresses for all its internal hosts. Which technology can the company use to provide access to the Internet using a single public IP address?

A. static NAT
B. source routing
C. ACL
D. PAT

Correct Answer: D
Section: Design IP Addressing and Routing Protocols
Explanation

Explanation/Reference:

QUESTION 33
At which layer of the network is route summarization recommended?

A. data link layer
B. core layer
C. distribution layer
D. access layer

Correct Answer: C
Section: Design IP Addressing and Routing Protocols
Explanation

Explanation/Reference:

QUESTION 34
Which two link state routing protocols support IPv6 routing? (Choose two.)

A. BGP4+
B. OSPF
C. RIPng
D. EIGRP
E. IS-IS

Correct Answer: BE
Section: Design IP Addressing and Routing Protocols
Explanation

Explanation/Reference:

QUESTION 35
Which is the North American RIR for IPv4 addresses?

A. RIPE
B. ARIN
C. IANA
D. IEEE
E. APNIC

Correct Answer: B
Section: Design IP Addressing and Routing Protocols
Explanation

Explanation/Reference:

QUESTION 36
What is the most compact representation of the following IPv6 address?

2001:db8:0000:0000:cafe:0000:0000:1234

A. 2001:db8::cafe::1234
B. 2001:db8::cafe:0000:0000:1234
C. 2001:db8:0:0:cafe::1234
D. 2001:db8::cafe:0:1234

Correct Answer: C
Section: Design IP Addressing and Routing Protocols
Explanation

Explanation/Reference:

QUESTION 37
Which type of area should you use in an enterprise OSPF deployment if you want to prevent propagation of type 5 LSAs but still allow the redistribution of external routes?

A. stub
B. totally stubby
C. backbone
D. NSSA
E. virtual link

Correct Answer: D
Section: Design IP Addressing and Routing Protocols
Explanation

Explanation/Reference:

QUESTION 38
Which is usually used to connect to an upstream ISP?

A. EIGRP
B. OSPF

C. BGP
D. IS-IS
E. RIPv2

Correct Answer: C
Section: Design IP Addressing and Routing Protocols
Explanation

Explanation/Reference:

QUESTION 39
You are designing a network that requires a routing protocol that will use minimal network bandwidth. Which would satisfy this requirement?

A. RIPv2
B. RIPng
C. OSPF
D. ARP
E. EGP

Correct Answer: C
Section: Design IP Addressing and Routing Protocols
Explanation

Explanation/Reference:

QUESTION 40
Which two statements best describe an OSPF deployment? (Choose two.)

A. ABR provides automatic classful network boundary summarization.
B. ABR requires manual configuration for classful network summarization.
C. External routes are propagated into the autonomous system from stub areas via ASBR.
D. External routes are propagated into the autonomous system from regular areas or NSSA via ASBR.
E. External routes are propagated into the autonomous system from regular areas or NSSA via ABR.

Correct Answer: BD
Section: Design IP Addressing and Routing Protocols

Explanation

Explanation/Reference:

QUESTION 41
Which three items pertain to EIGRP? (Choose three.)

A. Can use multiple unequal paths.
B. Routes are redistributed as type 2 by default.
C. ASN and K values must match to form neighbors.
D. Uses multicast address 224.0.0.9 for updates.
E. Exchanges full routing table every 30 seconds.
F. Summary routes have AD of 90.
G. External routes have AD of 170.

Correct Answer: ACG
Section: Design IP Addressing and Routing Protocols
Explanation

Explanation/Reference:

QUESTION 42
A hierarchical design of the EIGRP domain facilitates which two of the following? (Choose two.)

A. route summarization
B. faster convergence
C. unequal cost load balancing
D. redistribution
E. virtual links

Correct Answer: AB
Section: Design IP Addressing and Routing Protocols
Explanation

Explanation/Reference:

QUESTION 43
Which three protocols support VLSM? (Choose three.)

A. RIPv2
B. RIPv1
C. EIGRP
D. OSPF
E. IGRP

Correct Answer: ACD
Section: Design IP Addressing and Routing Protocols
Explanation

Explanation/Reference:

QUESTION 44
Which statement should the designer keep in mind when considering the advanced routing features?

A. One-way route redistribution avoids the requirement for static or default routes.
B. Redistribution, summarization, and filtering are most often applied between the campus core and enterprise edge.
C. Filtering only occurs on the routing domain boundary using redistribution.
D. Summarize routes at the core toward the distribution layer.
E. The hierarchical flexibility of IPv6 addressing avoids the requirement for routing traffic reduction using aggregation.

Correct Answer: B
Section: Design IP Addressing and Routing Protocols
Explanation

Explanation/Reference:

QUESTION 45
When designing an EIGRP network, which two things should you take into consideration? (Choose two.)

A. ASN and K values must match.
B. The neighbor command can be used to enable unicast communication.
C. The neighbor diameter cannot exceed a 15-hops limit.

D. NSSA areas can be used to redistribute external routes.
E. Neighbor relationship can be established with non-Cisco routers.

Correct Answer: AB
Section: Design IP Addressing and Routing Protocols
Explanation

Explanation/Reference:

QUESTION 46
Which statement describes a unique advantage of EIGRP?

A. It enables unequal-cost load balancing.
B. It enables equal-cost load balancing.
C. It enables source-based load balancing.
D. It enables port-based load balancing.

Correct Answer: A
Section: Design IP Addressing and Routing Protocols
Explanation

Explanation/Reference:

QUESTION 47
ACME corporation is implementing dynamic routing on the LAN at its corporate headquarters. The interior gateway protocol that they select must support these requirements: multivendor environment, efficient subnetting, high scalability, and fast convergence. Which interior gateway protocol should they implement?

A. EIGRP
B. OSPF
C. RIPng
D. BGP

Correct Answer: B
Section: Design IP Addressing and Routing Protocols
Explanation

Explanation/Reference:

QUESTION 48
Which routing protocol classification should you use when full topology information is needed?

A. link-state
B. distance vector
C. stateful
D. path vector

Correct Answer: A
Section: Design IP Addressing and Routing Protocols
Explanation

Explanation/Reference:

QUESTION 49
When you are designing a large IPv6 multivendor network, which IGP does Cisco recommend that you use?

A. OSPFv3
B. EIGRP for IPv6
C. BGP
D. RIPng

Correct Answer: A
Section: Design IP Addressing and Routing Protocols
Explanation

Explanation/Reference:

QUESTION 50
When designing the infrastructure protection portion for the enterprise edge, which solution would be the most appropriate solution to consider?

A. 802.1X
B. ACLs in the core layer
C. Cisco Security MARS
D. AAA

Correct Answer: D
Section: Design network services
Explanation

Explanation/Reference:

QUESTION 51
Which two design approaches provide management of enterprise network devices? (Choose two.)

A. in-band
B. out-of-line
C. out-of-band
D. in-line

Correct Answer: AC
Section: Design network services
Explanation

Explanation/Reference:

QUESTION 52
You are asked to design a new branch office that will need to support 25 users. These users will be using an ISP connection and will need to connect to the main office for network services. Which two Cisco devices are the most appropriate to fulfill all of these requirements? (Choose two.)

A. Cisco IPS
B. Cisco ISR G2
C. Cisco ASA
D. Cisco 2960
E. Cisco CRS-1
F. Cisco ACS

Correct Answer: BC
Section: Design network services
Explanation

Explanation/Reference:

QUESTION 53
Your supervisor wants you to recommend a management protocol that will allow you to track overall bandwidth utilization, utilization by traffic type, and utilization by source and destination.
Which is ideally suited for this function?

A. MRTG
B. NetFlow
C. RRD
D. SNMP

Correct Answer: B
Section: Design network services
Explanation

Explanation/Reference:

QUESTION 54
Which two devices would you place in your DMZ to ensure enterprise edge security? (Choose two.)

A. IPS
B. NAC
C. ASA
D. ACS
E. WCS

Correct Answer: AC
Section: Design network services
Explanation

Explanation/Reference:

QUESTION 55
Which three are security services offered through Cisco Router Security? (Choose three.)

A. Trust and Identity

B. Integrated Threat Control
C. Unified Wireless Network Security Solution
D. Secure Connectivity
E. Voice-Messaging Security
F. Endpoint Security
G. Virtual Security Gateway

Correct Answer: ABD
Section: Design network services
Explanation

Explanation/Reference:
answer is proper.

QUESTION 56
Which voice codec should you use in order to provide toll quality calls?

A. G.711
B. G.718
C. G.722
D. G.729

Correct Answer: A
Section: Design network services
Explanation

Explanation/Reference:

QUESTION 57
Which three are features of LWAPP? (Choose three.)

A. firmware synchronization
B. local management of APs
C. configuration changes manually synced
D. encryption of control channel
E. configuration data only on the WLC
F. wireless control free operation

G. replaces 802.1x for authentication in wireless connections

Correct Answer: ADE
Section: Design network services
Explanation

Explanation/Reference:

QUESTION 58
Which Cisco device has the sole function at looking at threat detection and mitigation at the Enterprise edge?

A. Cisco IOS router
B. Cisco ASA
C. Cisco Catalyst FWSM
D. Cisco IPS

Correct Answer: D
Section: Design network services
Explanation

Explanation/Reference:

QUESTION 59
Which three of these are layers in the Cisco SONA Architecture? (Choose three.)

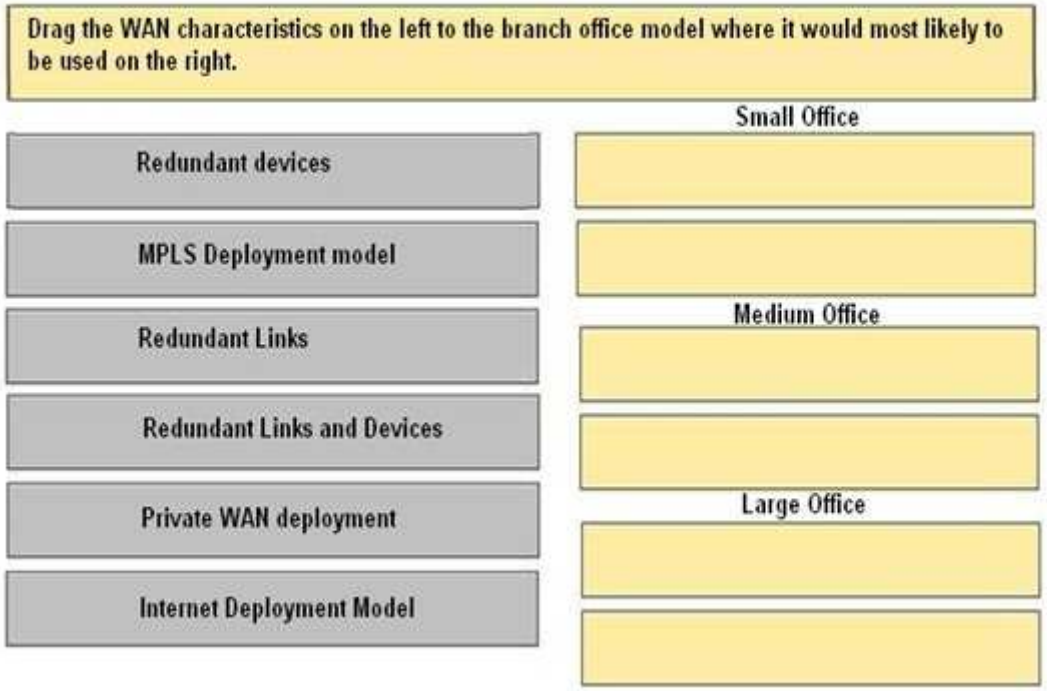
A. Applications
B. Physical Infrastructure
C. Presentation
D. Integrated Transport
E. Core Common Services
F. Networked Infrastructure

Correct Answer: ABE
Section: Design network services
Explanation

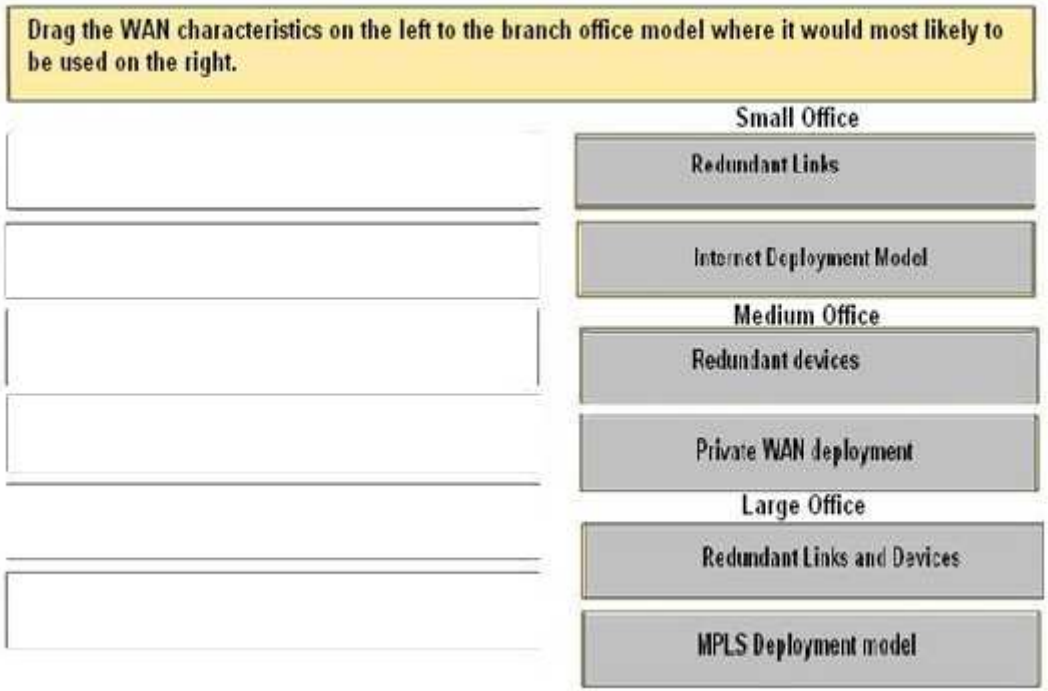
Explanation/Reference:

QUESTION 60

Select and Place:



Correct Answer:



Section: Describe the Methodology used to design a network
Explanation

Explanation/Reference:
Small Branch Design
The small branch design is recommended for branch offices that do not require hardware redundancy and that have a small user base supporting up to 50 users. This profile consists of an access router providing WAN services and connections for the LAN services.

The Layer 3 WAN services are based on the WAN and Internet deployment model. A T1 is used for the primary link, and an ADSL secondary link is used for backup. Other network fundamentals are supported, such as EIGRP, floating static routes, and QoS for bandwidth protection.

Medium Branch Design
The medium branch design is recommended for branch offices of 50 to 100 users, which is similar to the small branch but with an additional access router in the WAN edge (slightly larger) allowing for redundancy services.

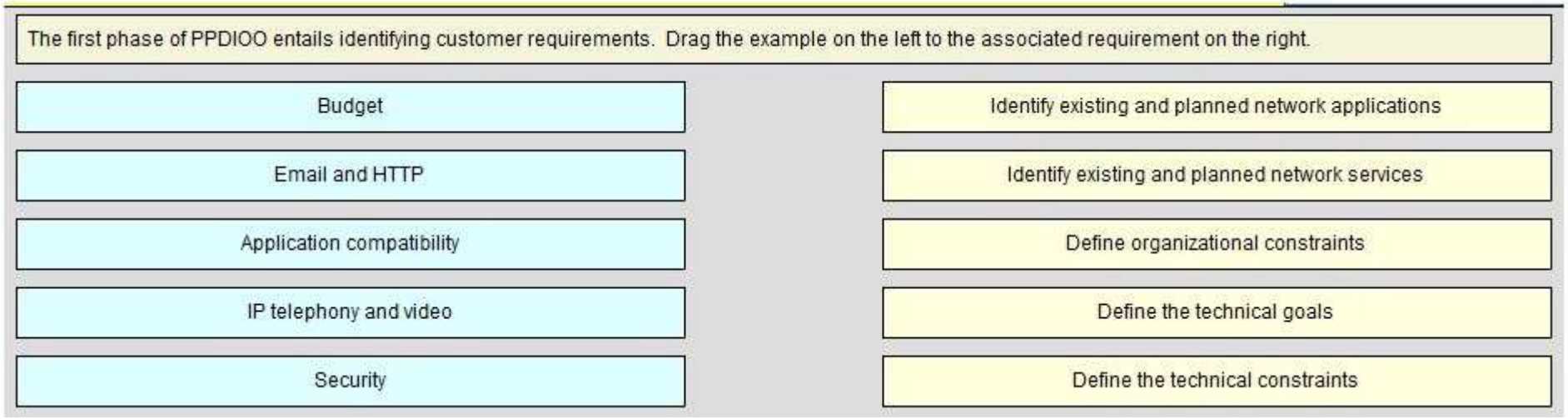
Large Branch Design
The large branch design is the largest of the branch profiles, supporting between 100 and 1000 users. This design profile is similar to the medium branch design in

that it also provides dual access routers in the WAN edge. In addition, dual Adaptive Security Appliances (ASA) are used for stateful firewall filtering, and dual distribution switches provide the multilayer switching component. The WAN services use an MPLS deployment model with dual WAN links into the WAN cloud.

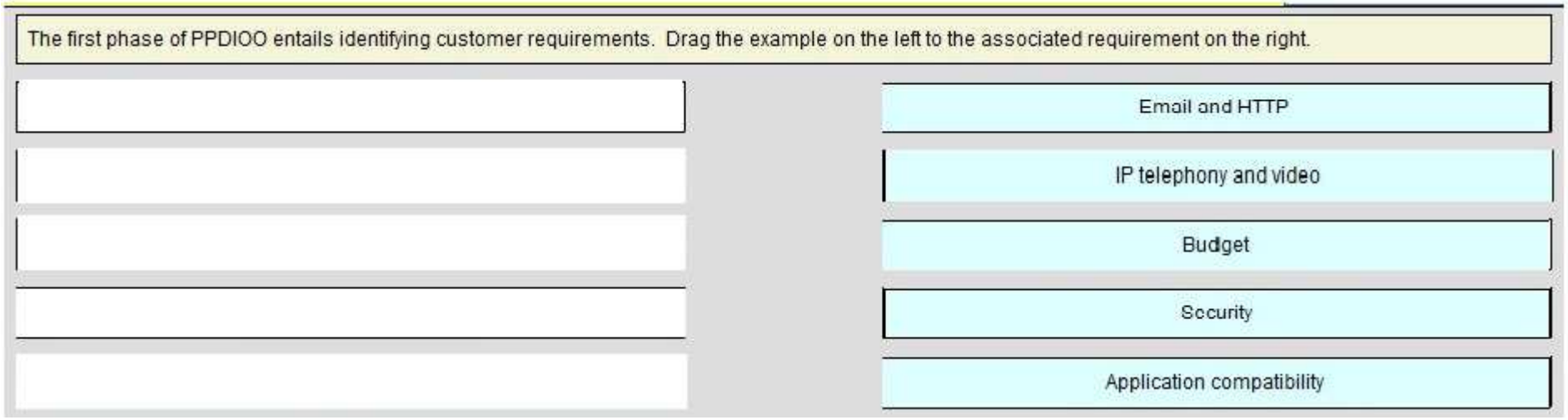
Cisco Press CCDA 640-864 Official Certification Guide Fourth Edition, Chapter 7

QUESTION 61

Select and Place:



Correct Answer:

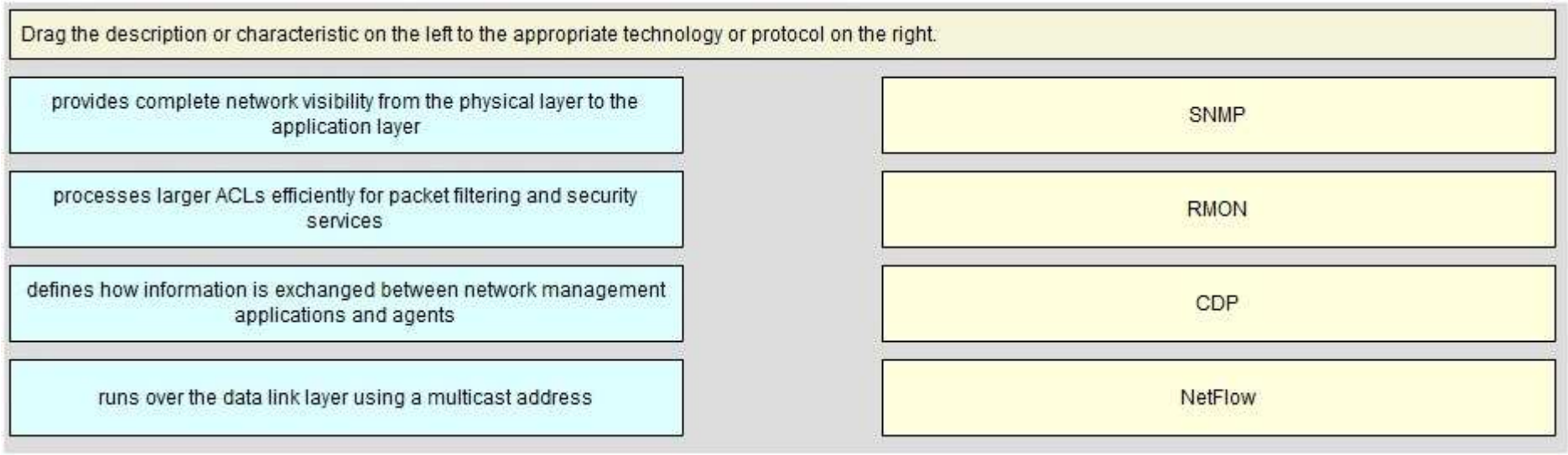


Section: Describe the Methodology used to design a network
Explanation

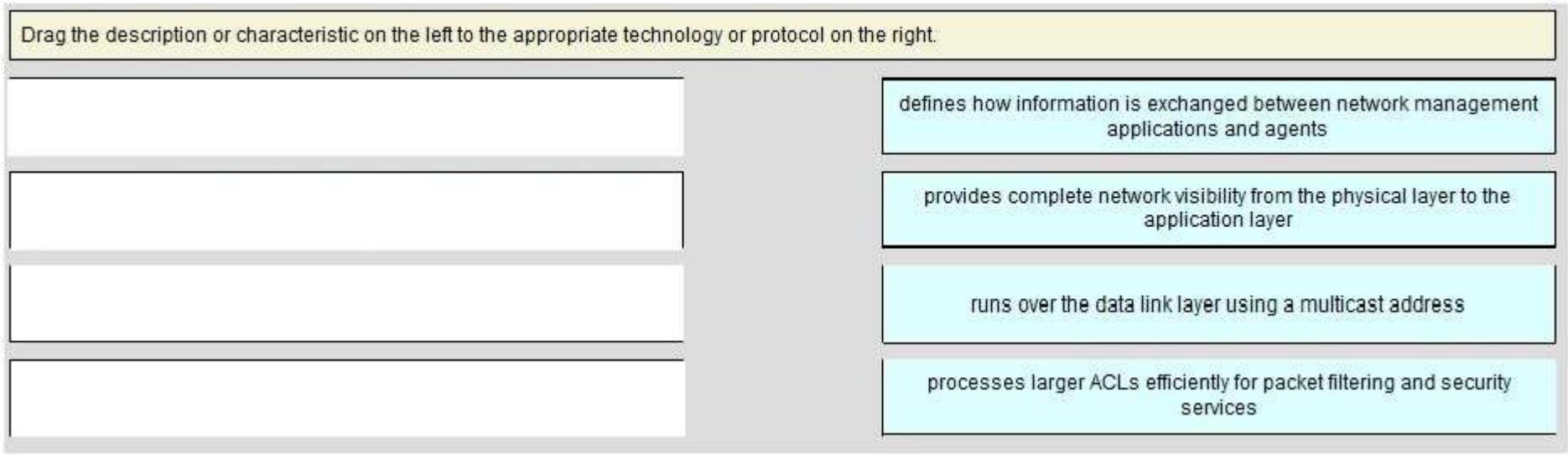
Explanation/Reference:

QUESTION 62

Select and Place:



Correct Answer:

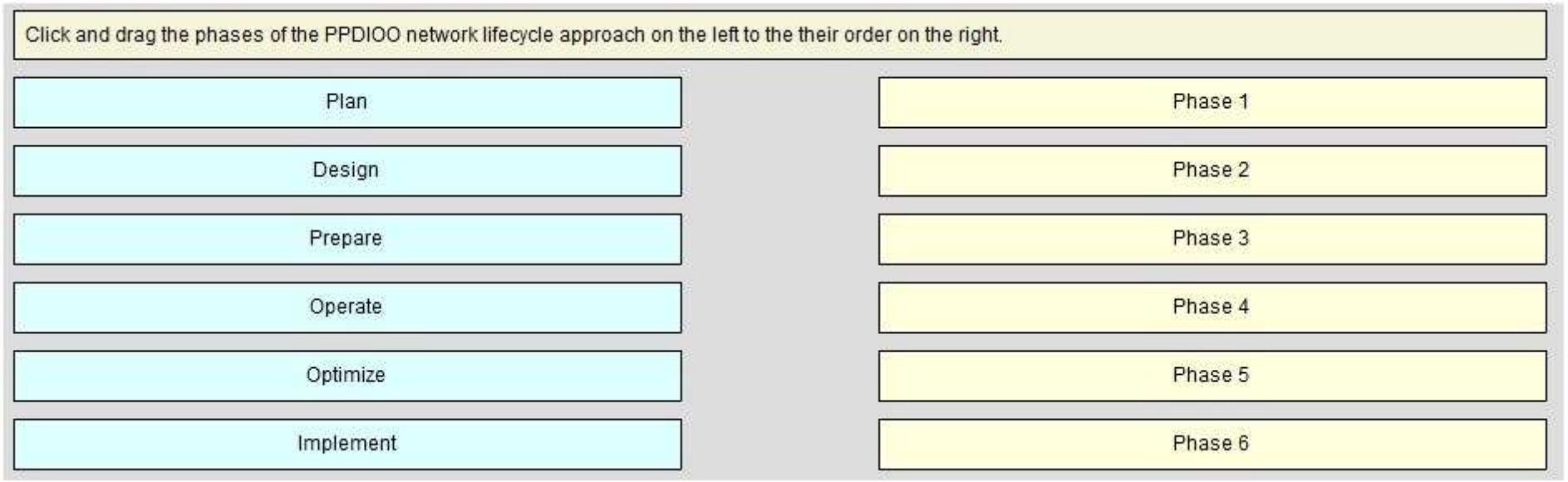


Section: Describe the Methodology used to design a network
Explanation

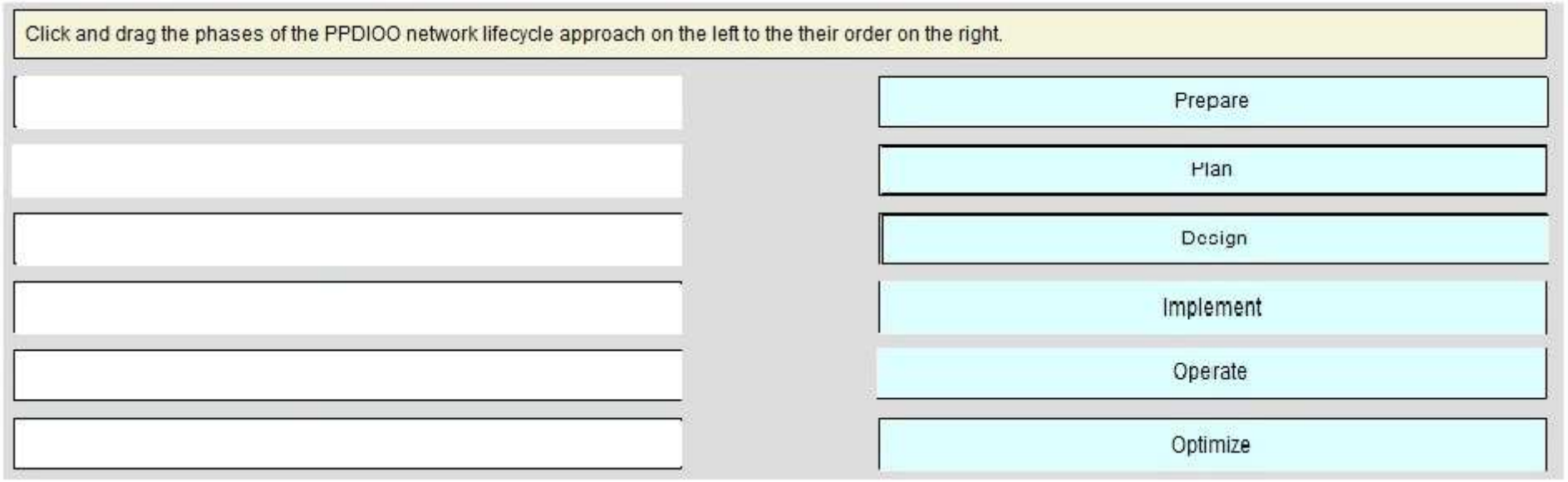
Explanation/Reference:

QUESTION 63

Select and Place:



Correct Answer:

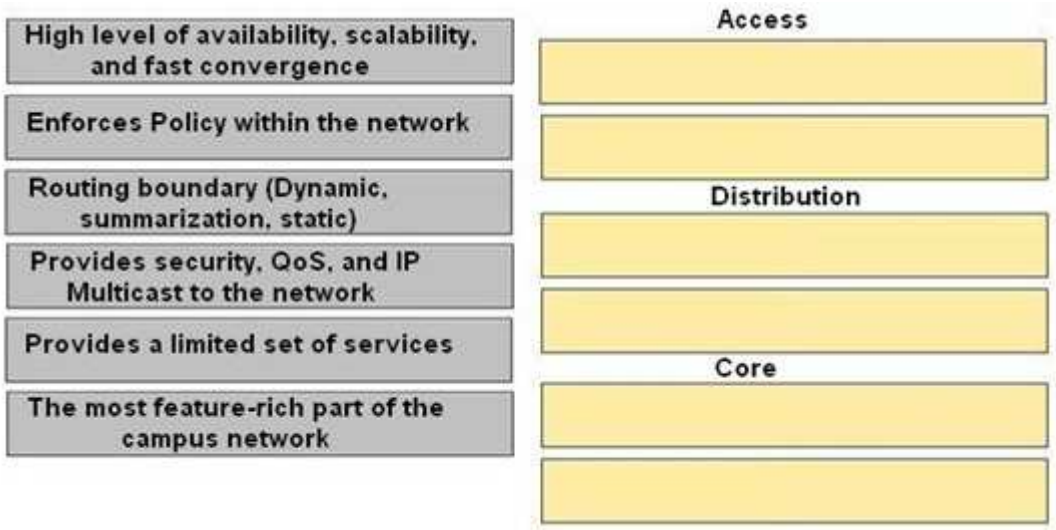


Section: Describe the Methodology used to design a network
Explanation

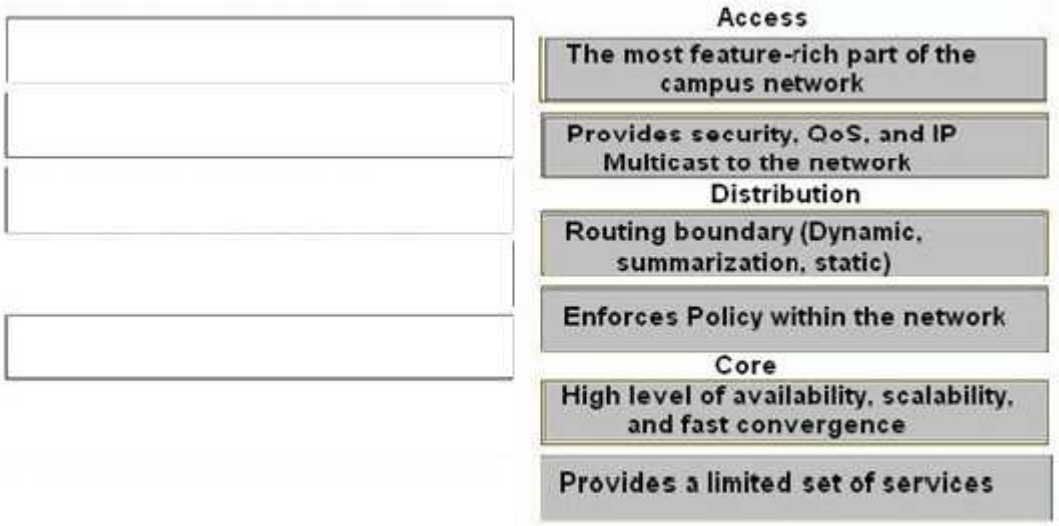
Explanation/Reference:

QUESTION 64
Drag the characteristics of the traditional campus network on the left to the most appropriate hierarchical network layer on the right.

Select and Place:



Correct Answer:



Section: Describe network structure and modularity
Explanation

Explanation/Reference:
Access

The most feature-rich part of the campus network
Provides security, QoS, and IP Multicast to the network
Distribution
Routing boundary (Dynamic, summarization, static)
Enforces Policy within the network
Core
High level of availability, scalability, and fast convergence
Provides a limited set of services

Large-Building LANs
Large-building LANs are segmented by floors or departments. The building-access component serves one or more departments or floors. The building-distribution component serves one or more building-access components. Campus and building backbone devices connect the data center, building-distribution components, and the enterprise edge-distribution component. The access layer typically uses Layer 2 switches to contain costs, with more expensive Layer 3 switches in the distribution layer to provide policy enforcement. Current best practice is to also deploy multilayer switches in the campus and building backbone.

Cisco Enterprise Architecture Model
Core
Fast transport
High reliability
Redundancy
Fault tolerance
Low latency and good manageability
Avoidance of slow packet manipulation caused by filters or other processes
Limited and consistent diameter
Quality of service (QoS)

Distribution
Policy-based connectivity
Redundancy and load balancing
Aggregation of LAN wiring closets
Aggregation of WAN connections
QoS
Security filtering
Address or area aggregation or summarization
Departmental or workgroup access
Broadcast or multicast domain definition
Routing between virtual LANs (VLAN)
Media translations (for example, between Ethernet and Token Ring)

Redistribution between routing domains (for example, between two different routing protocols)
Demarcation between static and dynamic routing protocols

Access
Layer 2 switching
High availability
Port security
Broadcast suppression
QoS
Rate limiting
Address Resolution Protocol (ARP) inspection
Virtual access control lists (VACL)
Spanning tree
Trust classification
Power over Ethernet (PoE) and auxiliary VLANs for VoIP

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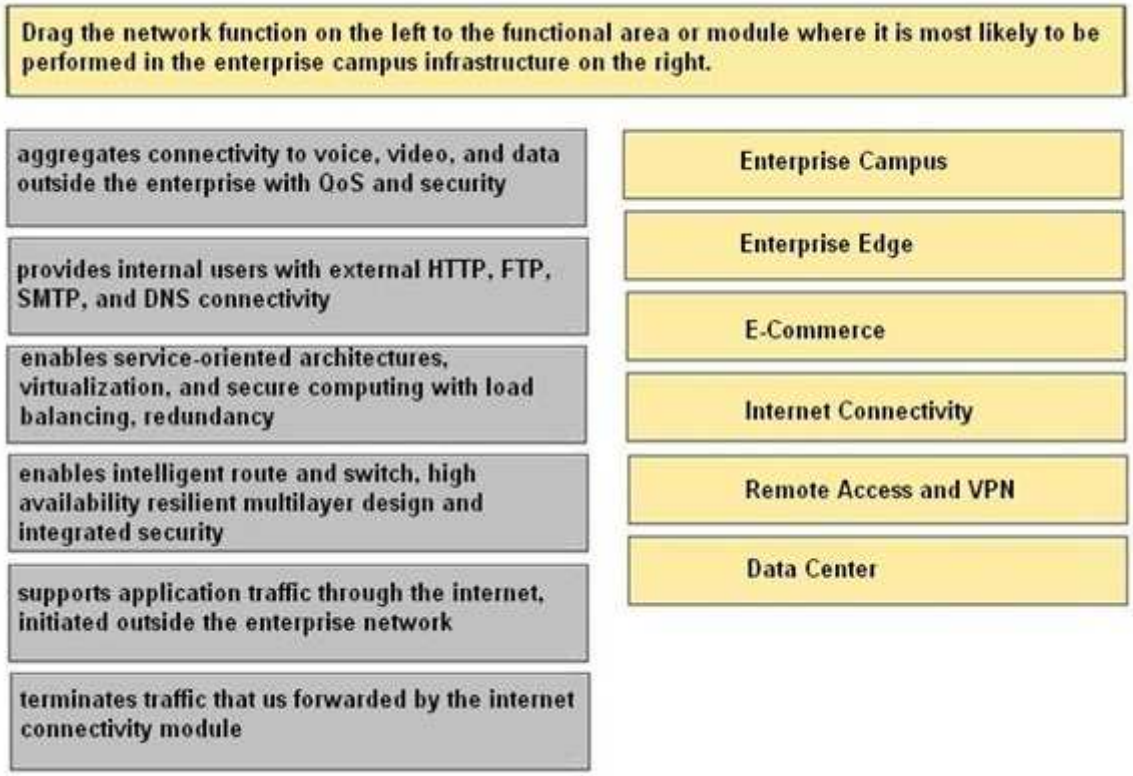
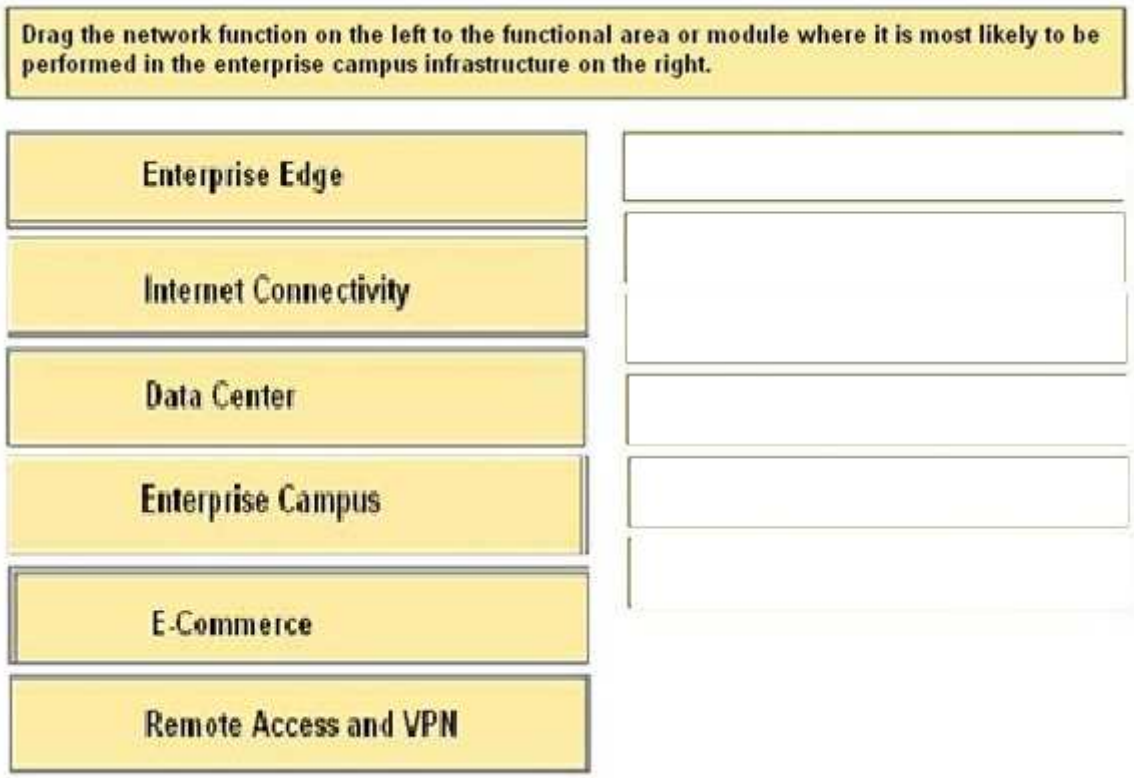
QUESTION 65

Select and Place:



Correct Answer:

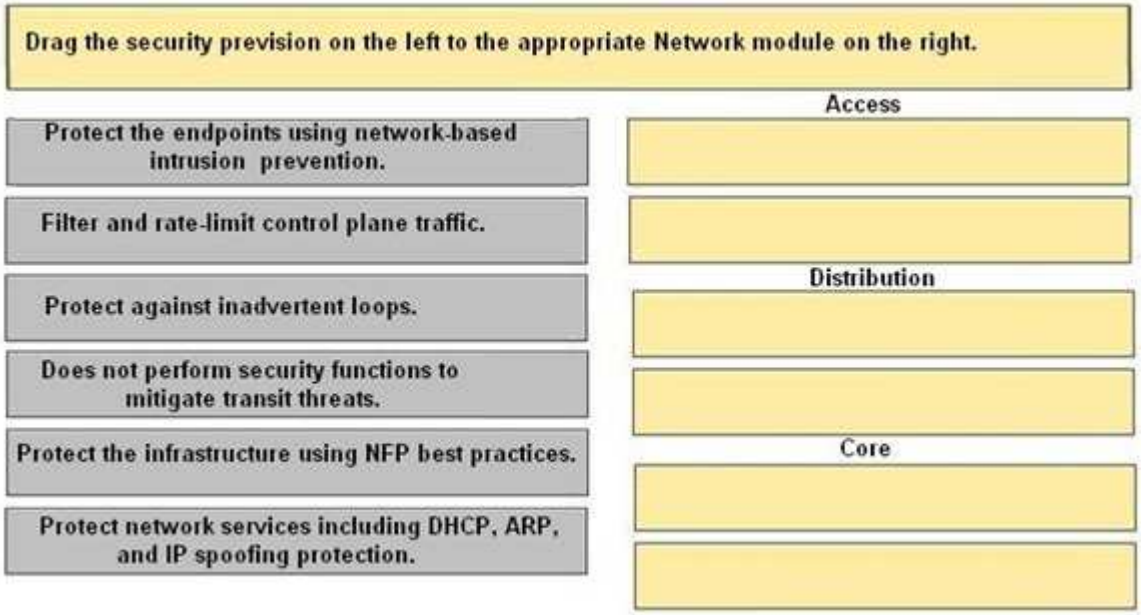


Section: Describe network structure and modularity
Explanation

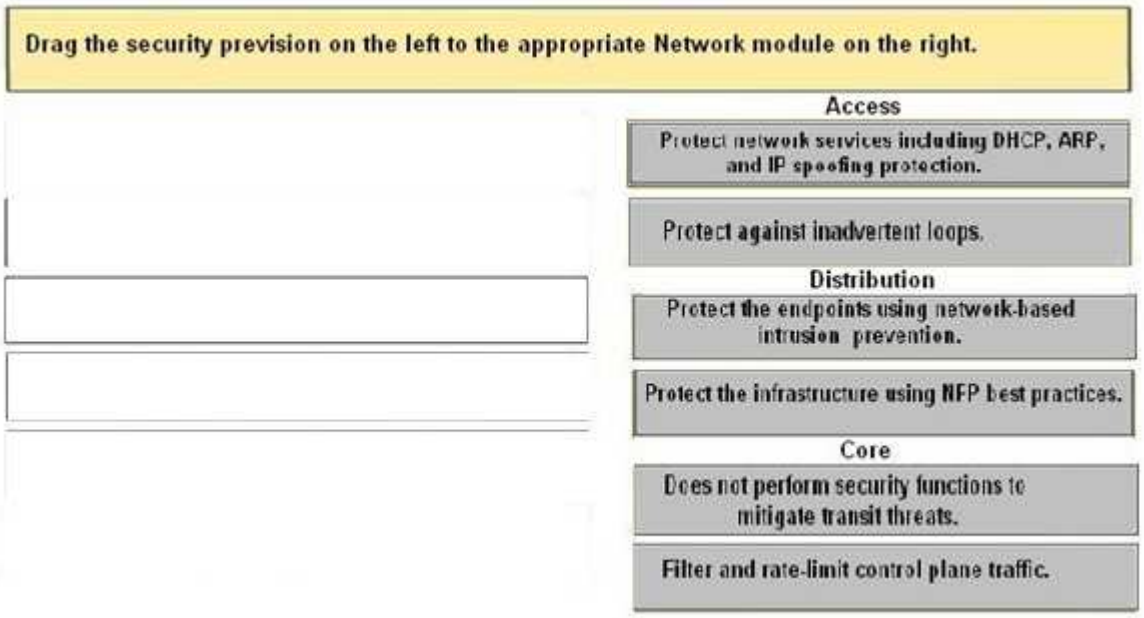
Explanation/Reference:

QUESTION 66

Select and Place:



Correct Answer:

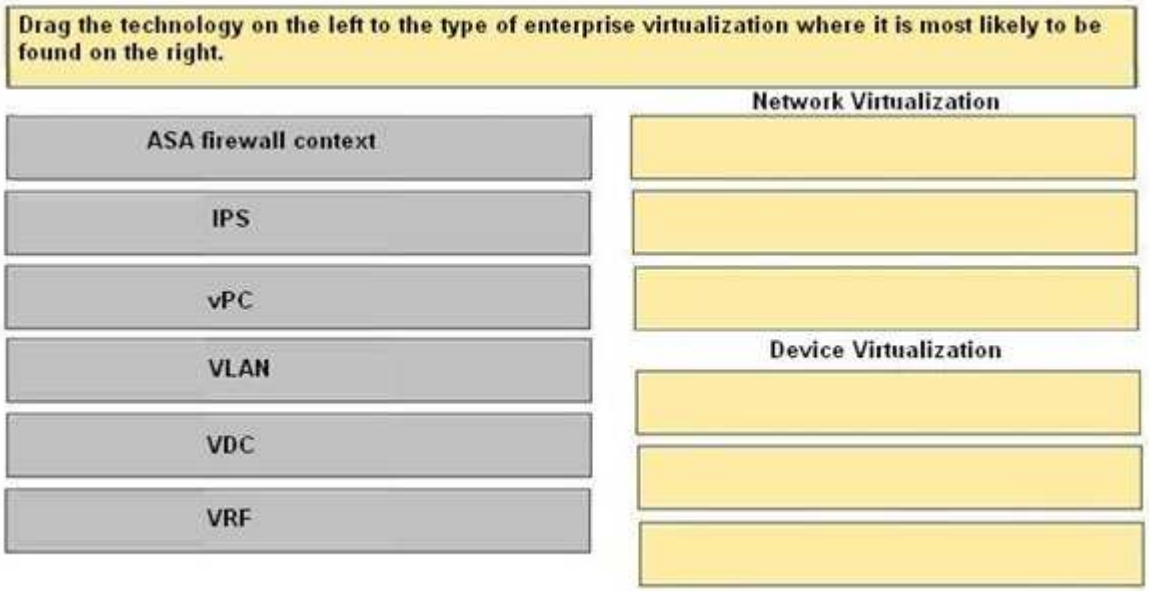


Section: Describe network structure and modularity
Explanation

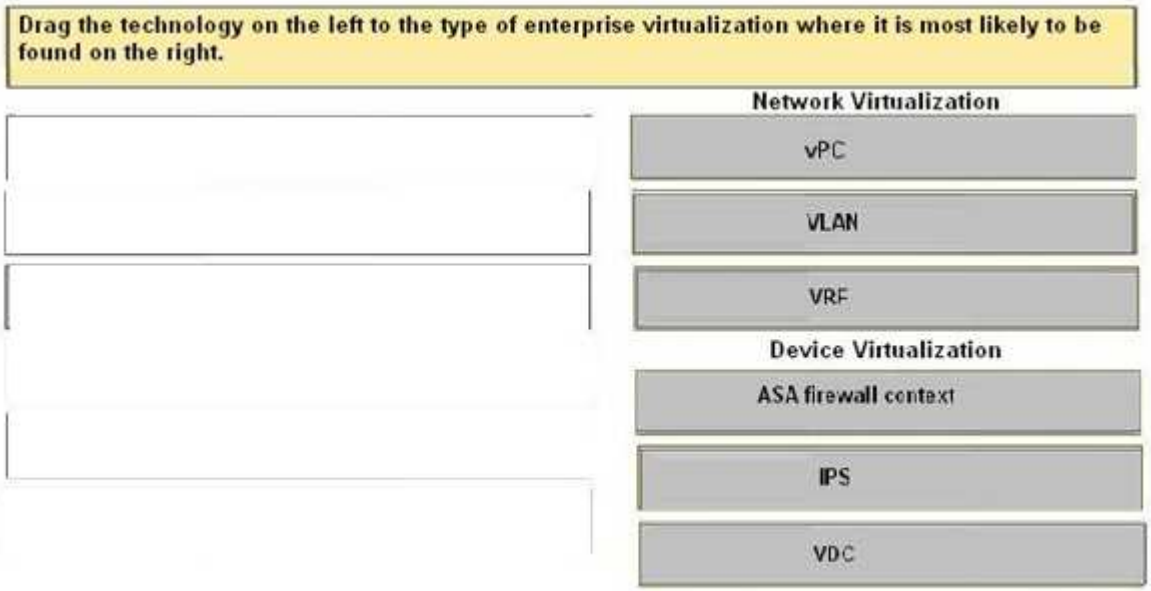
Explanation/Reference:
Explanation: Please refer to link.
Link: http://www.ciscopress.com/articles/article.asp?p=1073230&seqNum=2
Explanation:
http://www.cisco.com/en/US/docs/solutions/Enterprise/Security/SAFE_RG/chap5.html#wp1090913
http://www.cisco.com/en/US/docs/solutions/Enterprise/Security/SAFE_RG/chap3.html

QUESTION 67

Select and Place:



Correct Answer:



Section: Design Basic Enterprise Campus Networks
Explanation

Explanation/Reference:
Network virtualization encompasses logical isolated network segments that share the same physical infrastructure. Each segment operates independently and is logically separate from the other segments. Each network segment appears with its own privacy, security, independent set of policies, QoS levels, and independent routing paths.

Here are some examples of network virtualization technologies:
VLAN: Virtual local-area network
VSAN: Virtual storage-area network
VRF. Virtual routing and forwarding
VPN: Virtual private network
vPC. Virtual Port Channel

Device virtualization allows for a single physical device to act like multiple copies of itself. Device virtualization enables many logical devices to run independently of each other on the same physical piece of hardware. The software creates virtual hardware that can function just like the physical network device. Another form of device virtualization entails using multiple physical devices to act as one logical unit.

Here are some examples of device virtualization technologies:
Server virtualization: Virtual machines (VM)
Cisco Application Control Engine (ACE) context
Virtual Switching System (VSS)
Cisco Adaptive Security Appliance (ASA) firewall context
Virtual device contexts (VDC)

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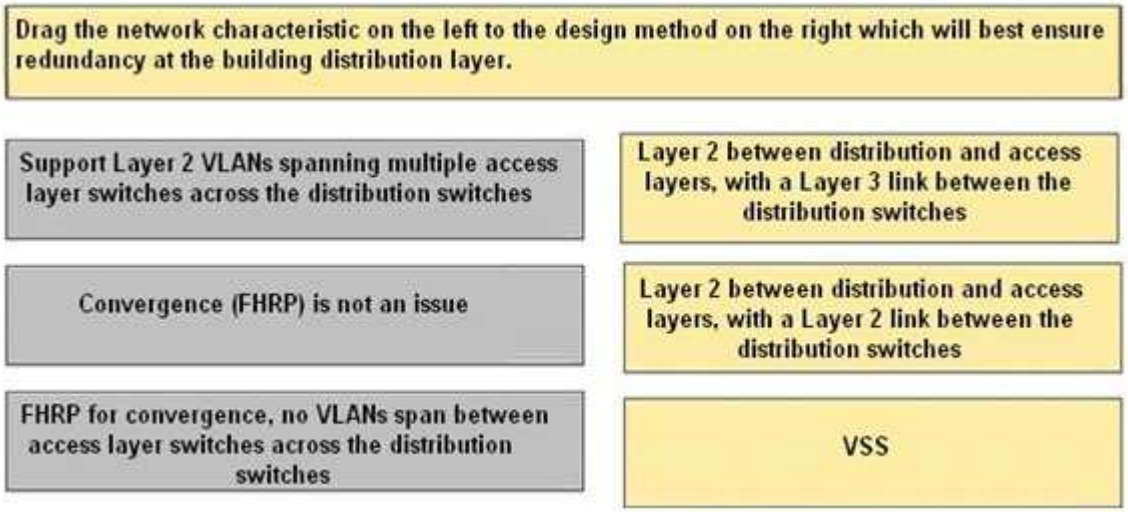
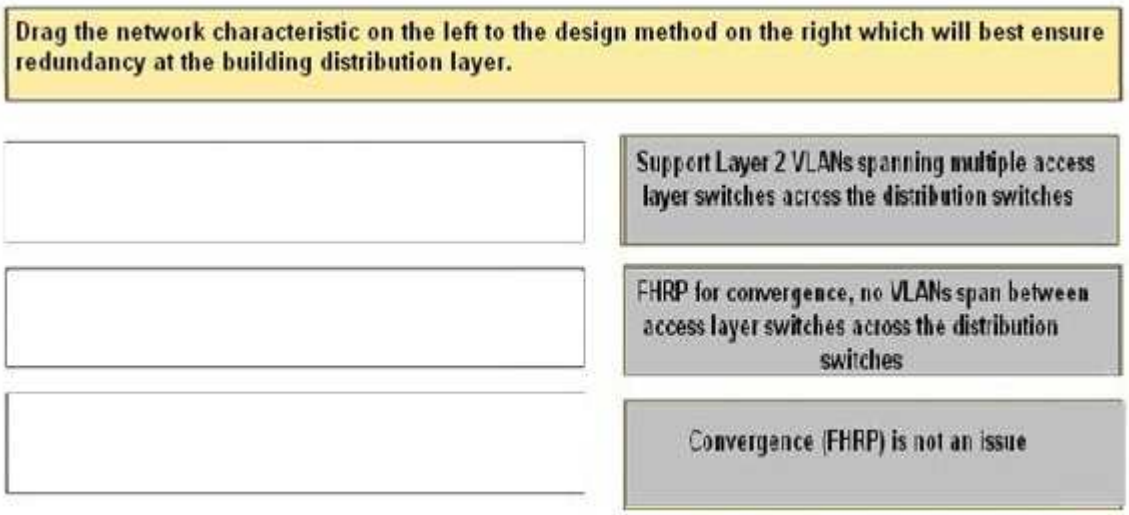
QUESTION 68

Select and Place:



Correct Answer:



Section: Design Basic Enterprise Campus Networks
Explanation

Explanation/Reference:
The following are recommended best practices at the distribution layer:
Use First-Hop Redundancy Protocols. Hot Standby Router Protocol (HSRP) or Gateway Load Balancing Protocol (GLBP) should be used if you implement Layer 2 links between the Layer 2 access switches and the distribution layer.
Use Layer 3 routing protocols between the distribution and core switches to allow for fast convergence and load balancing.
Use the distribution switches to connect Layer 2 VLANs that span multiple access layer switches.
Use Virtual Switching System (VSS) to eliminate the use of STP and the need for HSRP.

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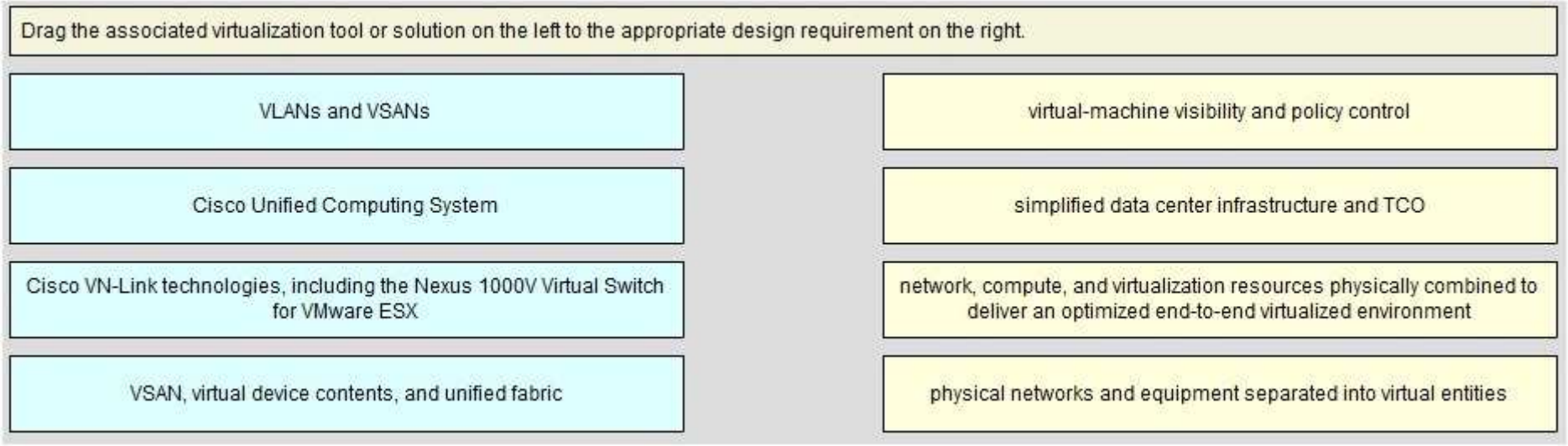
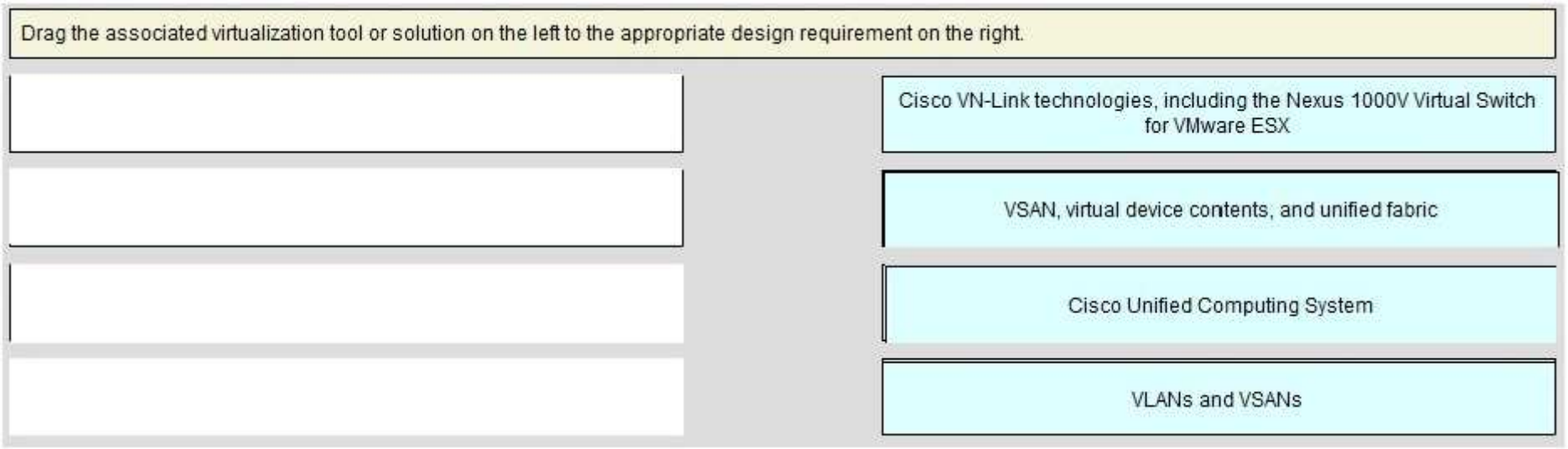
QUESTION 69

Select and Place:



Correct Answer:



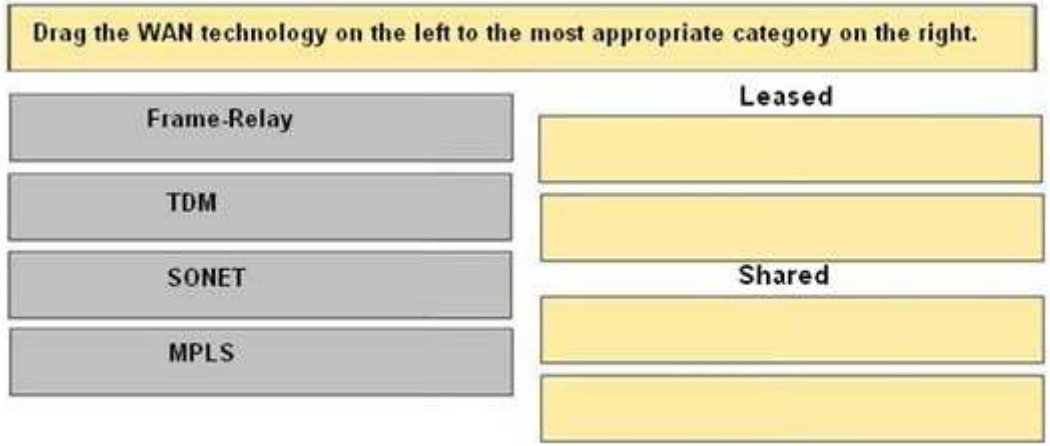
Section: Design Basic Enterprise Campus Networks

Explanation

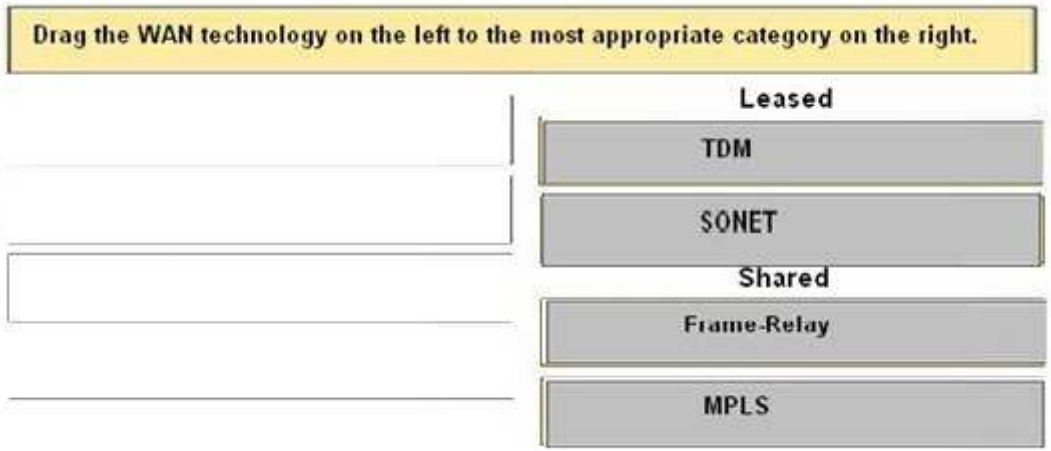
Explanation/Reference:

QUESTION 70

Select and Place:



Correct Answer:



Section: Design Enterprise Edge and Remote Network Modules
Explanation

Explanation/Reference:

WAN Link characteristics				
	Use	**Cost**	**Advantages**	**Examples**
Private	WAN to connect distant LANs	Owner must buy and configure network Expensive to maintain	High security Transmission quality	Metro Ethernet using Dark Fiber
Leased	WAN to connect distant LANs	High cost Equipment is leased or private	Provider is responsible for maintenance Dedicated bandwidth	TDM, SONET
Shared	Shared circuit or packed switched WAN	Cost is fair Bandwidth is leased Equipment is leased or private	Provider is responsible for maintenance Shared network for multiple sites	MPLS or FR

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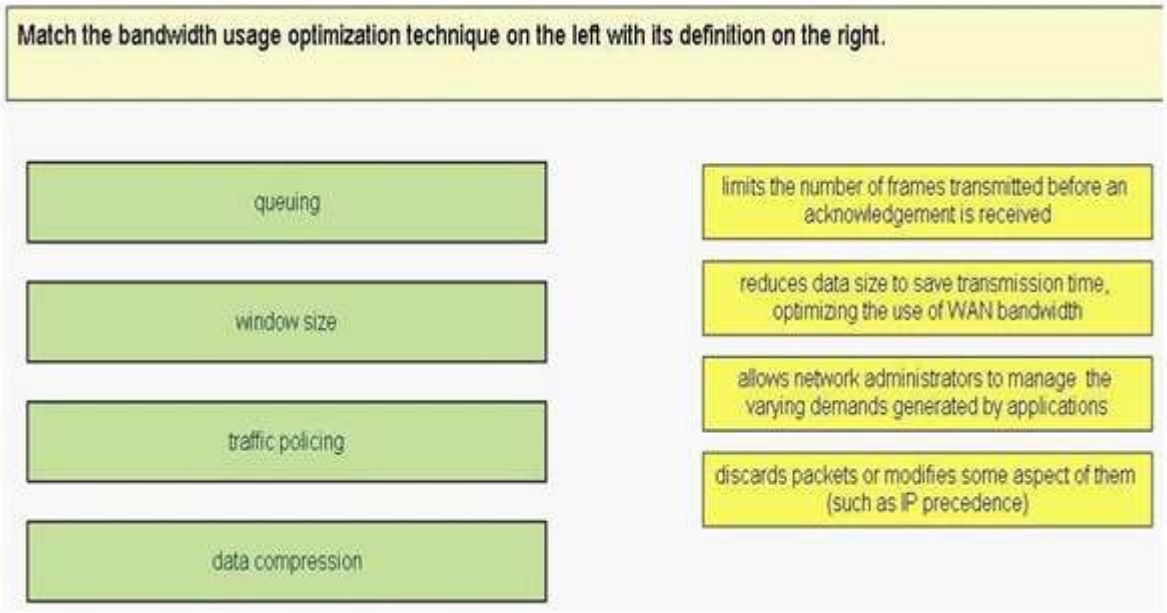
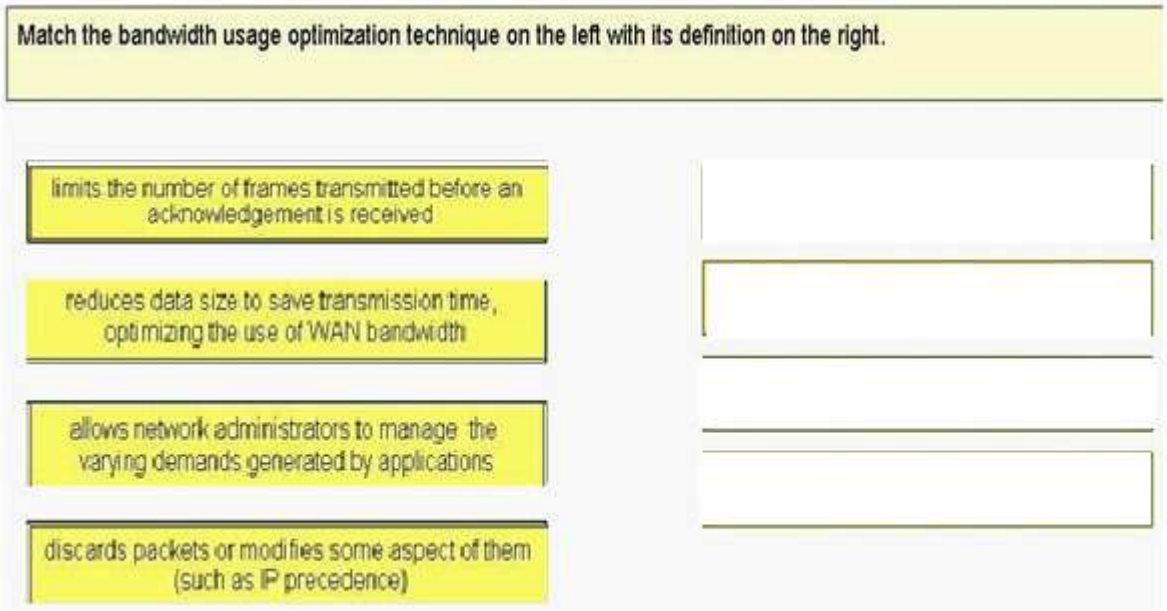
QUESTION 71

Select and Place:



Correct Answer:



Section: Design Enterprise Edge and Remote Network Modules
Explanation

Explanation/Reference:

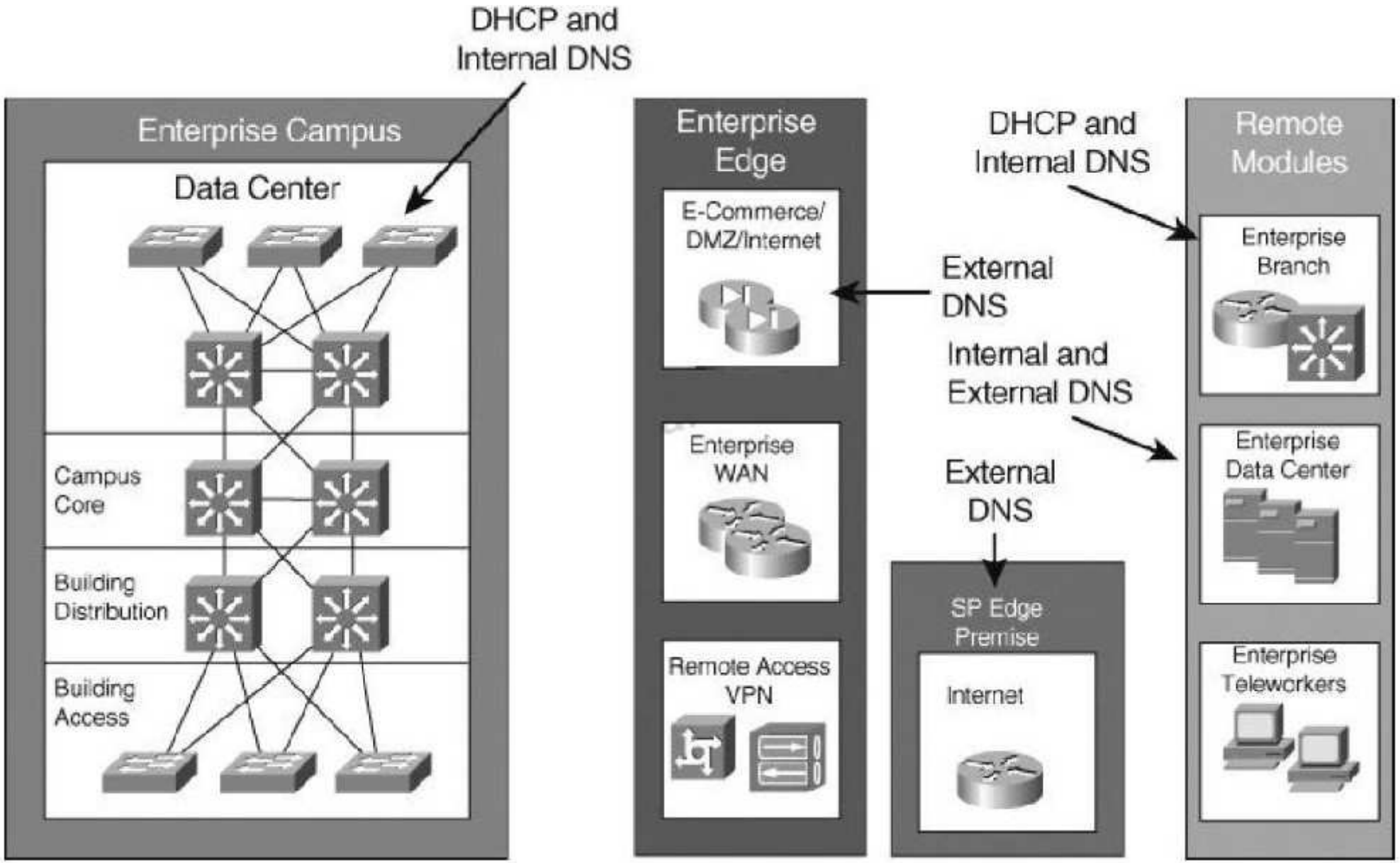
QUESTION 72
Which statement describes the recommended deployment of DNS and DHCP servers in the Cisco Network Architecture for the Enterprise?

A. Place the DHCP and DNS servers in the Enterprise Campus Access layer and Enterprise branch.
B. Place the DHCP and DNS servers in the Enterprise Campus Server Farm layer and Enterprise branch.
C. Place the DHCP server in the Enterprise Campus Core layer and Remote Access_VPN module with the DNS server in the Internet Connectivity module.
D. Place the DHCP server in the Enterprise Campus Distribution layer with the DNS server in the Internet Connectivity module.

Correct Answer: B
Section: Describe the Methodology used to design a network
Explanation

Explanation/Reference:

Explanation: For the Enterprise Campus, DHCP and internal DNS servers should be located in the Server Farm and they should be redundant. External DNS servers can be placed redundantly at the service provider facility and at the Enterprise branch.



QUESTION 73
Your company's Cisco routers are operating with EIGRP. You need to join networks with an acquisition's heterogeneous routers at 3 sites, operating with EIGRP and OSPF. Which describes the best practice for routing protocol deployment?

A. Apply OSPF throughout both networks
B. Apply one-way redistribution exclusively at each location
C. Apply two-way redistribution exclusively at each location
D. Apply two-way redistribution at each location with a route filter at only one location
E. Apply two-way redistribution at each location with a route filter at each location
F. Apply EIGRP with the same autonomous system throughout both networks

Correct Answer: E
Section: Describe the Methodology used to design a network
Explanation

Explanation/Reference:
Explanation: Without filters there is possibility of routing loops. Link: http://www.cisco.com/en/US/tech/tk365/technologies_tech_note09186a008009487e.shtml

QUESTION 74
Which two routing protocols converge most quickly? (Choose two.)

A. RIPv1
B. RIPv2
C. BGP
D. OSPF
E. EIGRP

Correct Answer: DE
Section: Describe the Methodology used to design a network
Explanation

Explanation/Reference:

QUESTION 75
Which of these is the equation used to derive a 64 Kbps bit rate?

A. 2 x 8 kHz x 4-bit code words

B. 8 kHz x 8-bit code words
C. 2 x 4-bit code words x 8 kHz
D. 2 x 4 kHz x 8-bit code words

Correct Answer: D
Section: Describe the Methodology used to design a network
Explanation

Explanation/Reference:
Explanation: While the human ear can sense sounds from 20 to 20, 000 Hz, and speech encompasses sounds from about 200 to 9000 Hz, the telephone channel was designed to operate at about 300 to 3400 Hz. This economical range carries enough fidelity to allow callers to identify the party at the far end and sense their mood. Nyquist decided to extend the digitization to 4000 Hz, to capture higher-frequency sounds that the telephone channel may deliver. Therefore, the highest frequency for voice is 4000 Hz. According to Nyquist theory, we must double the highest frequency, so 2x4kHz = 8kHz.
Each sample will be encoded into a 8-bit code. Therefore 8kHz x 8-bit code = 64 Kbps (notice about the unit Kbps: 8kHz = 8000 samples per second so 8000 x 8-bit = 64000 bit per second = 64 Kilobit per second = 64 Kbps)
Link: http://encyclopedia2.thefreedictionary.com/Nyquist+theorem

Note:
Nyquist theory:
"When sampling a signal (e.g., converting from an analog signal to digital), the sampling frequency must be greater than twice the bandwidth of the input signal in order to be able to reconstruct the original perfectly from the sampled version."

QUESTION 76
Which one of these statements is an example of how trust and identity management solutions should be deployed in the enterprise campus network?

A. Authentication validation should be deployed as close to the data center as possible.
B. Use the principle of top-down privilege, which means that each subject should have the privileges that are necessary to perform their defined tasks, as well as all the tasks for those roles below them.
C. Mixed ACL rules, using combinations of specific sources and destinations, should be applied as close to the source as possible.
D. For ease of management, practice defense in isolation - security mechanisms should be in place one time, in one place.

Correct Answer: C
Section: Describe the Methodology used to design a network
Explanation

Explanation/Reference:
Explanation: Validating user authentication should be implemented as close to the source as possible, with an emphasis on strong authentication for access from untrusted networks. Access rules should enforce policy deployed throughout the network with the following guidelines:
.
Source-specific rules with any type destinations should be applied as close to the source as possible.

.
Destination-specific rules with any type sources should be applied as close to the destination as possible.
.
Mixed rules integrating both source and destination should be used as close to the source as possible.

An integral part of identity and access control deployments is to allow only the necessary access. Highly distributed rules allow for greater granularity and scalability but, unfortunately, increase the management complexity. On the other hand, centralized rule deployment eases management but lacks flexibility and scalability. Practicing "defense in depth" by using security mechanisms that back each other up is an important concept to understand. For example, the perimeter Internet routers should use ACLs to filter packets in addition to the firewall inspecting packets at a deeper level.

Cisco Press CCDA 640-864 Official Certification Guide Fourth Edition, Chapter 13

QUESTION 77
Which factor would be most influential in choosing multimode fiber optic connections over UTP?

A. signal attenuation
B. required bandwidth
C. required distance
D. electromagnetic interference
E. cost

Correct Answer: C
Section: Design network services
Explanation

Explanation/Reference:

QUESTION 78
Which WAN technology is a cost-effective method to deliver 100Mb of bandwidth to multiple branch offices?

A. DSL
B. DWDM
C. ISDN
D. Metro Ethernet

Correct Answer: D
Section: Design network services
Explanation

Explanation/Reference:

QUESTION 79
Which subnet address and mask would you use for all Class D multicast addresses to be matched within an access list?

A. 224.0.0.0/20
B. 224.0.0.0/4
C. 239.0.0.0/24
D. 239.0.0.0/8
E. 225.0.0.0/8

Correct Answer: B
Section: Design network services
Explanation

Explanation/Reference:

QUESTION 80
A company is implementing an Identity Management solution with these characteristics:
·existing AAA Server·Cisco Catalyst switches·minimal added investments Which Cisco Trust and Identity Management solution would you recommend?

A. NAC Appliance
B. Cisco IBNS
C. CSM
D. Cisco Security MARS

Correct Answer: B
Section: Design network services
Explanation

Explanation/Reference:

QUESTION 81
When considering the three VoIP design models - single site, centralized multisite, and distributed multisite - which question below would help to eliminate one of the options?

A. Will the switches be required to provide inline power?
B. Will users need to make offsite calls, beyond the enterprise?
C. Will users require applications such as voice mail and interactive voice response?
D. Are there users whose only enterprise access is via a QoS-enabled WAN?

Correct Answer: D
Section: Design network services
Explanation

Explanation/Reference:

QUESTION 82
Which is part of the Prepare phase of PPDIOO?

A. Obtain site contact information
B. Perform network audit
C. Identify customer requirements
D. Perform gap analysis

Correct Answer: C
Section: Describe the Methodology used to design a network
Explanation

Explanation/Reference:
Explanation:

PPDIOO Phase	Description
Prepare	Establishes organization and business requirements, develops a network strategy, and proposes a high-level architecture
Plan	Identifies the network requirements by characterizing and assessing the network, performing a gap analysis
Design	Provides high availability, reliability, security, scalability, and performance
Implement	Installation and configuration of new equipment
Operate	Day-to-day network operations
Optimize	Proactive network management; modifications to the design

Prepare Phase
The Prepare phase establishes organization and business requirements, develops a network strategy, and proposes a high-level conceptual architecture to support the strategy. Technologies that support the architecture are identified. This phase creates a business case to establish a financial justification for a network strategy.

QUESTION 83
When designing the identity and access control portions for the enterprise campus network, which of these solutions would be the most appropriate solution to consider?

A. 802.1X
B. ACLs in the core layer
C. Cisco Security MARS
D. NetFlow

Correct Answer: A
Section: Describe the Methodology used to design a network
Explanation

Explanation/Reference:
Explanation:

Field	Description
Bytes	Number of bytes of memory that are used by the NetFlow cache
Active	Number of active flows
Inactive	Number of flow buffers that are allocated in the Netflow cache
Added	Number of flows that have been created since the start of the summary
Exporting flows	IP address and UDP port number of the workstation to which flows are exported
Flows exported	Total number of flows export and the total number of UDP datagrams
Protocol	IP protocol and well-known port number
Total Flows	Number of flows for this protocol since the last time that statistics were cleared
Flows/sec	Average number of flows this protocol per second
Packets/flow	Average number of packets per flow per second
Bytes/pkt	Average number of bytes for this protocol
Packets/sec	Average number of packets for this protocol per second

QUESTION 84
Which is the purpose of the Cisco NAC Profiler?

A. Automates discovery and inventory of all LAN attached devices
B. Generates a profile based on username and group
C. Learns and creates a database of virus definitions based on LAN traffic
D. A database used to map user VPN accounts

Correct Answer: A
Section: Describe the Methodology used to design a network
Explanation

Explanation/Reference:
Explanation:
Cisco NAC Profiler: Enables network administrators to keep a real-time, contextual inventory of all devices in a network. It greatly facilitates the deployment and

management of Cisco Network Admission Control (NAC) systems by discovering and tracking the location and type of all LAN-attached endpoints, including those that are not capable of authenticating. It also uses the information about the device to determine the correct policies for NAC to apply.

QUESTION 85
Cisco Identity-Based Networking Services relies heavily on the 802.1X protocol. Which other authentication solution is used hand-in-hand with 802.1X to authenticate users for network access?

A. RADIUS
B. LEAP
C. IPsec
D. TACACS
E. ISAKMP

Correct Answer: A
Section: Describe the Methodology used to design a network
Explanation

Explanation/Reference:
Explanation:
Cisco Identity-Based Network Services
The Cisco Identity-Based Network Services solution is a way to authenticate host access based on policy for admission to the network. IBNS supports identity authentication, dynamic provisioning of VLANs on a per-user basis, guest VLANs, and 802.1X with port security. The 802.1 X protocol is a standards-based protocol for authenticating network clients by permitting or denying access to the network. The 802.1 X protocol operates between the end-user client seeking access and an Ethernet switch or wireless access point (AP) providing the connection to the network. In 802.1 X terminology, clients are called supplicants, and switches and APs are called authenticates. A back-end RADIUS server such as a Cisco Access Control Server (ACS) provides the user account database used to apply authentication and authorization. With an IBNS solution, the host uses 802.IX and Extensible Authentication Protocol over LANs (EAPoL) to send the credentials and initiate a session to the network. After the host and switch establish LAN connectivity, username and password credentials are requested. The client host then sends the credentials to the switch, which forwards them to the RADIUS ACS. The RADIUS ACS performs a lookup on the username and password to determine the credentials' validity. If the username and password are correct, an accept message is sent to the switch or AP to allow access to the client host. If the username and password are incorrect, the server sends a message to the switch or AP to block the host port. Figure 13-4 illustrates the communication flow of two hosts using 802.1X and KAPoL with the switch, AP, and back-end RADIUS server.

QUESTION 86
What are the three modes of unicast reverse path forwarding? (Choose three.)

A. strict
B. loose
C. VRF
D. global

E. PIM
F. local

Correct Answer: ABC
Section: Design network services
Explanation

Explanation/Reference:

QUESTION 87
Which network access control technology is recommended to use with Layer 2 access layer switches?

A. 802.1q
B. 802.1x
C. 802.3af
D. 802.3q
E. 802.11n

Correct Answer: B
Section: Design network services
Explanation

Explanation/Reference:

QUESTION 88
Refer to the list of requirements. Which IP telephony design model should you implement to fulfill these requirements? - must be a single, large location with many remote sites - must have multisite WAN connectivity - requires SRST for call processing redundancy

A. centralized
B. distributed
C. clustered
D. decentralized

Correct Answer: A
Section: Design network services
Explanation

Explanation/Reference:

QUESTION 89
Which is the equation used to derive a 64 Kbps bit rate?

A. 2 x 8 kHz x 4-bit code words
B. 8 kHz x 8-bit code words
C. 2 x 4-bit code words x 8 kHz
D. 2 x 4 kHz x 8-bit code words

Correct Answer: D
Section: Design network services
Explanation

Explanation/Reference:

QUESTION 90
Which three statements are true regarding the virtual interface on a Cisco Wireless LAN Controller? (Choose three.)

A. supports mobility management
B. serves as a DHCP relay
C. used for all controller to AP communication
D. supports embedded Layer 3 security
E. default for out-of-band management
F. default for in-band management
G. provides connectivity to AAA servers

Correct Answer: ABD

Section: Design network services
Explanation

Explanation/Reference:

QUESTION 91
A campus network needs end-to-end QoS tools to manage traffic and ensure voice quality. Which three types of QoS tools are needed? (Choose three.)

A. interface queuing and scheduling
B. congestion management
C. compression and fragmentation
D. bandwidth provisioning
E. traffic classification
F. buffer management

Correct Answer: ADE
Section: Design network services
Explanation

Explanation/Reference:

QUESTION 92
Which technology enables WLCs to peer with each other to enable roaming support?

A. WAP profiles
B. roaming profiles
C. mobility groups
D. peer groups

Correct Answer: C
Section: Design network services
Explanation

Explanation/Reference:

QUESTION 93

Which IP telephony component supports VoIP, PoE, and QoS?

A. client endpoints
B. voice-enabled infrastructure
C. Cisco Unified Communications Manager
D. Cisco Unified Contact Center

Correct Answer: B
Section: Design network services
Explanation

Explanation/Reference:

QUESTION 94
High availability is a key design consideration in the enterprise campus network. In a fully redundant topology, which is likely to provide faster IGP convergence during a failure?

A. redundant supervisors
B. redundant supervisors with Cisco Nonstop Forwarding (NSF) and Stateful Switchover (SSO)
C. single supervisors with tuned IGP timers
D. single supervisors

Correct Answer: C
Section: Design Basic Enterprise Campus Networks
Explanation

Explanation/Reference:

QUESTION 95
Which two enterprise campus layers are combined in a medium-sized LAN? (Choose two.)

A. core
B. distribution
C. access
D. backbone
E. aggregation

Correct Answer: AB
Section: Design Basic Enterprise Campus Networks
Explanation

Explanation/Reference:
corrected.

QUESTION 96
What is a characteristic of campus core designs?

A. fast transport
B. security
C. summarization
D. redistribution

Correct Answer: A
Section: Design Basic Enterprise Campus Networks
Explanation

Explanation/Reference:

QUESTION 97
In the enterprise data center, which are the three main components? (Choose three.)

A. Network Infrastructure
B. Interactive services
C. Data Center Management
D. Internet services
E. WAN services
F. VPN and remote access

Correct Answer: ABC
Section: Design Basic Enterprise Campus Networks
Explanation

Explanation/Reference:

QUESTION 98
Which two common cable management strategies are used in high-density server deployments in the data center? (Choose two.)

A. top-of-rack
B. middle-of-rack
C. bottom-of-rack
D. beginning-of-row
E. middle-of-row
F. end-of-row

Correct Answer: AF
Section: Design Basic Enterprise Campus Networks
Explanation

Explanation/Reference:

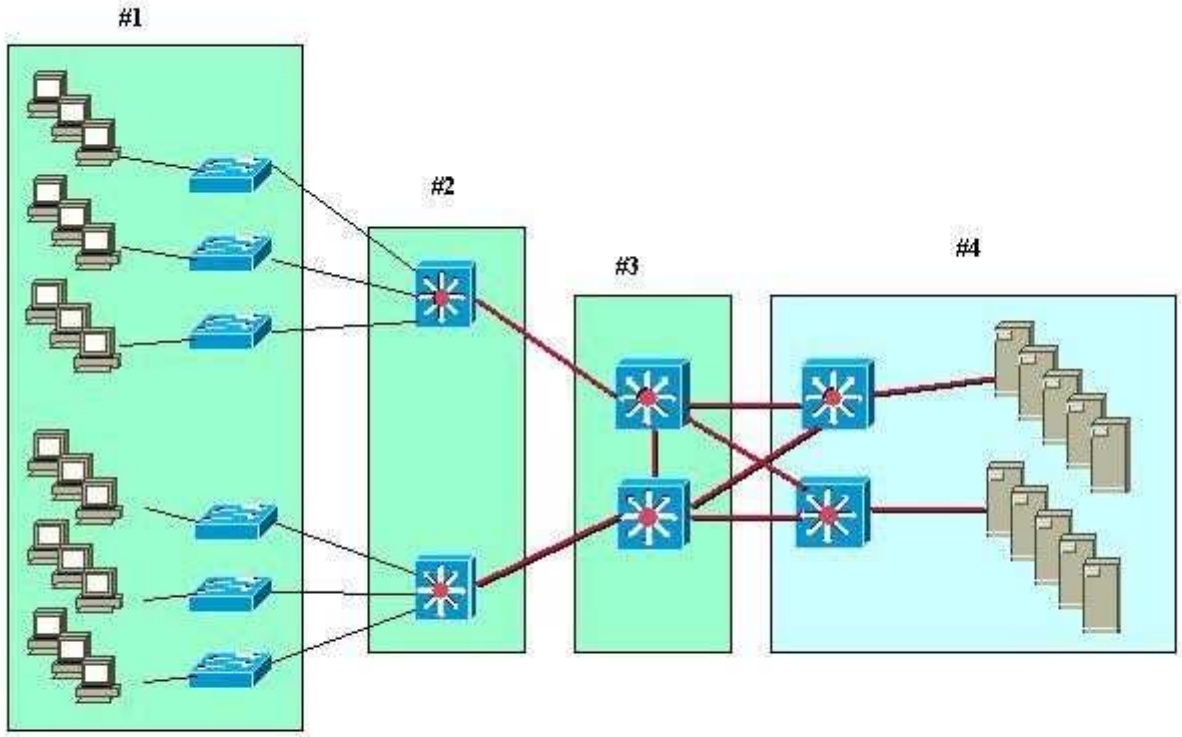
QUESTION 99
Which servers that reside in the data center require direct links to all other enterprise modules?

A. network management servers
B. DHCP servers
C. Active Directory servers
D. IP SLA servers
E. web servers

Correct Answer: A
Section: Design Basic Enterprise Campus Networks
Explanation

Explanation/Reference:
answer is authentic.

QUESTION 100
Refer to the exhibit.



A standard, Layer 2 campus network design is pictured. Which numbered box represents the distribution layer?

A. #1
B. #2

C. #3
D. #4

Correct Answer: D
Section: Describe the Methodology used to design a network
Explanation

Explanation/Reference:

QUESTION 101
Which two are types of network virtualization? (Choose two.)

A. VSS: Virtual Switching System
B. VRF: virtual routing and forwarding
C. VCI: virtual channel identifier
D. VLSM: variable length subnet masking
E. VM: virtual machine
F. VMP: Virtual Memory Pool

Correct Answer: AB
Section: Describe the Methodology used to design a network
Explanation

Explanation/Reference:
Explanation:
Network virtualization encompasses logical isolated network segments that share the same physical infrastructure. Each segment operates independently and is logically separate from the other segments. Each network segment appears with its own privacy, security, independent set of policies, QoS levels, and independent routing paths.
Here are some examples of network virtualization technologies:

VLAN: Virtual local-area network
VSAN: Virtual storage-area network
VRF: Virtual routing and forwarding
VPN: Virtual private network
VPC: Virtual Port Channel

QUESTION 102
Which two methods are used to enhance VPN performance on Cisco ISRs? (Choose two.)

A. SSL Acceleration Network Module
B. VPN Shared Port Adapter
C. VPN Acceleration Module
D. high-performance VPN encryption AIM
E. VPN Service Adapter
F. built-in hardware-based encryption acceleration

Correct Answer: DF
Section: (none)
Explanation

Explanation/Reference:
appropriate answer.

QUESTION 103
Which three factors best justify WAN link redundancy between geographically dispersed sites? (Choose three.)

A. high expense of transmitting data
B. important traffic flows
C. excessive packet transmission rate
D. uncertain reliability
E. high link utilization
F. lack of speed

Correct Answer: BDF
Section: (none)
Explanation

Explanation/Reference:
proper answer.

QUESTION 104
Which three pieces of information should be documented for each step of each phase in a design implementation plan? (Choose three.)

A. easy guidelines in case of failure
B. estimated rollback time in case of failure
C. simple implementation guidelines
D. estimated implementation time

E. design document references
F. step description

Correct Answer: DEF
Section: (none)
Explanation

Explanation/Reference:
answer is corrected.

QUESTION 105
The topology map in the draft design document should cover which two layers of the OSI model? (Choose two.)

A. session
B. data link
C. transport
D. application
E. physical
F. network

Correct Answer: EF
Section: (none)
Explanation

Explanation/Reference:
answer is sophisticated.

QUESTION 106
In a Cisco CatOS switch, what is the recommended practice when configuring switch-to-switch intercommunications to carry multiple VLANs for Dynamic Trunk Protocol?

A. auto to auto_negotiate
B. disable Dynamic Trunk Protocol when operating in the distribution layer
C. auto to auto_no_negotiate
D. desirable to desirable_no_negotiate
E. on to on_negotiate
F. desirable to desirable_negotiate

Correct Answer: F
Section: (none)
Explanation

Explanation/Reference:
100% corrected.

QUESTION 107
What are the two most likely driving forces motivating businesses to integrate voice and data into converged networks? (Choose two.)

A. Voice networks cannot carry data unless the PRI circuits aggregate the BRI circuits.
B. Their PSTNs cannot deploy features quickly enough.
C. Data, voice, and video cannot converge on their current PSTN structures.
D. Voice has become the primary traffic on networks.
E. WAN costs can be reduced by migrating to converged networks.

Correct Answer: AC
Section: (none)
Explanation

Explanation/Reference:
reliable answer.

QUESTION 108
A lightweight access point is added to a working network. Which sequence will it use to associate itself with a wireless LAN controller?

A. primary, secondary, tertiary, greatest AP capacity, master
B. primary, secondary, tertiary, master, greatest AP capacity
C. master, primary, secondary, tertiary, greatest AP capacity
D. greatest AP capacity, primary, secondary, tertiary, master

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:
exact answer.

QUESTION 109

You want to gather as much detail as possible during a network audit, to include data time stamping across a large number of interfaces, customized according to interface, with a minimal impact on the network devices themselves. Which tool would you use to meet these requirements?

A. RMON
B. SNMPv3
C. NetFlow
D. Cisco Discovery Protocol

Correct Answer: C
Section: Describe the Methodology used to design a network
Explanation

Explanation/Reference:
Explanation:
NetFlow provides extremely granular and accurate traffic measurements and a high-level collection of aggregated traffic. The output of netflow information is displayed via the show ip cache flow command on routers. The Table shows a description of the fields for NetFlow output.
Table.Netflow Output escription

Field	Description
Bytes	Number of bytes of memory that are used by the NetFlow cache
Active	Number of active flows
Inactive	Number of flow buffers that are allocated in the Netflow cache
Added	Number of flows that have been created since the start of the summary
Exporting flows	IP address and UDP port number of the workstation to which flows are exported
Flows exported	Total number of flows export and the total number of UDP datagrams
Protocol	IP protocol and well-known port number
Total Flows	Number of flows for this protocol since the last time that statistics were cleared
Flows/sec	Average number of flows this protocol per second
Packets/flow	Average number of packets per flow per second
Bytes/pkt	Average number of bytes for this protocol
Packets/sec	Average number of packets for this protocol per second

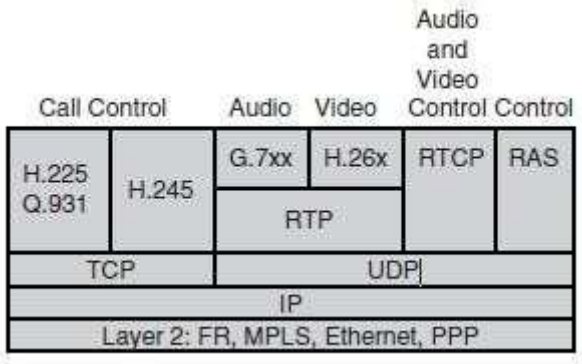
QUESTION 110
Which protocol is used for voice bearer traffic?

A. MGCP
B. RTP
C. SCCP
D. CDP
E. ICMP

Correct Answer: B
Section: Describe the Methodology used to design a network
Explanation

Explanation/Reference:
Explanation:

VoIP Control and Transport Protocols
A number of different protocols are used in a VoIP environment for call control, device provisioning, and addressing.
Figure 14-15 shows those protocols focused on VoIP control and transport.



QUESTION 111
Which protocol is used to reserve bandwidth for the transport of a particular application data flow across the network?

A. cRTP
B. IEEE 802.1P
C. RSVP
D. LFI
E. Auto QOS

Correct Answer: C
Section: Describe the Methodology used to design a network
Explanation

Explanation/Reference:
Explanation:
RSVP Signaling protocol that enables end stations or applications to obtain guaranteed bandwidth and low delays for their data flows.

QUESTION 112
Which two features are supported by single wireless controller deployments? (Choose two.)

A. automatic detection and configuration of LWAPPs
B. LWAPP support across multiple floors and buildings

C. automatic detection and configuration of RF parameters
D. Layer 2 and Layer 3 roaming
E. controller redundancy
F. mobility groups

Correct Answer: AB
Section: Describe the Methodology used to design a network
Explanation

Explanation/Reference:

QUESTION 113
Which four services does the architecture for Media Services contain? (Choose four.)

A. access services
B. transport services
C. storage services
D. forwarding services
E. session control services
F. security services
G. filtering services
H. remote access services

Correct Answer: ABCE
Section: Describe the Methodology used to design a network
Explanation

Explanation/Reference:
Explanation:
An architecture framework for media services supports different models of video models. As shown in Figure 14-13, the network provides service to video media in the Media Services Framework. Those services are access services, transport services, bridging services, storage servers, and session control services, which arc provided to endpoints. Access services provide identity of end devices, mobility, and location services. Transport services provide QoS for reliable packet delivery.
Bridging services provide transcoding, conferencing, and recording services of media streams.
Storage services provide capture and storage of media streams and content management and distribution.
Session control services provide session signaling and control and gateway services.

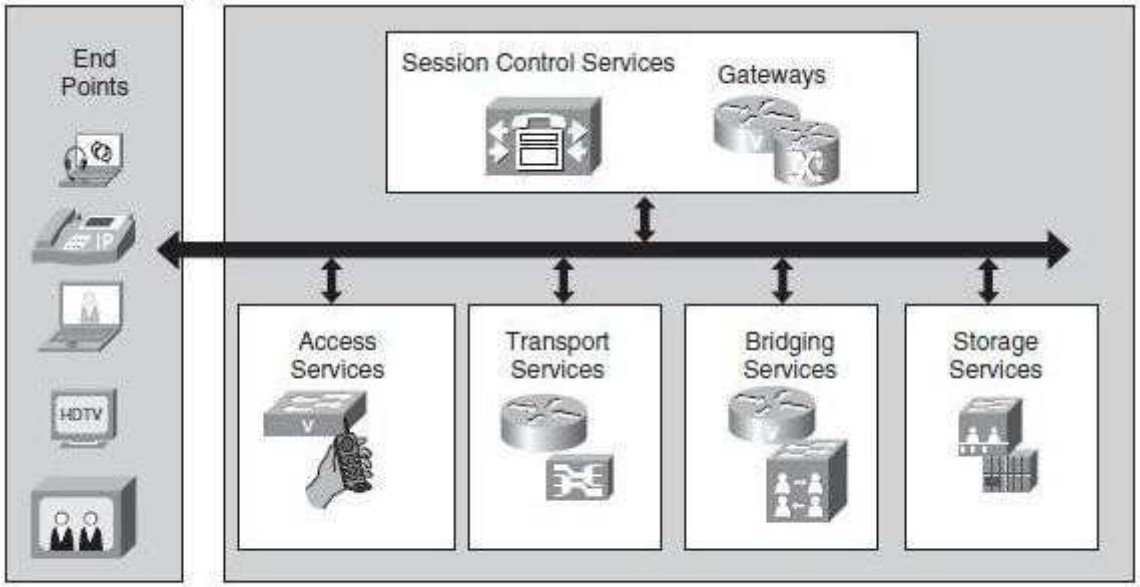
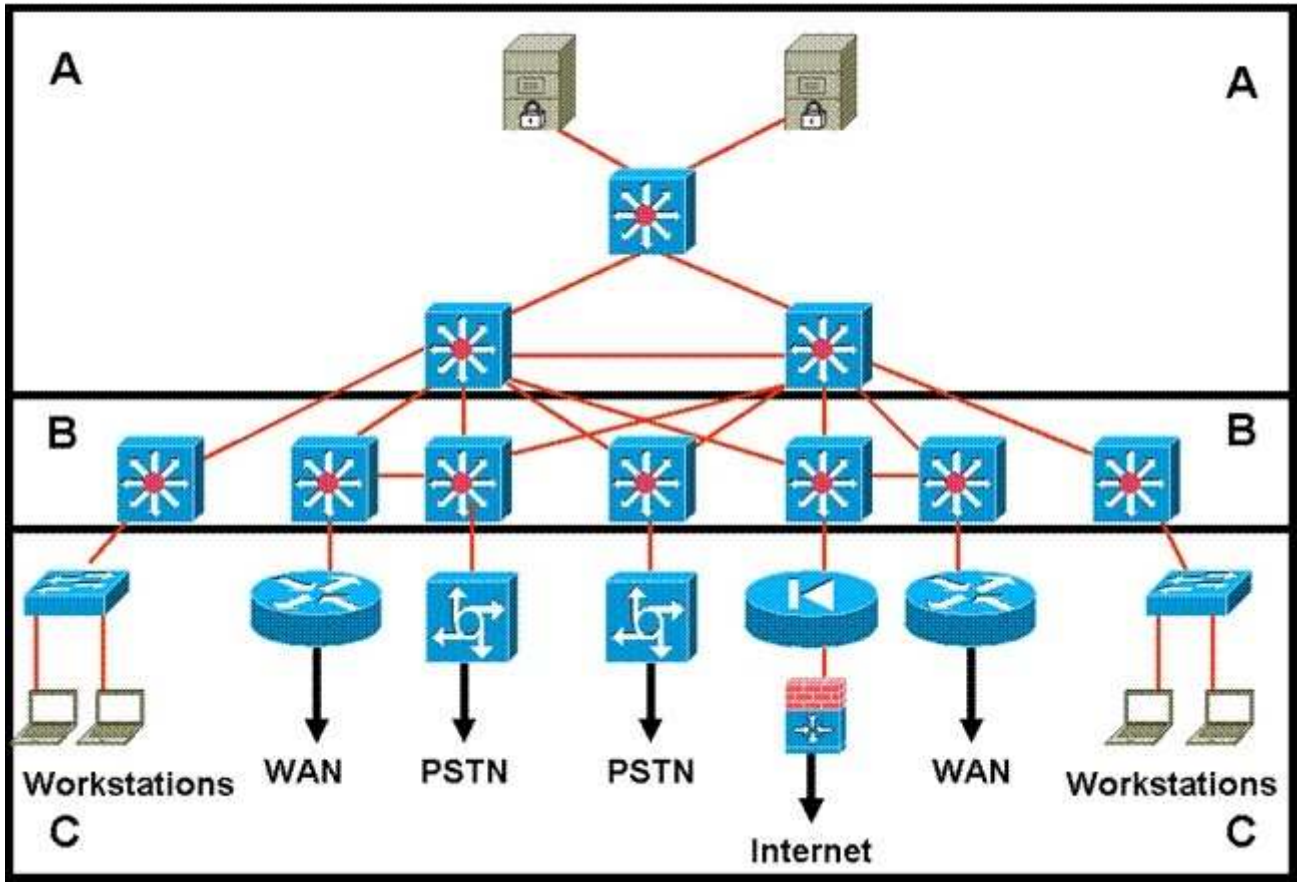


Figure 14-13 *Media Services Architectural Framework*

QUESTION 114
Refer to the exhibit.



Which layer is the distribution layer?

A. Layer A
B. Layer B
C. Layer C
D. Layers A and B form a consolidated core and distribution layer

Correct Answer: B
Section: Describe the Methodology used to design a network
Explanation

Explanation/Reference:

QUESTION 115
Which three service categories are supported by an ISR? (Choose three.)

A. voice
B. security
C. data
D. Internet
E. storage
F. satellite

Correct Answer: ABC
Section: Design Enterprise Edge and Remote Network Modules
Explanation

Explanation/Reference:

QUESTION 116
When designing for a remote worker, which two are typical requirements? (Choose two.)

A. best-effort interactive and low-volume traffic patterns
B. connections to the enterprise edge using Layer 2 WAN technologies
C. always-on connection with SLA from ISP
D. voice and IPsec VPN support
E. high-end security devices with stateful firewall filtering
F. dual or multihoming to ISPs

Correct Answer: CD
Section: Design Enterprise Edge and Remote Network Modules
Explanation

Explanation/Reference:

QUESTION 117

What is the maximum number of groups that is supported by GLBP?

A. 64
B. 256
C. 512
D. 1024

Correct Answer: D
Section: Design Enterprise Edge and Remote Network Modules
Explanation

Explanation/Reference:

QUESTION 118
Which two routing protocols usually converge most quickly? (Choose two.)

A. RIPv1
B. RIPv2
C. BGP
D. OSPF
E. EIGRP

Correct Answer: DE
Section: Design IP Addressing and Routing Protocols
Explanation

Explanation/Reference:

QUESTION 119
Which two routing protocols operate over NBMA point-to-multipoint networks without the use of point-to-point subinterfaces? (Choose two.)

A. RIPv1
B. RIPv2
C. IS-IS
D. EIGRP
E. OSPF

Correct Answer: DE
Section: Design IP Addressing and Routing Protocols
Explanation

Explanation/Reference:

QUESTION 120
You want to gather as much detail as possible during a network audit with a minimal impact on the network devices themselves. Which tool would you use to include data time stamping across a large number of interfaces while being customized according to each interface?

A. RMON
B. SNMPv3
C. NetFlow
D. Cisco Discovery Protocol

Correct Answer: C
Section: Describe the Methodology used to design a network
Explanation

Explanation/Reference:

QUESTION 121
In which phase of PPDIOO are the network requirements identified?

A. Design
B. Plan
C. Prepare
D. Implement
E. Operate
F. Optimize

Correct Answer: B
Section: Describe the Methodology used to design a network
Explanation

Explanation/Reference:

Explanation:

PPDIOO Phase	Description
Prepare	Establishes organization and business requirements, develops a network strategy, and proposes a high-level architecture
Plan	Identifies the network requirements by characterizing and assessing the network, performing a gap analysis
Design	Provides high availability, reliability, security, scalability, and performance
Implement	Installation and configuration of new equipment
Operate	Day-to-day network operations
Optimize	Proactive network management; modifications to the design

Plan Phase
The Plan phase identifies the network requirements based on goals, facilities, and user needs. This phase characterizes sites and assesses the network, performs a gap analysis against best- practice architectures, and looks at the operational environment. A project plan is developed to manage the tasks, responsible parties, milestones, and resources to do the design and implementation. The project plan aligns with the scope, cost, and resource parameters established with the original business requirements. This project plan is followed (and updated) during all phases of the cycle.

QUESTION 122
Which IPv6 feature enables routing to distribute connection requests to the nearest content server?

A. Link-local
B. Site-local
C. Anycast
D. Multicast
E. Global aggregatable

Correct Answer: C
Section: Describe the Methodology used to design a network
Explanation

Explanation/Reference:
Explanation: Anycast is a network addressing and routing methodology in which datagrams from a single sender are routed to the topologically nearest node in a group of potential receivers all identified by the same destination address.

Link: http://en.wikipedia.org/wiki/Anycast

QUESTION 123
What is the recommended spanning tree protocol to use for all Layer 2 deployments in a branch office environment?

A. CST
B. RSPT
C. PVST
D. MISTP
E. Rapid PVST +

Correct Answer: E
Section: Describe the Methodology used to design a network
Explanation

Explanation/Reference:

QUESTION 124
Which mode is used to exclusively look for unauthorized access points?

A. monitor mode
B. sniffer mode
C. rogue detector mode
D. local mode

Correct Answer: C
Section: Describe the Methodology used to design a network
Explanation

Explanation/Reference:
Explanation:

AP Mode	Description
Monitor mode	
Rogue Detector mode	
Sniffer mode	
Bridge mode	

Interference detection and avoidance: As Cisco LWAPs monitor all channels, interference is detected by a predefined threshold (10 percent by default). Interference can be generated by rogue APs, microwaves, cordless telephones, Bluetooth devices, neighboring WLANs, or other electronic devices.

QUESTION 125
Which of the following three options represents the components of the Teleworker Solution? (Choose three.)

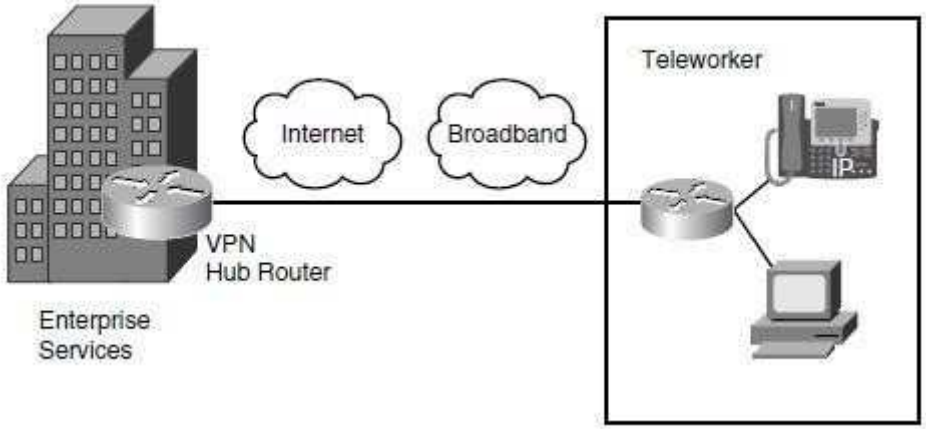
A. Cisco Unified IP Phone
B. Cisco 880 Series Router
C. Aironet Office Extend Access Point
D. Catalyst 3560 Series Switch
E. Cisco 2900 Series Router
F. MPLS Layer 3 VPN
G. Leased lines

Correct Answer: ABC
Section: Describe the Methodology used to design a network
Explanation

Explanation/Reference:
Explanation:
A Cisco ASR is used to terminate Teleworker solutions, not a 2900 series router. Hybrid teleworker uses Aironet, Advanced teleworker uses 880, both use IP phones.
google: "at_a_glance_c45-652500.pdf" for details

The Cisco Virtual Office Solution for the Enterprise Teleworker is implemented using the Cisco 800 series ISRs. Each ISR has integrated switch ports that then connect to the user's broadband connection. The solution uses a permanent always-on IPsec VPN tunnel back to the corporate network. This architecture provides for centralized IT security management, corporate-pushed security policies, and integrated identity services. In addition, this solution supports the enterprise teleworker needs through advanced applications such as voice and video. For example, the enterprise teleworker can take advantage of toll bypass, voicemail, and advanced IP phone features not available in the PSTN.

Enterprise Teleworker Module
The enterprise teleworker module consists of a small office or a mobile user who needs to access services of the enterprise campus. As shown in Figure 2-14, mobile users connect from their homes, hotels, or other locations using dialup or Internet access lines. VPN clients are used to allow mobile users to securely access enterprise applications. The Cisco Virtual Office solution provides a solution for teleworkers that is centrally managed using small integrated service routers (ISR) in the VPN solution. IP phone capabilities are also provided in the Cisco Virtual Office solution, providing corporate voice services for mobile users.



QUESTION 126
Which three types of WAN topologies can be deployed in the Service Provider Module? (Choose three.)

A. ring
B. star
C. full mesh
D. core/edge
E. collapsed core
F. partial mesh

Correct Answer: BCF

Section: Describe the Methodology used to design a network
Explanation

Explanation/Reference:

QUESTION 127
With deterministic Wireless LAN Controller redundancy design, the different options available to the designer have their own strengths. Which one of these statements is an example of such a strength?

A. Dynamic load balancing, or salt-and-pepper access point design, avoids the potential impact of oversubscription on aggregate network performance.
B. N+N redundancy configuration allows logically grouping access points on controllers to minimize intercontroller roaming events.
C. N+N+1 redundancy configuration has the least impact to system management because all of the controllers are colocated in an NOC or data center.
D. N+1 redundancy configuration uses Layer 3 intercontroller roaming, maintaining traffic on the same subnet for more efficiency.

Correct Answer: B
Section: Describe the Methodology used to design a network
Explanation

Explanation/Reference:
Explanation: With such an arrangement there is no complex mesh of access points & controllers. Link: http://www.cisco.com/web/learning/le31/le46/cln/qlm/CCDA/design/understanding- wireless-network-controller-technology-3/player.html

N+N WLC Redundancy
With N+N redundancy, shown in Figure 5-14.an equal number of controllers hack up each other. For example, a pair of WLCs on one floor serves as a backup to a second pair on another floor. The top WLC is primary for API and AP2 and secondary for AP3 and AP4. The bottom WLC is primary for AP3 and AP4 and secondary for API and AP2. There should be enough capacity on each controller to manage a failover situation.

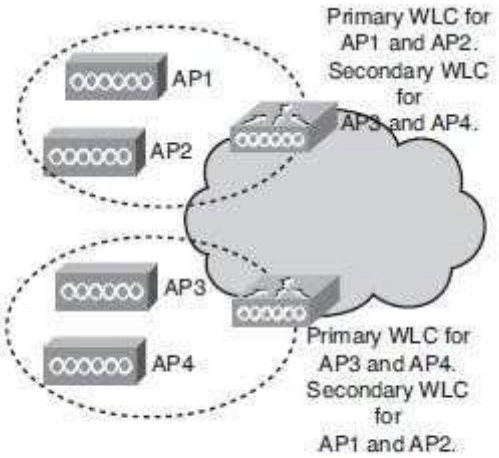


Figure 5-14 *N+N Controller Redundancy*

N+N+1 WLC Redundancy

With N+N+1 redundancy, shown in Figure 5-15, an equal number of controllers back up each other (as with N+N), plus a backup WLC is configured as the tertiary WLC for the APs. N+N+1 redundancy functions the same as N+N redundancy plus a tertiary controller that backs up the secondary controllers. The tertiary WLC is placed in the data center or network operations center

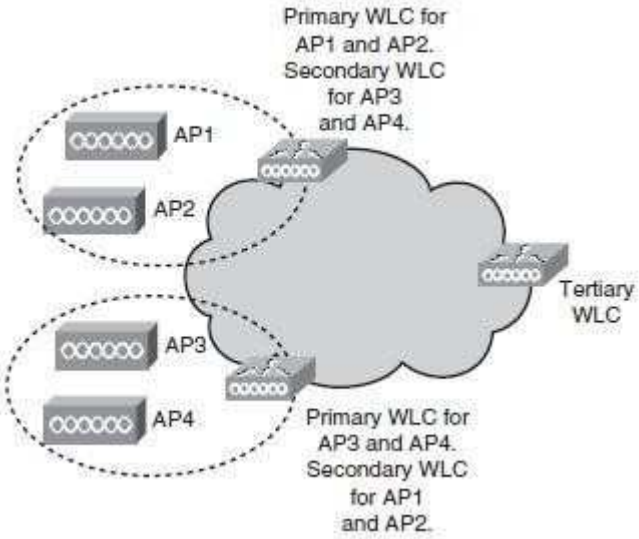


Figure 5-15 *N+N+1 Controller Redundancy*

Table 5-9 covers WLC redundancy.

Table 5-9 *WLC Redundancy*

WLC Redundancy	Description
N+1	A single WLC acts as the backup for multiple WLCs. The backup WLC is configured as the secondary on APs.
N+N	An equal number of controllers back up each other.
N+N+1	An equal number of controllers back up each other. The backup WLC is configured as the tertiary on APs.

QUESTION 128
When designing the threat detection and mitigation portion for the enterprise data center network, which of the following would be the most appropriate solution to consider?

A. 802.1X
B. ACLs in the core layer
C. Cisco Security MARS
D. Cisco Firewall Services Module

Correct Answer: C
Section: Describe the Methodology used to design a network
Explanation

Explanation/Reference:

QUESTION 129
According to Cisco, which four improvements are the main benefits of the PPDIOO lifecycle approach to network design? (Choose four.)

A. faster ROI
B. improved business agility
C. increased network availability
D. faster access to applications and services
E. lower total cost of network ownership
F. better implementation team engagement

Correct Answer: BCDE
Section: Describe the Methodology used to design a network
Explanation

Explanation/Reference:
Explanation:
The PPDIOO life cycle provides four main benefits:

+ It improves business agility by establishing business requirements and technology strategies. + It increases network availability by producing a sound network design and validating the network operation.
+ It speeds access to applications and services by improving availability, reliability, security, scalability, and performance.
+ It lowers the total cost of ownership by validating technology requirements and planning for infrastructure changes and resource requirements.
(Reference: Cisco CCDA Official Exam Certification Guide, 3rd Edition) described in the link below.Link: http://www.ciscopress.com/articles/article.asp?p=1608131&seqNum=3

QUESTION 130
During which phase of the PPDIOO model would you conduct interviews with supporting staff to develop and propose a viable solution?

A. Prepare
B. Plan
C. Design
D. Implement
E. Operate
F. Optimize

Correct Answer: A
Section: Describe the Methodology used to design a network
Explanation

Explanation/Reference:
Explanation:

PPDIOO Phase	Description
Prepare	Establishes organization and business requirements, develops a network strategy, and proposes a high-level architecture
Plan	Identifies the network requirements by characterizing and assessing the network, performing a gap analysis
Design	Provides high availability, reliability, security, scalability, and performance
Implement	Installation and configuration of new equipment
Operate	Day-to-day network operations
Optimize	Proactive network management; modifications to the design

Prepare Phase
The Prepare phase establishes organization and business requirements, develops a network strategy, and proposes a high-level conceptual architecture to support the strategy. Technologies that support the architecture are identified. This phase creates a business case to establish a financial justification for a network strategy.

QUESTION 131
Which three are considered as technical constraints when identifying network requirements? (Choose three.)

A. support for legacy applications

B. bandwidth support for new applications
C. limited budget allocation
D. policy limitations
E. limited support staff to complete assessment
F. support for existing legacy equipment
G. limited timeframe to implement

Correct Answer: ABF
Section: Describe the Methodology used to design a network
Explanation

Explanation/Reference:
Explanation:
Network design might be constrained by parameters that limit the solution. Legacy applications might still exist that must be supported going forward, and these applications might require a legacy protocol that may limit a design. Technical constraints include the following:
.
Existing wiring does not support new technology.
.
Bandwidth might not support new applications.
.
The network must support exiting legacy equipment.
.
Legacy applications must be supported (application compatibility).

DRAG DROP

QUESTION 132
Characterizing an existing network requires gathering as much information about the network as possible. Which of these choices describes the preferred order for the information-gathering process?

A. site and network audits, traffic analysis, existing documentation and organizational input
B. existing documentation and organizational input, site and network audits, traffic analysis
C. traffic analysis, existing documentation and organizational input, site and network audits
D. site and network audits, existing documentation and organizational input, traffic analysis

Correct Answer: B
Section: Describe the Methodology used to design a network
Explanation

Explanation/Reference:
Explanation:
This section describes the steps necessary to characterize the existing network infrastructure and all sites. This process requires three steps:

Step 1. Gather existing documentation about the network, and query the organization to discover additional information. Organization input, a network audit, and traffic analysis provide the key information you need. (Note that existing documentation may be inaccurate.) Step 2. Perform a network audit that adds detail to the description of the network. If possible, use traffic-analysis information to augment organizational input when you are describing the applications and protocols used in the network. Step 3. Based on your network characterization, write a summary report that describes the health of the network. With this information, you can propose hardware and software upgrades to support the network requirements and the organizational requirements.

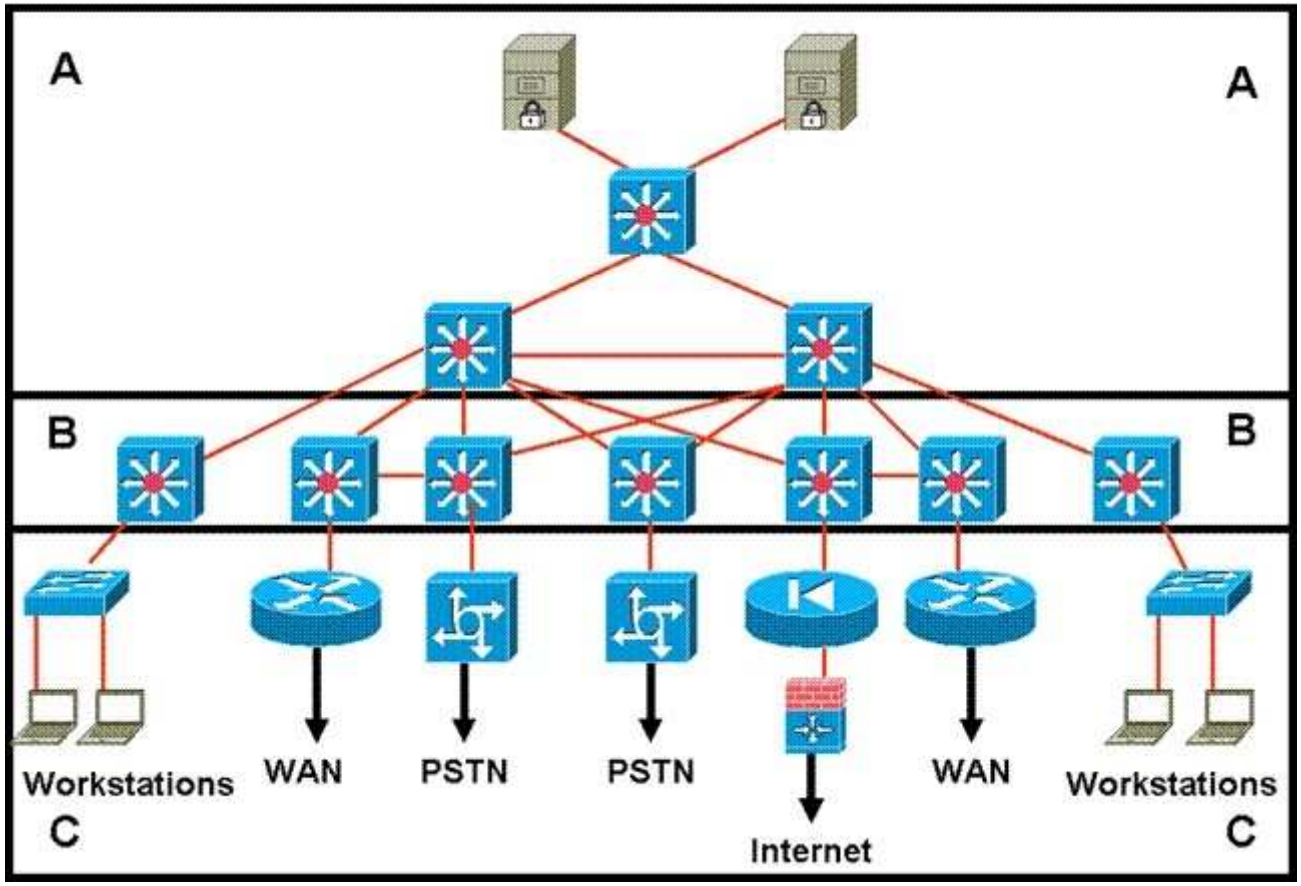
QUESTION 133
Which three terms describe the primary functions of the distribution layer of the campus network design hierarchy? (Choose three.)

A. provides end-user connectivity
B. provides high speed transport
C. provides QoS services
D. enforces security policies
E. provides WAN connections
F. connects access devices to the core backbone

Correct Answer: CDF
Section: Describe network structure and modularity
Explanation

Explanation/Reference:
Link: http://www.cisco.com/en/US/docs/solutions/Enterprise/Campus/campover.html#wp708979

QUESTION 134
Refer to the exhibit.



Which statement accurately represents the characteristics of the core layer in this design?

A. QoS should only be performed only in the core.
B. Load balancing should never be implemented or used.
C. Access lists should be used in the core to perform packet manipulation.
D. Partial mesh should be used as long as it is connected to each device by multiple paths.
E. Policy-based traffic control should be implemented to enable prioritization and ensure the best performance for all time-critical applications.

Correct Answer: D
Section: Describe network structure and modularity

Explanation

Explanation/Reference:

QUESTION 135
Which two of the following are benefits of using a modular approach to network design? (Choose two.)

A. improves flexibility
B. facilitates implementation
C. lowers implementation costs
D. improves customer participation in the design process

Correct Answer: AB
Section: Describe network structure and modularity
Explanation

Explanation/Reference:

QUESTION 136
Which three solutions are part of the Borderless Network Services? (Choose three.)

A. Wireless
B. Routing
C. TrustSec
D. MediaNet
E. Switching
F. EnergyWise
G. Next-Gen WAN

Correct Answer: CDF
Section: Describe network structure and modularity
Explanation

Explanation/Reference:
Explanation:

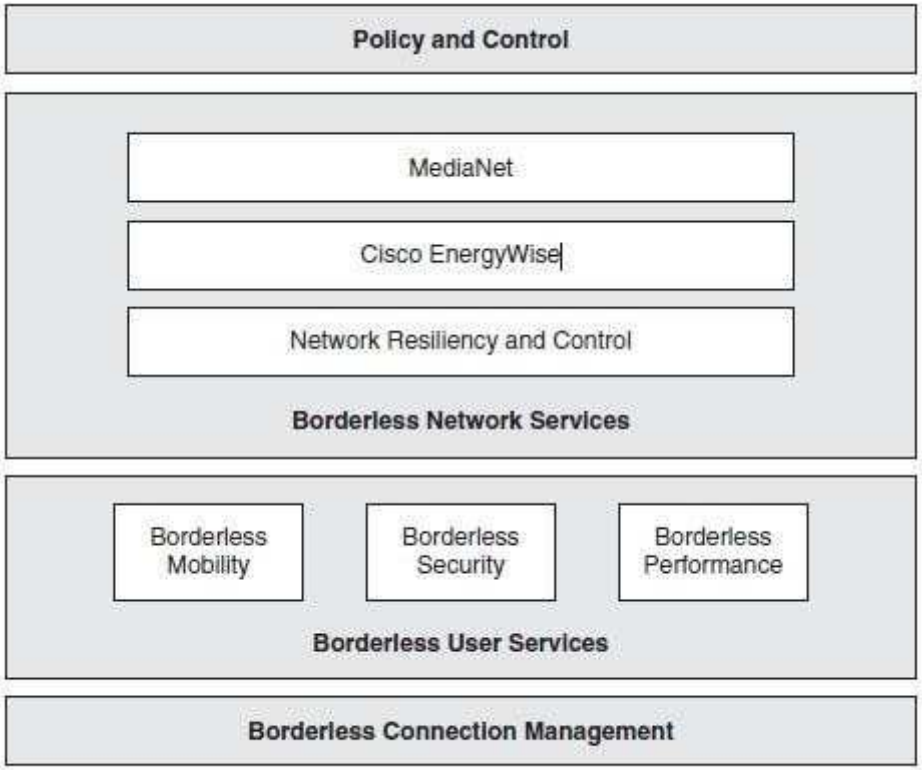
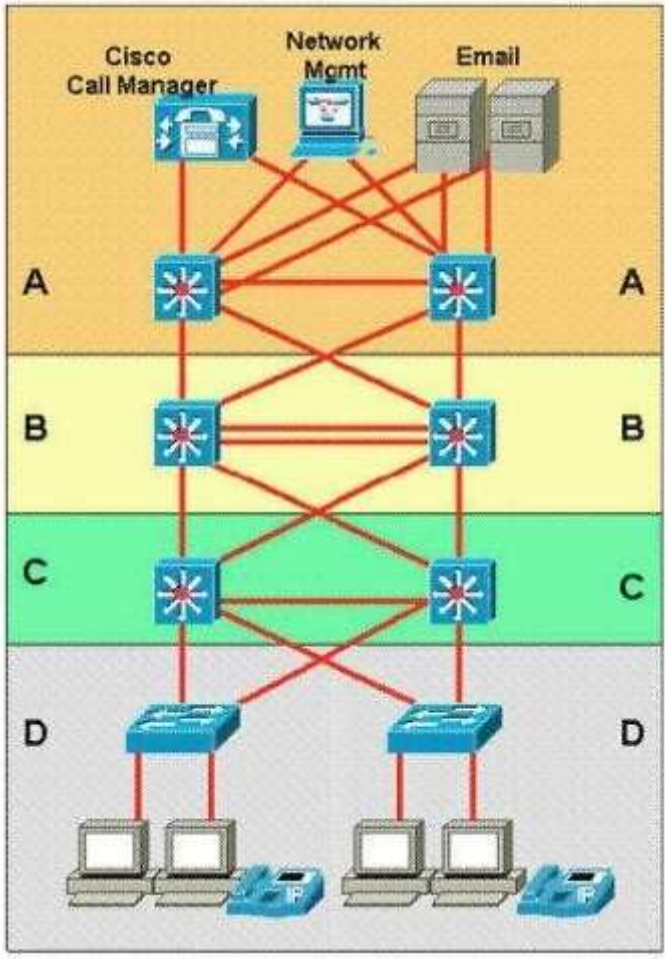


Figure 1-2 *Borderless Architecture*

Topic 3, Design Basic Enterprise Campus Networks

QUESTION 137
Refer to the exhibit.



Which two statements correctly identify the layers of the Enterprise Campus module? (Choose two.)

A. A is the Data Center Module and C is the Campus Core layer.
B. A is the Data Center Module and D is the Building Access layer.
C. B is the Campus Core layer and C is the Building Distribution layer.
D. B is the Building Distribution layer and C is the Campus Core layer.
E. A is the Internet Connectivity layer and B is the Campus Core layer.

F. B is the Building Distribution layer and D is the Building Access layer.

Correct Answer: BC
Section: Design Basic Enterprise Campus Networks
Explanation

Explanation/Reference:
Explanation: Module characteristics show to which category the blocks belong to. Link: http://www.cisco.com/en/US/docs/solutions/Enterprise/Campus/campover.html#wp708780

QUESTION 138
The evolution of the Data Center is best represented by the 3.0 architecture component of virtualization. Which of the following is not an example of the virtualization taking place in the Data Center?

A. Virtualized media access utilizing Fiber Channel over Ethernet
B. VLANs and virtual storage area networks (VSANs) provide for virtualized LAN and SAN connectivity, separating physical networks and equipment into virtual entities
C. Virtual Machines that run an application within the client operating system, which is further virtualized and running on common hardware
D. Storage devices virtualized into storage pools, and network devices are virtualized using device contexts

Correct Answer: A
Section: Design Basic Enterprise Campus Networks
Explanation

Explanation/Reference:

QUESTION 139
When there is a need for immunity to EMI for connecting locations that are greater than 100 meters apart, which two solutions can be utilized? (Choose two.)

A. multimode fiber
B. Fiber Channel
C. HVDC transmission lines
D. single-mode fiber
E. serial RS-232
F. Gigabit Ethernet 1000BASE-CX

Correct Answer: AD
Section: Design Basic Enterprise Campus Networks

Explanation

Explanation/Reference:

QUESTION 140
Which layer of the OSI model does Cisco recommend to place the enterprise network core layer, when designing a network based on its switched hierarchical design?

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

Correct Answer: C
Section: Design Basic Enterprise Campus Networks
Explanation

Explanation/Reference:

QUESTION 141
OSPF will be used as the IGP within a campus network. Which two things should you consider before deployment? (Choose two.)

A. All areas need to connect back to area 0.
B. The OSPF process number on each router should match.
C. NSSA areas should be used when an area cannot connect directly to area 0.
D. Stub areas should be connected together using virtual links.
E. ECMP may cause undesired results depending on the environment.

Correct Answer: AE
Section: Design Basic Enterprise Campus Networks
Explanation

Explanation/Reference:
answer appropriate.

QUESTION 142
Which Cisco technology using Nexus NX-OS infrastructure allows the network architect to create up to four separate control and data plane instances of the Nexus

chassis?

A. virtual port-channel
B. virtual routing and forwarding
C. virtual switching system
D. virtual device context

Correct Answer: D
Section: Design Basic Enterprise Campus Networks
Explanation

Explanation/Reference:
Explanation:
Virtualization
Virtual local-area network (VLAN), virtual storage-area network (VSAN), and virtual device contexts (VDC) help to segment the LAN, SAN, and network devices instances. Cisco Nexus 1000V virtual switch for VMware ESX and ESXI help to deliver visibility and policy control for virtual machines (VM).
Flexible networking options with support for all server form factors and vendors, including support for blade servers from Cisco, Dell, IBM, and HP with integrated Ethernet and Fiber Channel switches.

QUESTION 143
Which three options are valid Cisco STP tools used to ensure best-practice access layer design for the enterprise campus? (Choose three.)

A. Portfast
B. UDLD
C. Root Guard
D. BPDU Guard
E. Flex Links
F. SPAN
G. EtherChannel

Correct Answer: ACD
Section: Design Basic Enterprise Campus Networks
Explanation

Explanation/Reference:
Explanation:
Access layer Limit VLANs to a single closet when possible to provide the most deterministic and highly available topology.
Use RPVST+ if STP is required. It provides the best convergence.
Set trunks to ON and ON with no-negotiate

Manually prune unused VLANs to avoid broadcast propagation. Use VTP Transparent mode, because there is little need for a common VLAN database in hierarchical networks.
Disable trunking on host ports, because it is not necessary. Doing so provides more security and speeds up PortFast.
Consider implementing routing in the access layer to provide fast convergence and Layer 3 load balancing.
Use Cisco STP Toolkit, which provides PortFast, Loop Guard, Root Guard, and BPDU Guard.

QUESTION 144
Spanning Layer 2 across geographically separate data centers is a key consideration for current data center designs. Which is the name of the NX-OS technology that facilitates MAC in IP transport for Layer 2 VLANs across any IP network?

A. Overlay Transport Virtualization
B. Virtual Private LAN Services
C. Generic Routing Encapsulation
D. QinQ tunneling

Correct Answer: A
Section: Design Basic Enterprise Campus Networks
Explanation

Explanation/Reference:
answer is valid.

QUESTION 145
You are tasked with designing a new branch office that will support 75 users with possible expansion in the future and will need a highly available network. Which of the branch design profiles should be implemented?

A. large branch design
B. medium branch design
C. teleworker design
D. small branch design

Correct Answer: B
Section: Describe the Methodology used to design a network
Explanation

Explanation/Reference:
Explanation:
Medium Branch Design
The medium branch design is recommended for branch offices of 50 to 100 users, which is similar to the small branch but with an additional access router in the WAN edge (slightly larger) allowing for redundancy services. Typically, two 2921 or 2951 routers are used to support the WAN, and separate access switches are

used to provide LAN connectivity.

QUESTION 146
Which two can be used as a branch office WAN solution? (Choose two.)

A. frame relay
B. MPLS
C. Metro Ethernet
D. GPRS
E. dial-up modem
F. 3G USB modems

Correct Answer: BC
Section: Describe the Methodology used to design a network
Explanation

Explanation/Reference:
Explanation
Frame relay is old 'shared' technology today's sites use some flavor or Metro E or MPLS/VPN

QUESTION 147
What is the acceptable amount of one-way network delay for voice and video applications?

A. 300 bytes
B. 1 sec
C. 150 ms
D. 500 ms

Correct Answer: C
Section: Describe the Methodology used to design a network
Explanation

Explanation/Reference:
Explanation:
Delay Components in VoIP Networks
The ITU's G.I 14 recommendation specifics that the one-way delay between endpoints should not exceed 150 ms to be acceptable, commercial voice quality. In private networks, somewhat longer delays might be acceptable for economic reasons. The ITU G.114 recommendation specifics that 151-ms to 400-ms one-way delay might be acceptable provided that organizations are aware that the transmission time will affect the quality of user applications. One-way delays of above 400 ms are unacceptable for general network planning purposes.

QUESTION 148
A Cisco Self-Defending Network has been installed, but DoS attacks are still being directed at e-commerce hosts. The connection rate at the Internet firewall was limited, but the problem persists. What more can be done?

A. Move the servers to the DMZ.
B. Install all relevant operating system patches.
C. Block the servers' TCP traffic at the Internet firewall.
D. Block the servers' UDP traffic at the Internet firewall.

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:
sufficient answer.

QUESTION 149
RST Corporation is planning to upgrade its current network. The chief technology officer has supplied a topology diagram and an IP addressing scheme of the current network during an interview.
RST has been growing at about twenty percent per year. It has been difficult to maintain customer support at a satisfactory level. Therefore, the RST board has met with and directed the chief technology officer to look into network improvements.

Which two items are most relevant in documenting RST's business requirements? (Choose two.)

A. existing network topologies
B. network performance requirements
C. the IP addresses assigned by the ISP
D. improved customer support requirements
E. projected growth estimates

Correct Answer: AD
Section: (none)
Explanation

Explanation/Reference:
valid answer.

QUESTION 150

Which two of these best describe the implementation of a WAN Backup design over the Internet? (Choose two.)

A. a best-effort method
B. bandwidth guaranteed based on interface configuration
C. designed as an alternative to a failed WAN connection
D. implemented with a point-to-point logical link using a Layer 2 tunnel

Correct Answer: AC
Section: (none)
Explanation

Explanation/Reference:
appropriate.

QUESTION 151
Which two design criteria require VLANs in a proposed solution? (Choose two.)

A. the segmenting of collision domains
B. a limited corporate budget
C. the use of multivendor equipment
D. security between departments
E. video streaming on the LAN
F. the segmenting of broadcast domains

Correct Answer: DF
Section: (none)
Explanation

Explanation/Reference:
Great answer.

QUESTION 152
WAN backup over the Internet is often used to provide primary connection redundancy. Which is the most important consideration when passing corporate traffic over the public Internet?

A. security
B. static versus dynamic routing
C. bandwidth

D. QoS
E. latency

Correct Answer: A
Section: Describe the Methodology used to design a network
Explanation

Explanation/Reference:
Explanation:
WAN Backup over the Internet
Another alternative for WAN backup is to use the Internet as the connectivity transport between sites. However, keep in mind that this type of connection does not support bandwidth guarantees. The enterprise also needs to work closely with the ISP to set up the tunnels and advertise the company's networks internally so that remote offices have reachable IP destinations. Security is of great importance when you rely on the Internet for network connectivity, so a secure tunnel using IPsec needs to be deployed to protect the data during transport.

QUESTION 153
To provide Layer 2 connectivity between the primary and remote data centers, given that the two data centers are using Layer 3 routed DCIs, which NX-OS technology can be used to facilitate this requirement?

A. VRF
B. OTV
C. MPLS
D. SPT
E. VPC

Correct Answer: B
Section: Describe the Methodology used to design a network
Explanation

Explanation/Reference:

QUESTION 154
Which WLC interface is dedicated for WLAN client data?

A. virtual interface
B. dynamic interface
C. management interface
D. AP manager interface

E. service port interface

Correct Answer: B
Section: Describe the Methodology used to design a network
Explanation

Explanation/Reference:
Explanation:
WLC Interface Types
A WLC has five interface types:
Management interface (static, configured at setup, mandatory) is used for in-band management, connectivity to AAA, and Layer 2 discovery and association.
Service-port interface (static, configured at setup, optional) is used for out-of-band management. It is an optional interface that is statically configured. AP manager interface (static, configured at setup, mandatory except for 5508 WLC) is used for Layer 3 discovery and association. It has the source IP address of the AP that is statically configured.
Dynamic interface (dynamic) is analogous to VLANs and is designated for WLAN client data. Virtual interface (static, configured at setup, mandatory) is used for leaver 3 security authentication, DHCP relay support, and mobility management.

QUESTION 155
Which three modular components are part of the Cisco Enterprise Edge Architecture? (Choose three.)

A. e-commerce module
B. Internet connectivity module
C. server farm module
D. remote access and VPN module
E. PSTN services module
F. enterprise branch module
G. building distribution module

Correct Answer: ABD
Section: Describe network structure and modularity
Explanation

Explanation/Reference:
Explanation:

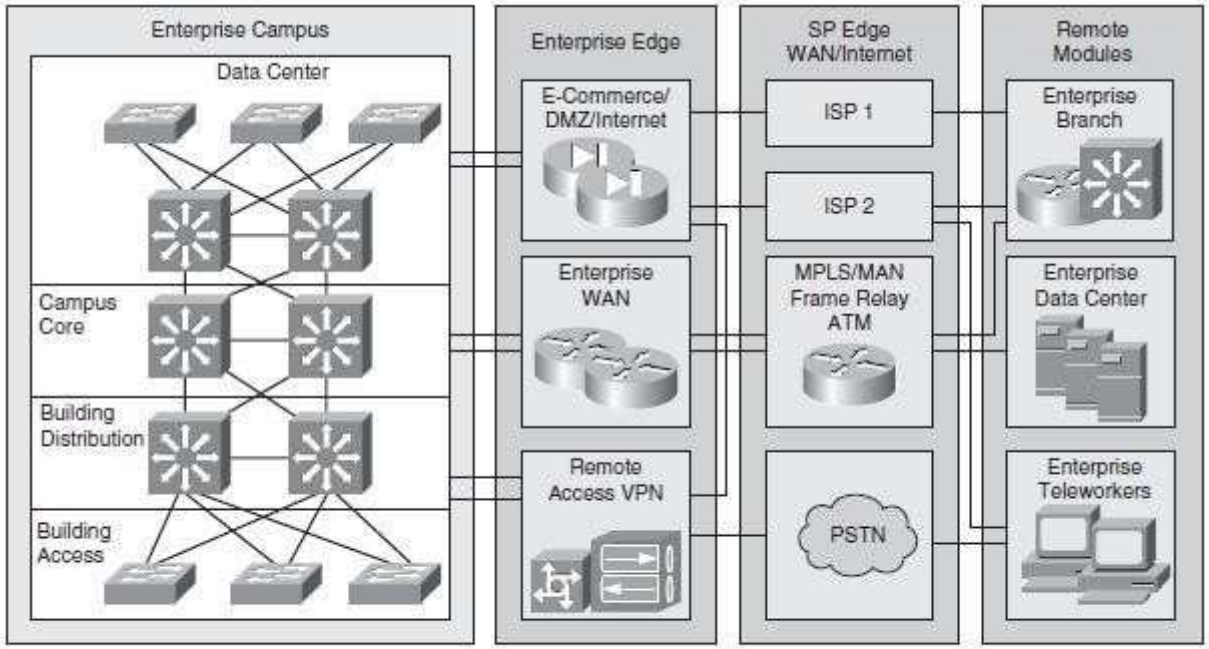


Figure 2-5 *Cisco Enterprise Architecture Model*

QUESTION 156
Which of the following is a component within the Cisco Enterprise Campus module?

A. Teleworker
B. E-Commerce
C. Internet Connectivity
D. Building Distribution
E. WAN/MAN Site-to-Site VPN

Correct Answer: D
Section: Describe network structure and modularity
Explanation

Explanation/Reference:

QUESTION 157
What are the three primary functions of the distribution layer of the campus network design hierarchy? (Choose three.)

A. provide end-user connectivity
B. provide high speed transport
C. provide QoS services
D. enforce security policies
E. provide WAN connections
F. connect access devices to the core backbone

Correct Answer: CDF
Section: Describe network structure and modularity
Explanation

Explanation/Reference:

QUESTION 158
Where in the Cisco Enterprise Architecture model does network management reside?

A. Enterprise data center module
B. Enterprise campus module
C. Enterprise edge module
D. Service Provider edge module
E. Service Provider data center module

Correct Answer: B
Section: Describe network structure and modularity
Explanation

Explanation/Reference:
Explanation:

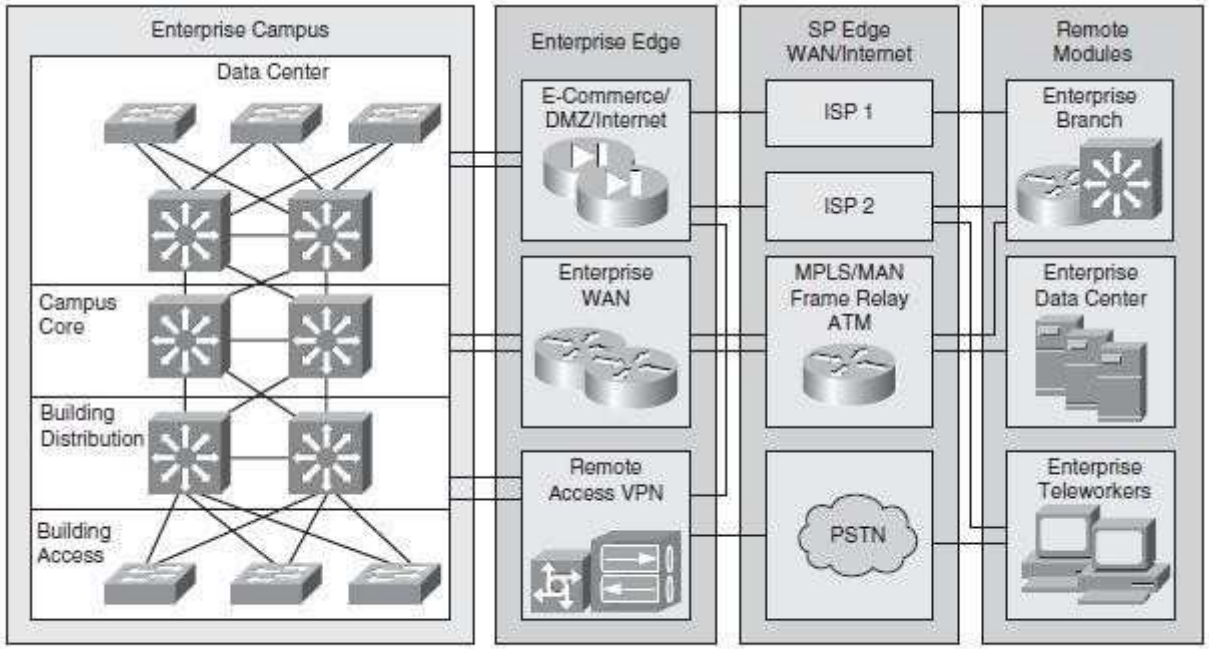


Figure 2-5 *Cisco Enterprise Architecture Model*

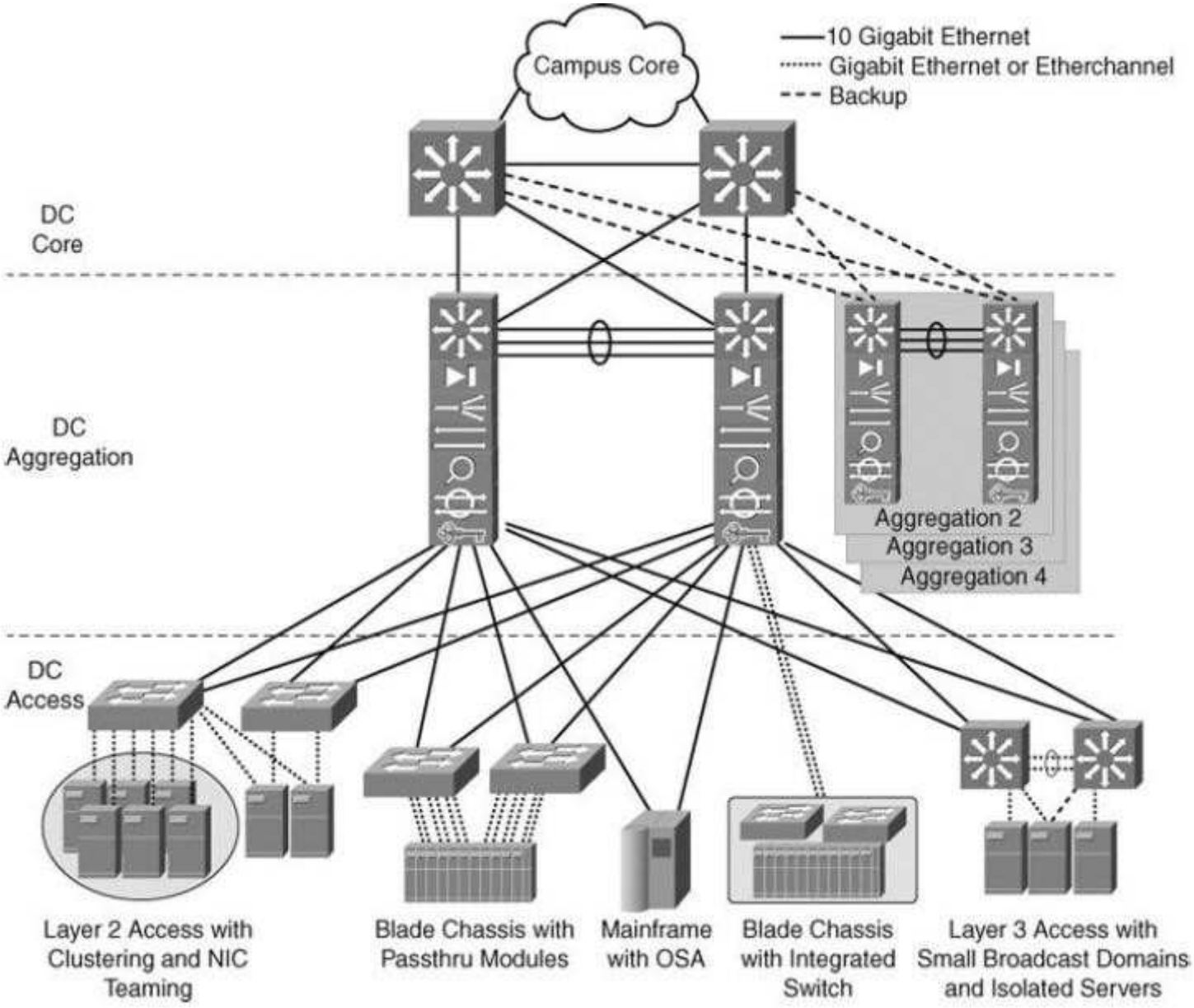
The network management servers reside in the campus infrastructure but have tie-ins to all the components in the enterprise network for monitoring and management.

QUESTION 159
Which two statements about designing the Data Center Access layer are correct? (Choose two.)

A. Multiport NIC servers should each have their own IP address.
B. Layer 3 connectivity should never be used in the access layer.
C. Layer 2 connectivity is primarily implemented in the access layer.
D. Multiport NIC servers should never be used in the access layer.
E. Layer 2 clustering implementation requires servers to be Layer 2 adjacent.

Correct Answer: CE
Section: Design Basic Enterprise Campus Networks
Explanation

Explanation/Reference:
Explanation:
User access is primarily layer 2 in nature, layer 2 clustering is possible only in layer 2 Here is the Explanation: from the Cisco press CCDA certification guide Figure 4-8. Enterprise Data Center Infrastructure Overview



Defining the DC Access Layer
The data center access layer's main purpose is to provide Layer 2 and Layer 3 physical port density for various servers in the data center. In addition, data center access layer switches provide high-performance, low-latency switching and can support a mix of oversubscription requirements. Both Layer 2 and Layer 3 access (also called routed access) designs are available, but most data center access layers are built using Layer 2 connectivity. The Layer 2 access design uses VLAN trunks upstream, which allows data center aggregation services to be shared across the same VLAN and across multiple switches. Other advantages of Layer 2 access are support for NIC teaming and server clustering that requires network connections to be Layer 2 adjacent or on the same VLAN with one another.

CCDA 640-864 Official Certification Guide Fourth Edition, Chapter 4

QUESTION 160
What is the primary consideration when choosing a routed network design over a traditional campus network design?

A. Layer 3 service support at the network edge
B. the routing protocol choice: open (OSPF) or proprietary (EIGRP)
C. the routing abilities of the host devices
D. the need to control the broadcast domains within the campus core

Correct Answer: A
Section: Design Basic Enterprise Campus Networks
Explanation

Explanation/Reference:
Explanation: Layer 3 ability at network edge should be available to leverage the benefits of routed network design.
Link: http://www.cisco.com/en/US/docs/solutions/Enterprise/Campus/campover.html