Exam : 350-027

Title : CCIEÂ® Written: Metro Ethernet

Ver : 02.12.07

QUESTION 1:

Which statements are true regarding ATM-Ethernet PW Interworking? Select two.

A. IP Interworking is supported.
B. Ethernet Interworking is supported.
C. LLC Interworking is supported.
D. ATM-Ethernet Interworking is not possible.

Answer: A, B

Explanation:
See Table 1 at:
http://www.cisco.com/en/US/products/sw/iosswrel/ps1838/products_feature_guide09186a008029b264.html

QUESTION 2:

To eliminate the need for adjacent routers on broadcast networks to form n(n-1)/2 adjacencies, IS-IS defines a pseudonode or Designated intermediate System, DIS. All router on the broadcast medium form an adjacency with the DIS. The Backup DIS is called:

A. Redundant DIS
B. BDR
C. There is no concept of a backup DIS in IS-IS
D. Designated Redundant System

Answer: C

Explanation:
1) http://www.cisco.com/warp/public/97/DIS-LSP-1.html
"On broadcast multi-access networks, a single router is elected as the DIS. There is no backup DIS elected. The DIS is the router that creates the pseudonode and acts on behalf of the pseudonode."
2) http://www.cisco.com/warp/public/97/is-is-ip-config.html
"Notice that the DIS is elected for both levels, and that no backup DIS exists, as with Open Shortest Path First (OSPF), which has a backup Designated Router (DR)."
3) http://www.ciscopress.com/articles/article.asp?p=31319&rl=1
"No backup DIS exists in IS-IS, in contrast to the backup DR for OSPF. If a DIS dies, a new election takes place"

QUESTION 3:

What ISDN timer is started after Q.931 SETUP msg is sent?

A. T301
B. T303

C. T302
D. T310
E. T305

Answer: D

Explanation:
If the Call Setup message is not acknowledged before the T303 timer expires, the CPE sends a second Call Setup message and restart T303. If T303 expires a second time, the call is cleared and disconnected.
Incorrect Answers:
T301 timer is for "Call Proceeding" not SETUP.

QUESTION 4:

Which statements are true regarding Interworking? Select two.

A. Interworking is only supported in AToM.
B. Interworking is supported in AToM and L2TPv3.
C. Ethernet Interworking is only supported if one AC is Ethernet or VLAN.
D. FR-PPP is not supported.

Answer: B, C

Explanation:
Table1 L2VPN Interworking Supported Features
Feature MPLS or L2TPv3 Support IP or Ethernet Support
Frame Relay to Ethernet/VLAN MPLS
L2TPv3
IP
Ethernet
Frame Relay to PPP MPLS
L2TPv3
IP
Frame Relay to ATM AAL5 MPLS IP
Ethernet/VLAN to ATM AAL5 MPLS IP
Ethernet
Ethernet to VLAN MPLS
L2TPv3
IP
Ethernet
http://www.cisco.com/en/US/partner/products/sw/iosswrel/ps1838/products_feature_guide09186a008029b264.html#wp107
Item "C" just means that to support Ethernet one end or the other of the Attachment Circuit has to be Ethernet. Note that in the third column where "Ethernet" appears, one or the other (or both) in column 1 is "Ethernet" (or VLAN).

Look for any Transport over MPLS for information on configuring AToM.
For configuring L2VPN Interworking, see L2VPN Interworking.

QUESTION 5:

Observering the output below from the CK router, select what path EoMPLS will take before exiting a router:
CK#show mpls 12transport vc 100 detail
Local interface: Fa0/0.1 up, line protocol up, Eth VLAN 100 up
Destination address: 172.0.0.3, VC ID: 100, VC status: up
Preferred path: Tunnel1, active
Default path: disabled
Tunnel label: 3, next hop point2point
Output interface: Tu1, imposed label stack {27 20}
Create time: 00:07:11, last status change time: 00:07:11
Signaling protocol: LDP 16, remote 20
MPLS VC labels: local 16, remote 20
Group ID: local 0, remote 0
MTU: local 1500, remote 1500
Remote interface description:
Sequencing: receive disabled, send disabled

A. 172.0.0.3
B. FastEthernet 0/0
C. FastEthernet 0/0.1
D. Tunnel1
E. This is an invalid output

Answer: D

QUESTION 6:

What is NOT true regarding PW QoS?

A. A policy action can be applied for packets matched by DLCI.
B. LLQ can be applied to traffic classified per COS on Ethernet AC.
C. CB-WFQ can be applied to traffic classified per COS on Ethernet AC.
D. The command 'set cos' is used to modify the .1p cos bits in a policy.
E. The command 'set vlan' is used to modify the VLAN tag in a policy.
F. All of the above.

Answer: E

QUESTION 7:

According to the IEEE 802.3 CSMA/CD specification, what is the proper signal for contact 6 of a PHY

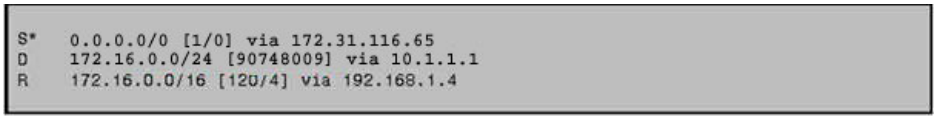
without an internal crossover MDI Signal?

A. Receive +
B. Transmit +
C. Receive -
D. Transmit -

Answer: C

QUESTION 8:

Exhibit:



A router has the above routes listed in its routing table and receives a packet destined for 172.16.0.45.
What will happen?

A. The router will not forward this packet, since it is destined for the 0 subnet.
B. The router will forward the packet through 172.31.116.65, since it has the lowest metric.
C. The router will forward the packet through 10.1.1.1.
D. The router will forward the packet through 172.31.116.65, since it has the lowest administrative distance.
E. The router will forward the packet through 192.168.1.4

Answer: C

Explanation:
The longest mask rule applies here both 172.16.0.0/24 and 172.16.0.0/16 match, but the routing entry for the /24 is used since the mask is longer.

QUESTION 9:

Which statement is true? Select one.

A. L2TPv2 and L2TPv3 are the same protocol with enhanced features in L2TPv3.
B. L2TPv3 and L2TPv3 are both commonly used for dial-in services.
C. L2TPv2, not L2TPv3, is commonly used for dial-in services.
D. L2TPv3 is used for Layer2 attachment services.
E. None of the above.

Answer: C

Explanation:
l2tpv2 is used normally for dial-in service and remote access see book (Layer 2 VPN Architectures: chapter2/section3:Layer 2 Tunnel Protocol Version 3 Overview)
Not A: there are some difference between l2tpv2 & l2tpv3 not just extension or enhancement

QUESTION 10:

What is most commonly used to prevent hackers from flooding a port with MAC-addresses?

A. BPDU Guard
B. 802.x
C. Port Security
D. Storm Control
E. Switch Port protected

Answer: C

QUESTION 11:

A service provider plans to offer Virtual Private LAN Service to a customer who has 10 sites, and the customer edge switches are attached to 8 provider edge switches. What is the maximum number of pseudowires that needs to be provisioned throughout the service provider network in order to have full Layer-2 connectivity among all sites?

A. 10
B. 8
C. 28
D. 45

Answer: C

Explanation:
n(n-1)/2 = 8*7/2=28

QUESTION 12:

Which statements are true regarding the 'preferred-path' pseudowire command? Select two

A. It can be used with an interface, an IP address or an access-list.
B. When used with an IP address, the peer is a remote PE loopback.
C. When used with an IP address, the peer is the IGP next hop.
D. There must be an LSP destined to the IP address used.
E. There must be a TE-Tunnel LSP destined to the IP address used.

Answer: B, D

Explanation:
Preferred path
Path that was assigned to the VC and the status of that path. The path can be an MPLS traffic engineering tunnel or an IP address or host name of a peer PE router

QUESTION 13:

The TCP PUSH flag indicates:

A. The data in the TCP receive buffer should be sent to the application listening to this TCP connection without waiting for further data.
B. Any data being buffered by routers between the source and destination for this connection should be sent immediately.
C. The sender should make certain its send buffer is pushed into the wire.
D. This session is about to end.

Answer: A

QUESTION 14:

CIDR is primarily used:

A. In BGP only.
B. For classless routing.
C. In OSPF only.
D. In EIGRP only.

Answer: A

Explanation:
Classless Interdomain Routing (CIDR)
Classless interdomain routing. IP addressing technique supported by BGP4 and based on route aggregation. CIDR allows routers to group routes together to minimize the quantity of routing information carried by the core routers

QUESTION 15:

A service provider offers Virtual Private LAN Service over its MPLS-enabled network. Currently 6 provider edge switches total are in service. There are 5 customers who subscribed for the service, and every customer has 2 sites attached for every provider edge switch. What is the maximum number of LDP sessions created for pseudowire signaling throughout the service provider network to have full Layer-2 connectivity among all sites of each customer?

A. 15
B. 30
C. 36
D. 45

Answer: A

Explanation:
n(n-1)/2=6*5/2=15 since LDP is bidirectional

QUESTION 16:

Estimating the MTU for EoMPLS Packets Edge MTU of 1500, Transport header, AToM header present, MPLS label, and stack MPLS label, calculate the core MTU requirements to handle EoMPLS port mode packets.

A. 1518
B. 1520
C. 1524
D. 1526

Answer: D

Explanation:
See Table 7-3@ L2 VPN architectures.

QUESTION 17:

The ATM reference model is composed of which ATM layers? (Multiple answer) Select three.

A. ATM layer
B. Physical layer
C. Modular layer
D. ATM adaptation layer

Answer: A, B, D

QUESTION 18:

In MPLS what is an LSP?

A. Label Selection Pair
B. Label Switched Path
C. Lightweight Signaling Protocol
D. Large Sampling Path

Answer: B

QUESTION 19:

Which statements are true regarding default MTU? Select two.

A. Ethernet and POS are 1500 bytes.

B. Ethernet, Serial and HSSI are 1500 bytes.
C. HSSI, ATM and POS are 9100 bytes.
D. HSSI, ATM and POS are 4470 bytes.
E. Ethernet and Serial are 1500 bytes

Answer: D, E

Explanation:
http://www.cisco.com/en/US/partner/tech/ CK3 9/ CK3 71/technologies_tech_note09186a00800c8279.shtml#mtu_4470_bytes
FDDI, HSSI, ATM, POS - 4470

QUESTION 20:

In VPLS, the MAC address withdrawal is accomplished by means of what protocol?

A. UDP
B. STP
C. BGP
D. PWE3
E. LDP

Answer: E

Explanation
Virtual Private LAN Service Architectures and Operation [Cisco 7600 Series Routers]
http://www.cisco.com/en/US/partner/products/hw/routers/ps368/products_white_paper09186a00801f6084.shtml

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QUESTION 21:

For an OC-48 signal (2.5Gb/s), what is the BER (bit error rate) if there is a 1 bit error every four days?

A. 10E-12
B. 10E-13
C. 10E-14
D. 10E-15
E. 10E-16

Answer: D

Explanation:
BER = Errors/Total Number of Bits
1/2.5*1000*1000*1000*60*60*24*4 = 10E-15

QUESTION 22:

MPLS Traffic Engineering does NOT require:

A. BGP
B. Link state IGP protocol
C. CEF switching
D. RSVP

Answer: A

Explanation:
there are two type of TE
RSVP-TE (widely used) & CR-LDP
(MPLS need CEF switching(C) and TE needs Link state IGP protocol "ISIS/OSPF" (B). However, BGP is not needed for Both basic MPLS nor TE.

QUESTION 23:

What is NOT a reason to deploy MPLS?

A. Ubiquitous acceptance and firm standards.
B. Traffic engineering capabilities.
C. Simplify lookups in software-based routers.
D. Potential use in VPN services.

Answer: A

QUESTION 24:

A router is set to boot from flash, but cannot find boot commands in the configuration. Also, valid files do not exist in the default flash device. The router will:

A. Boot from ROM, since there are no valid sources.
B. Try to boot from the network, using a default filename.
C. Terminate the boot process with an error message.
D. Try to boot from the network, then boot from ROM as a backup.

Answer: D

QUESTION 25:

What is true about the DLCI field in the Frame Relay header?

A. It consists of two portions, source and destination, which map data to a logical channel.
B. It generally has significance only between the local switch and the DTE device.

C. It is an optional field in the ITU-T specification.
D. It is present only in data frames sent through the network.

Answer: B

QUESTION 26:

What type of fiber-optic system is used to distribute cable television signals?

A. Point to multipoint
B. Local Area network
C. Switched
D. Point to point

Answer: A

QUESTION 27:

FRTP stands for:

A. Frame Relay Top Pseudowire
B. Frame Relay Traffic Pseudowire
C. Frame Relay Traffic Policy
D. Frame Relay Traffic Policing
E. None of the above.

Answer: D

Explanation:
See the sample question in Cisco site and notice choice c "protocol not policy"

QUESTION 28:

MPLS does not support:

A. Multicast
B. OSPF
C. BGP
D. Multicast and OSPF

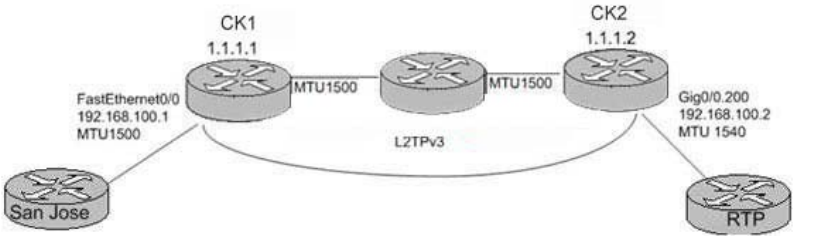
Answer: A

QUESTION 29:

Exhibit:

```
CK1
!
l2tp-class l2tp_vlass
 authentication
 hostname PE1
 password 0 cisco
!
pseudowire-class PWE_L2TPv3
 encapsulation l2tpv3
 protocol l2tpv3 l2tp_vlass
 ip local interface Loopback1
 ip pmtu
 ip dfbit set
!
interface Loopback1
ip address 1.1.1.1 255.255.255.255
!
interface FastEthernet0/0
 xconnect 1.1.1.2 100 pw-class PWE_L2TPv3
```

```
CK2
!
l2tp-class l2tp_vlass
 authentication
 hostname PE2
 password 0 cisco
!
pseudowire-class PWE_L2TPv3
 encapsulation l2tpv3
 protocol l2tpv3 l2tp_vlass
 ip local interface Loopback1
 ip pmtu
 ip dfbit set
!
interface Loopback1
ip address 1.1.1.2 255.255.255.255
!
interface GigabitEthernet0/0.200
mtu 1540
 xconnect 1.1.1.2 100 pw-class PWE_L2TPv3
```



What is true about this configuration? Select two.

A. This scenario will work, despite MTU mismatch issues.
B. This configuration has the wrong MTU in the core, which will prevent L2TPv3 from coming up, it requires an MTU match on each side.
C. There is a misconfiguration in pseudowire-class for this scenario.
D. The Interworking feature isn't enabled in pseudowire-class.

Answer: A, D

Explanation:
[if the pseudo-wire function was there, there would be a command like below]
To enable L2VPN Interworking, use the interworking command in pseudowire class configuration mode. To disable L2VPN Interworking, use the no form of this command.
interworking{ethernet | ip}
http://www.cisco.com/en/US/partner/products/sw/iosswrel/ps1829/products_feature_guide09186a00801b2407.html#wp104

QUESTION 30:

Which statement is true regarding local switching? Select three.

A. Local switching connection comes up even with mismatching MTUs.
B. The command 'xconnect' is used when configuring local switching.
C. AMT only supports local switching to FR or ATM.
D. The command 'connect' is used when configuring local switching.

Answer: A, C, D

Explanation:
B is not true.

QUESTION 31:

DSCP EF is equivalent to what decimal value?

A. 26
B. 34
C. 46
D. 38

Answer: C

Explanation:
The correct answer is 46 (in binary 101110)
Router(config)# class-map match-all VOIP
1751-uut1(config-cmap)# match ip dscp ?
Differentiated services codepoint value
af11 Match packets with AF11 dscp (001010)
.....
.....
cs7 Match packets with CS7(precedence 7) dscp (111000)
default Match packets with default dscp (000000)
ef Match packets with EF dscp (101110)
Router1(config-cmap)# match ip dscp af31
Reference:
http://www.cisco.com/en/US/partner/products/ps6610/products_data_sheet09186a00800a3e30.html

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QUESTION 32:

Given an address of 10.1.1.1 with a subnet mask of 255.255.255.224, how many hosts can be addressed in this subnet?

A. 16
B. 15
C. 30
D. 31
E. 63

Answer: C

QUESTION 33:

Which are two modes of Pseudwore Interworking? Select two.

A. IP (routed) interworking
B. ATM-FR (SNAP-NLPID) interworking
C. Clear Channel interworking
D. Ethernet (bridged) interworking
E. There is no PW interworking

Answer: A, D

QUESTION 34:

For the spanning tree algorithm, a bridge builds part of its forwarding table based on:

A. Destination MAC addresses
B. 802.2 headers
C. Source MAC addresses
D. The Ethernet type field
E. The SNAP field

Answer: C

QUESTION 35:

The term VFI describes:

A. The Ethernet bridge function in the PE.
B. The spanning tree instance in the PE.
C. The forwarding instance of IP packets over an MPLS core.
D. There is no such a thing as VFI.
E. None of the above.

Answer: A

Explanation:
Reference:
http://www.cisco.com/en/US/partner/products/sw/netmgtsw/ps4748/products_user_guide_chapter09186a00801e15a7.htm

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QUESTION 36:

What is true about the EoMPLS control word?

A. It is different for .1q tagged versus untagged Ethernet frames.
B. It indicates the class of service of an EoMPLS packet.
C. It is only used for .1q tagged packets, to convery the tag to the remote end.
D. The first 4 bits are 0 as to not alias an IP packet.
E. There is no such thing as EoMPLS control word.

Answer: D

Explanation:
The control word is used for sequencing, not class of service. The EXP bits in the MPLS header are used for class of service. The first four bits in the control word are set to 0.
From RFC4448
The control word defined in this section is based on the Generic PW MPLS Control Word as defined in [PWE3-CW]. It provides the ability to sequence individual frames on the PW, avoidance of equal-cost multiple-path load-balancing (ECMP) [RFC2992], and Operations and Management (OAM) mechanisms including VCCV [VCCV].
...
The control word is defined as follows:
0 1 2 3
0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1
+-+
|0 0 0 0| Reserved | Sequence Number |
+-+
In the above diagram, the first 4 bits MUST be set to 0 to indicate PW data. The rest of the first 16 bits are reserved for future use. They MUST be set to 0 when transmitting, and MUST be ignored upon receipt.
The next 16 bits provide a sequence number that can be used to guarantee ordered frame delivery. The processing of the sequence number field is OPTIONAL.
The sequence number space is a 16-bit, unsigned circular space. The sequence number value 0 is used to indicate that the sequence number check algorithm is not used. The sequence number processing algorithm is found in [PWE3-CW].
Not E: There is a control word that Cisco basically ignores for EoMPLS.

QUESTION 37:

What is the recommended percentage for priority queue when configuring Low Latency Queuing?

A. 50%
B. 33%
C. 40%
D. 10%

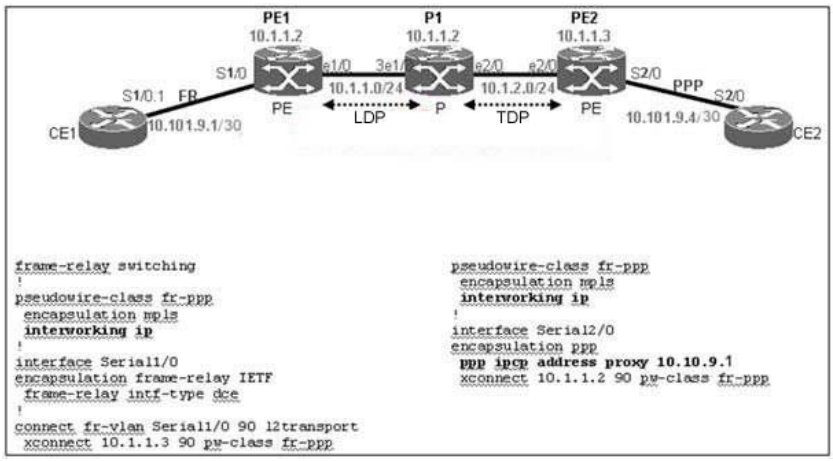
Answer: B

Explanation:
The correct answer is 33% not 40%.

LLQ should not exceed 1 third (1/3) of bandwidth
http://www.sprint.net/policy/cos_guidelines.html

QUESTION 38:

Exhibit



By looking at the configuration shown, determine whether CE1 will be able to communicate with CE2.

A. No, because the Frame-Relay interface is not configured correctly.
B. No, because of the MTU mismatch on Frame-Relay and PPP.
C. No, because the LDP and TDP can be configured in the core for this network.
D. No, because Frame-Relay switching needs to be enabled on both PE1 and PE2.
E. Yes, CE1 will be able to communicate with CE2.
F. No, because Frame-Relay and PPP are totally different protocols and they want work with each other.

Answer: E

Explanation:
Interlocking between Frame Relay and PPP is allowed. See L2VPN Interworking" on the CISCO site.
According to this document, the configuration in the exhibit should work.

QUESTION 39:

Which pieces of information are not present in a BPDU? Select three

A. Bridge ID of the root switch.
B. Bridge ID of the sending switch.
C. STP Path to the root.
D. Value if hysteresis timer.
E. MAC Address of the root port.

Answer: A, D, E

QUESTION 40:

Which statements are FALSE concerning the use of VACLs on the Catalyst 6500 switch? Select one.

A. VACLs can be used to forward/drop and redirect traffic based on Layer 2 and Layer 3 information.
B. VACLs cannot be used when using QoS on the switch.
C. VACLs can be used together with RACLs.
D. VACLs can be used for traffic that is being L3 switched.
E. VACLs do not cause extra latency for traffic passing through the switch.

Answer: E

QUESTION 41:

With CGMP enabled, which are unique about the following MAC address range: 01-00-5E-00-00.00 to 01-00-5E-00-00-FF? (Multiple answer) Select three.

A. CGMP does not prune those MAC addresses.
B. They contain the CGMP Multicast Addresses for the IGMP Leaves and IGMP Queries.
C. CGMP filters those MAC addresses when they arrive at the processor.
D. They are the reserved IP addresses of 224.0.0.0 to 224.0.0.255 for forwarding local IP multicast traffic in a single Layer 3 hop.

Answer: A, B, D

Explanation:
B: When CGMP Leave is enabled, two entries are added to the show cam system command output, as shown below.
01-00-5e-00-00-01
01-00-5e-00-00-02
IGMP Leave uses 224.0.0.2 and IGMP Query uses 224.0.0.1.
See http://www.cisco.com/warp/public/473/22.html#cgmp.

QUESTION 42:

What command used for Interworking configuration?

A. 'interworking {etherner | ip} in interface config mode.
B. 'interworking {etherner | ip} is pseudowire-class config mode.
C. 'interworking {bridged | routed} in 12tp-class mode.
D. '{ip | Ethernet}Interworking in pseudowire-class config mode.

Answer: B

QUESTION 43:

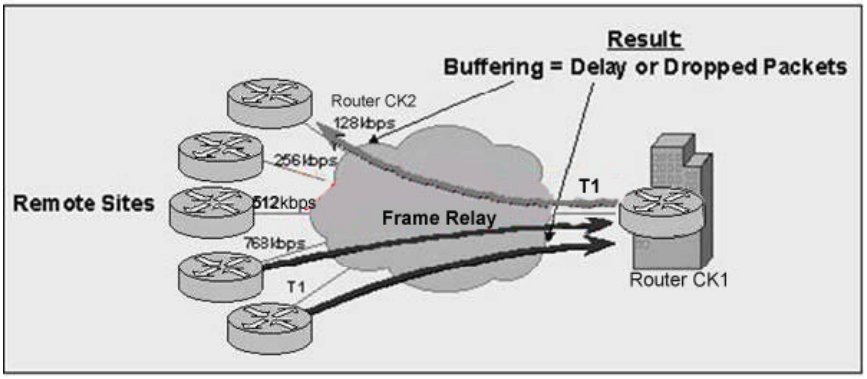
Regarding IP Interworking between Ethernet and PPP, which statements are true? Select two

A. IP Interworking between PPP-Ethernet is only supported using CHAP.
B. PPP terminates on the PE device, and therefore the PE negotiates LCP and NCP.
C. Specific configuration regarding IPCP is required.
D. It is not supported.

Answer: B. C

QUESTION 44:

Exhibit:



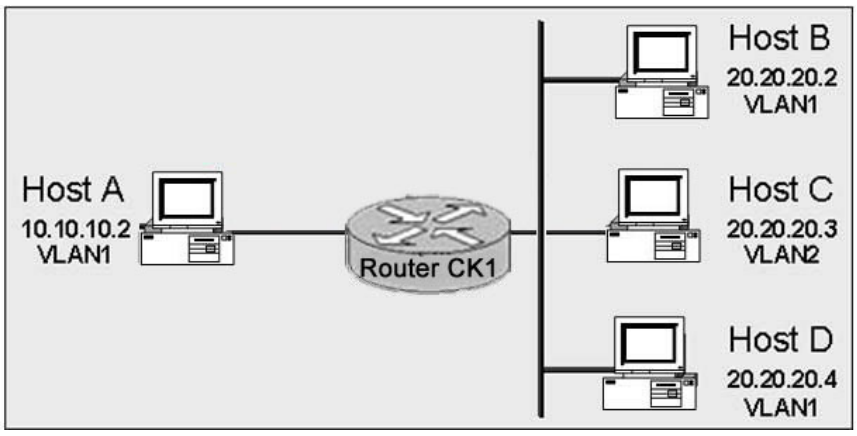
Which mechanism should be employed to limit the 'transmit rate' from Router CK1 to Router CK2 ?

A. Committed Access Rate
B. Traffic Shaping
C. Weighted Fair Queuing
D. Packet Classification w/ Weighted Fair Queuing
E. None of the Above

Answer: B

QUESTION 45:

Exhibit:



Host D sends a frame to Host B at the same time that Host B sends a frame to Host D. Bridging is enabled on Router CK1 , and the two frames collide into each other. Select the best explanation of why Host B will or will not receive the original frame from Host D:

A. Host B will receive the frame, since Hosts B and D are in the same VLAN.
B. Host B will receive the frame, since Hosts B and D are in the same routing domain.
C. Host B will not receive the frame, since Hosts B and D are in the same collision domain.
D. Host B will not receive the frame, since Hosts B and D are in different broadcast domains.
E. Host B will receive the frame, since Hosts B and D are in the same bridging domain.

Answer: C

QUESTION 46:

Which statements are true? Select two.

A. L2TPv2 can run over UDP or directly over IP.
B. L2TPv2 can run over UDP only.
C. L2TPv3 can run over UDP or directly over IP.
D. L2TPv3 can run over UDP only.
E. L2TPv2 and L2TPv3 always use TCP as reliable transport.

Answer: B, C

Explanation:
C is correct since l2tp run on UDP or ip direct.
Not A: is not correct since l2tpv2 can not run on top IP direct
Even though L2TP is labeled as an IP-based technology, it is in fact a transport-independent protocol. L2TPv2, which is mostly deployed for remote access applications, specifies mechanisms to tunnel Layer 2 frames over UDP, ATM AAL5, and Frame Relay. L2TPv3 defines the specifications to tunnel Layer 2 frames over IP and UDP.
see book (Layer 2 VPN Architectures:chapter2/section3: Layer 2 Tunnel Protocol Version 3 Overview)

QUESTION 47:

- interface tunnel 1
tunnel destination 10.10.10.10
ip unnumbered loopback0
tunnel model mpls traffic-eng
tunnel mpls traffic-eng affinity 0x0 mask 0x1
tunnel mpls traffic-eng autoroute announce
tunnel mpls traffic-eng bandwidth 15500 <sub-pool 40000>
tunnel mpls traffic-eng fast-reroute
tunnel mpls traffic-eng path-option 5 dynamic
tunnel mpls traffic-eng path-option 6 explicit name path-list1
tunnel mpls traffic-eng priority 7 7

tunnel mpls traffic-eng record-route
From the MPLS-TE configuration above, one can conclude that:

A. Path Option 6 will be attempted first because explicit paths are always preferred over dynamic paths.
B. Path Option 5 will be attempted first because dynamic paths are always preferred over explicit paths.
C. Path Option 5 is attempted first because path options are attempted in sequence - lowest to highest.
D. This is not valid output.

Answer: C

QUESTION 48:

What protocol is used to exchange control information between active and standby supervisors in order to support redundancy?

A. SCP
B. SSO
C. SLP
D. CDP
E. STP
F. There is no such thing as a protocol between supervisor modules.

Answer: B
http://www.cisco.com/en/US/products/hw/modules/ps2797/products_data_sheet09186a00801fcaba.html

---

QUESTION 49:

Existing ACEs in the VACL:
set security ac lip Control_Access permit host 10.1.1.100
set security ac lip Control_Access deny 10.1.1.0 255.255.255.0
set security ac lip Control_Access permit host 172.16.84.99
set security ac lip Control_Access deny 172.16.84.0 255.255.255.128
Additional ACEs to the VACL:
set security ac lip Control_Access permit host 172.16.82.3
set security ac lip Control_Access deny host 172.17.10.44
set security ac lip Control_Access permit host 192.168.99.150
set security ac lip Control_Access deny host 192.168.250.1
A VLAN Access Control List has been configured with the four entries shown above. After the addition of the next four entries, how many total mask value entries are required in the Ternary Content Addressable Memory (TCAM) table?

A. 1
B. 2
C. 3
D. 4
E. 8

Answer: C

QUESTION 50:

Which statements are true about LMI in FRoMPLS? Select two.

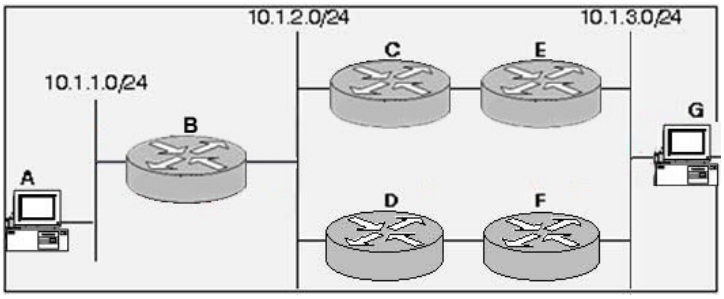
A. LMI runs between PE and CE.
B. LMI runs between CE and CE.
C. Only NNI LMI is supported.
D. LMI support is optional.
E. LMI support is required.

Answer: A, E

Explanation:
Not D: You can't actually disable LMI. See
http://www.cisco.com/en/US/partner/products/hw/routers/ps368/products_configuration_guide_chapter09186a00

QUESTION 51:

Exhibit:



In this diagram, Host G is attempting to send a packet to Host A through Router E. All routers are running EIGRP, and Router E has installed the following route in its routing table:
10.1.1.0/24 via router F
What will occur when Router E receives packets from Host G that are destined for Host A?

A. E cannot have a route to 10.1.1.0/24 through F, so it will always choose the path through C.
B. This is a routing loop, E will forward the traffic to F, and F will send the traffic back to E.
C. Router E will forward the traffic to Router F.
D. Router E will forward the traffic to Router F and send a 'host not reachable this direction' ICMP packet to Host G.
E. Router E will forward the traffic to Router F and send an ICMP redirect to Host G.

Answer: E

QUESTION 52:

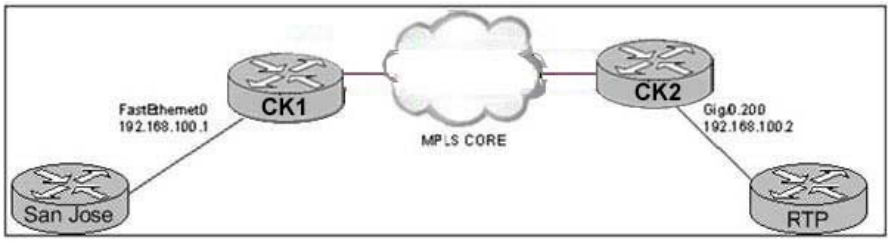
What QoS mechanism is used and supported with EoMPLS?

A. 802.1s
B. 802.1d
C. 802.1p
D. 802.1w
E. 802.1q

Answer: C

QUESTION 53:

Exhibit:



CK1 and CK2 are connected to the MPLS cloud. All MPLS tables from CK1 and CK2 are working. Observing the shown topology, will this scenario work?

A. This scenario will not work because Gigabit Ethernet can't be connected to FastEthernet over MPLS.
B. This scenario will work because the issues concerning Gigabit and FastEthernet over MPLS with default behavior should not may any difference.
C. This scenario will not work because Gigabit usually has MTU over 9000 and FastEthernet 1500.
D. This scenario will not work because one side has dot1q header and another side is in port mode.
E. This scenario will work by configuring PWE Class using the Interworking feature. By default, the MTU on each side is 1500, so this is an acceptable solution.

Answer: E

QUESTION 54:

Which statements are true regarding STP Path Cost? Select two

A. STP default Path cost is the same for all interfaces.
B. STP default Path cost depends on the interface speed.
C. The cost cannot be changed for a VLAN.
D. The cost can be changed for an interface using the command 'spanning-tree cost'.
E. The cost can be changed for an interface using the command 'spt path-cost'.

Answer: B, D

QUESTION 55:

'tunnel mpls traffic-eng autoroute announce' means:

A. This router will announce this route automatically to all other routers in the network.
B. All routes will not attempt to use this tunnel.
C. Only routes that have the tunnel destination will be recomputed using SPF over the tunnel interface.
D. This will announce RSVP to other routers.

Answer: A

Explanation:
See:
http://www.cisco.com/en/US/partner/tech/ CK4 36/ CK4
28/technologies_configuration_example09186a0080093fd0.shtml
or:
http://www.cisco.com/univercd/cc/td/doc/product/software/ios124/124cr/hmp_r/mpl_s8h.htm#wp1009648

QUESTION 56:

Dynamic Trunking Protocol (DTP) provides a method to:

A. Synchronization networks between trunks.
B. Negotiate the trunking method with an adjacent switch.
C. Autodiscover network-wide trunks.
D. Avoid STP loops.
E. Allow CDP discovery over ISL or dot1q trunks.

Answer: B

QUESTION 57:

Which are components of VPLS? Select three.

A. BGP extensions
B. Pseudowire technology
C. LDP extensions
D. Etherchannel technology
E. MAC Address learning and forwarding on a virtual port

Answer: B, C, E

QUESTION 58:

What technology allows transporting Layer 2 attachment circuits over IP-only backbones?

A. GRE
B. AToM

C. L2TPv3
D. DLSW+

Answer: C

QUESTION 59:

When executing the following show mpls l2transport vc detail command, you notice the link does not come up. Choose the most likely cause.
PE#sho mpls l2transport wc detail
Local interface: Et0/0 up, line protocol up, Ethernet up
Destination address: 172.168.1.102, VC ID: 100, VC status: down
Preferred path: not configured
Default path: active
Tunnel label: 16, next hop point2point
Output interface: Se5/0, imposed label stack {16 16}
Create time: 00:18:10, last status change time: 00:03:51
Signaling protocol: LDP, peer, 172.168.1.102:0 up
MPLS VC labels: local 16, remote 16
Group ID: local 0, remote 0
MTU: local 1500, remote unknown
Remote interface description:
Sequencing: receive disabled, send disabled
VC statistics:
packet totals: receive 0, send 0
byte totals: receive 0, send 0
packet drops: receive 0, send 78

A. MPLS is not enabled from PE to P.
B. The remote PE interface is down.
C. TDP is configured instead of LDP.
D. There is a remote site MTU mismatch.

Answer: D

QUESTION 60:

What command makes it possible to run MPLS/LDP in secue mode between P and PE?

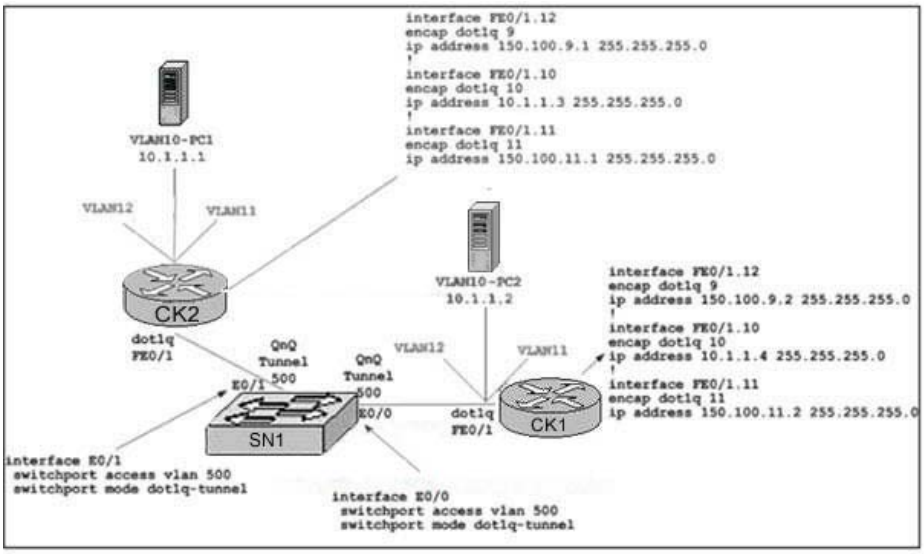
A. Enable crypto/ipsec between PE and P
B. Mpls tdp neighbor x.x.x.x
C. Mpls neighbor ldp-peer x.x.x.x
D. Mpls ldp neighbor x.x.x.x

Answer: D

Explanation:
http://www.cisco.com/univercd/cc/td/doc/product/software/ios123/123cgcr/swtch_r/swi_m2.htm#wp1077091

QUESTION 61:

Exhibit:



What is true about the SW1 configuration, with respect to communication between PC1 and PC2?

A. There is a miss-configuration on SW1.
B. VLAN10 needs to be enabled on SW1 in order for this to work.
C. The wrong VLAN is assigned from SW1 to CK2 and CK1 .
D. It is valid: Double tag will hide all VLANs inside of VLAN500, and PC1 and PC2 will be able to communicate.
E. None of the above.

Answer: E

QUESTION 62:

Exhibit:

Based on the information above, which OSPF configurations listed are valid? (multiple answer) Select two.

A. router CK1
router ospf 1
network 14.0.0.0 0.255.255.255 area 0
router CK2
router ospf 1

network 14.0.0.0 0.255.255.255 area 0
B. router CK1
router ospf 1
network 14.1.1.0 0.0.0.255 area 0
router CK2
router ospf 2
network 14.1.1.0 0.0.0.255 area 0
C. router CK1
router ospf 1
network 14.0.0.0 0.0.255.255 area 0
router CK2
network 14.1.0.0 0.0.0.255 area 0
D. router CK1
router ospf 1
network 14.1.1.0 0.0.0.255 area 1
router CK2
router ospf 1
network 14.1.0.0 0.0.255.255 area 0

Answer: A, B

Explanation:
The correct answer is A and B. A is correct because all of the one bits in the inverse mask are essentially wildcards. The command "net 14.0.0.0 0.255.255.255 area 0" will put any interface with the address of 14.x.x.x into the ospf process including of course 14.1.1.1 and 14.1.1.2. In fact, a quick way of running ospf is to configure "net 0.0.0.0 255.255.255.255 area x" which puts all interfaces into the ospf process.

QUESTION 63:

Exhibit:

```
PE1# show l2tun session all
 Session Information Total tunnels 3 sessions 3
Session id 192996 is up, tunnel id 54217
     Call serial number is 14924020000
     Remote tunnel name is R2
     Internet address is 4.2.4.6
     Session is L2TP signalled
     Session state is established time since change 00:35:37
     1142 packets sent, 13312 received
     124309 Bytes sent, 13312 received
     Receive packets dropped:
      out-of-order: 0
      total: 0
     Send packets dropped:
      exceeded session MTU: 0
      total: 0
     Session vcid is 16
     Session Layer 2 circuit, type is Ethernet, name is Ethernet0/0
     Circuit state is UP
     Remote session id is 32999, remote tunnel id 44186
     DF bit on, ToS reflect disabled, ToS value 0, TTL value 255
     Session cookie information:
     local cookie, size X bytes, value 6E 47 8C 4A BA BF 7E A4
     remote cookie, size X bytes, value 7F 9F 65 C4 C7 5B 57 FF
     FS cached header information:
     encap size =  32 bytes
     00000000 00000000 00000000 00000000
     00000000 00000000 00000000 00000000
```

By executing the shown command, calculate a cookie size used in this session.

A. 16
B. 4
C. 8
D. 32

Answer: C

QUESTION 64:

What is true regarding MPLS-TE configurations?

A. The command 'mpls traffic-eng tunnels' is only needed in a global configuration.
B. The command 'mpls traffic-eng tunnels' is only needed in an interface configuration.
C. The command 'mpls traffic-eng tunnels' is needed in both global and interface configurations.
D. The command 'mpls traffic-eng tunnels' is only needed in OSPF or ISIS router configurations.
E. The command 'mpls traffic-eng tunnels' is not needed.

Answer: C

QUESTION 65:

On a 3550 switch, private vlan edge is known as:

A. Private Vlan
B. Protected port
C. Switch private vlan

D. None of the above

Answer: B

QUESTION 66:

A router is set up to redistribute routing updates from OSPF to RIP. What answer best describes issues the network administrator needs to be aware of?

A. Split Horizon, Poison Reverse, Holddown.
B. Slow convergence, limited hop-count metric, lack of network mask information, periodic broadcasts.
C. None, OSPF is a link-state routing protocol which overcomes issues found in RIP.
D. Difference in metrics (e.g. hops vs. cost), subnet mask allocation/addressing (e.g. VLSM vs. fixed subnet mask length), routing protocol summarization (e.g. network boundaries).

Answer: D

QUESTION 67:

Which statements are true regarding VPLS? Select two.

A. Each PE device emulates a bridge.
B. The whole P-network emulates a bridge.
C. Hierarchical VPLS (H-VPLS) reduces signaling overhead.
D. There is no such a thing as Hierarchical VPLS (H-VPLS).

Answer: B, C

QUESTION 68:

What standard defines the STP algorithm?

A. IEEE 802.1D
B. IEEE 802.11
C. IEEE 802-1q
D. ITU Q.2727-STP
E. IETF RFC1483

Answer: A

QUESTION 69:

Which protocols can be used to authenticate media-level access control, offer the capability to permit or deny network connectivity, control VLAN access, and apply traffic policy, based upon user or machine identity? Select three.

A. Radius
B. Tacacs+
C. Local Authenticate database
D. 802.1x
E. CA Server

Answer: A, B, D

QUESTION 70:

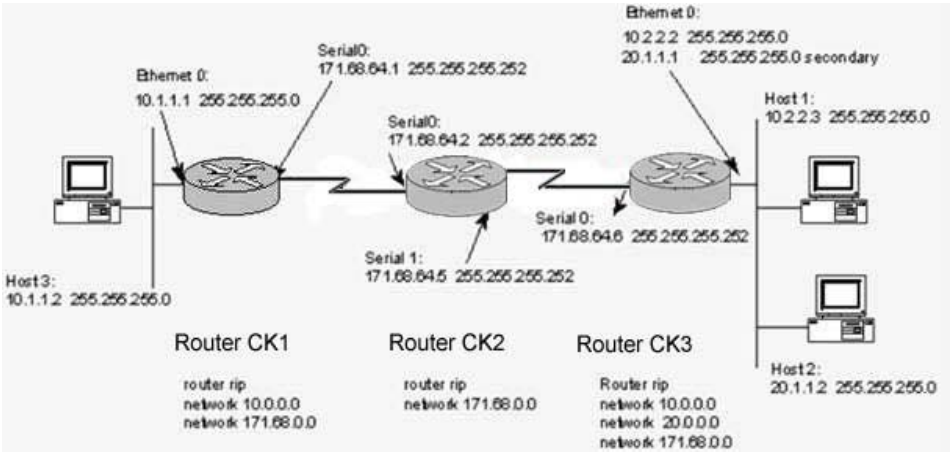
What statement is correct regarding Virtual LANs (VLANs)?

A. It is permissible to bridge inside a VLAN, but not to route between VLANs.
B. It is not permissible to bridge inside a VLAN, but it is valid to route between VLANs.
C. It is permissible to bridge inside a VLAN and to route between VLANs.
D. It is not permissible to bridge inside or route between VLANs.

Answer: C

QUESTION 71:

Exhibit:



With RIP running, what command would be used to set the default route on Router CK2 to 171.68.64.6 (Router CK3)?

A. ip default-network 171.68.64.6
B. up route 0.0.0.0 255.255.255.255 171.68.64.6
C. ip route 0.0.0.0 0.0.0.0 171.68.64.6
D. None of the above.

Answer: A

QUESTION 72:

A new Cisco router has no configuration defined. What methods can be used to configure the router for the first time? (Multiple answer) Select four.

A. Using SNMP via a network management station.
B. Connecting a terminal to the console port and running the Setup dialogue.
C. Connecting a terminal to the console and directly typing in configuration commands.
D. Using BOOTP/SLARP/RARP to download a configuration file that has been created ahead of time.
E. Connecting a terminal to the console port, defining a minimal configuration, connecting the router to the network, and using TFTP to download a configuration file that has been created ahead of time.

Answer: B, C, D, E

Explanation:
The correct answer is B,C,D and E. The bootp/slarp/rarp method of configuring a router has been known to appear on the lab exam. See http://www.cisco.com/en/US/partner/products/ps6600/products_white_paper09186a0080080578.shtml

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QUESTION 73:

Which specification defines LACP? Select two.

A. IEEE 802.11
B. IEEE 802.1q and IEEE 802.1p
C. IEEE 802.3ad
D. ITU Q.922
E. RFC2547

Answer: C

QUESTION 74:

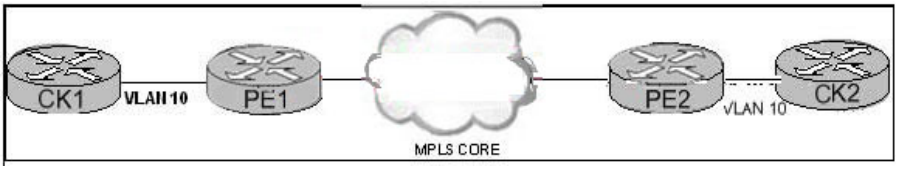
What is the difference between Link LDP and targeted LDP?

A. Link LDP uses port 646 and targeted LDP uses port 711.
B. LDP Hellos use unicast UDP for targeted and multicast UDP for link.
C. Link LDP uses UDP for discovery and targeted LDP uses TCP for discovery.
D. Link LDP uses port 711 and targeted LDP uses port 646.
E. None of the above are true.

Answer: B

QUESTION 75:

Exhibit:



CK1 and CK2 are routers connected through PE1 and PE2 using 802.1q VLAN 10 as shown in the diagram. PE1 and PE2 have provisioned one pseudowire for CK1 and CK2 on the 802.1q sub-interfaces of VLAN 10. CK1 can ping CK2 and vice versa. Suppose both CK1 and CK2 enable an IEEE standard-based Spanning Tree protocol for VLAN 10 and both use the default bridge priority. The interface CK1 connected to the provider edge router has a lower MAC address then that of CK2 . What CK router will become the root bridge for VLAN 10?

A. CK1 only
B. CK2 only
C. Both CK1 and CK2
D. None of the above

Answer: A

QUESTION 76:

In Frame Relay, what devices resend packets that do not transmit correctly?

A. Digital transmission media cabled to monitor ports, as opposed to straight DCE signaling.
B. Network end stations.
C. Network switches running SNMP management software.
D. Special bridging devices within the backbone cloud.

Answer: B

QUESTION 77:

What can NOT be matched in a FR attachment circuit? Select two.

A. match fr-de
B. match fr-dlci
C. match fr-ea
D. match fr-dlci range
E. match fr-cos

Answer: E

QUESTION 78:

Traceroute does not work on Host A (a Unix workstation) to the Internet. Currently, there is an inbound access-list applied to the serial interface on Router 1 that says "access-list 101 permit tcp any any". What access-list entry may need to be added in order to get traceroute to work?

A. access-list 101 permit udp any any
B. access-list 101 permit icmp any any time-exceeded
access-list 101 permit icmp any any port-unreachable
C. access-list 101 permit icmp any any time-exceeded
access-list 101 permit icmp any any net-unreachable
D. access-list 101 permit icmp any any echo
access-list 101 permit icmp any any net-unreachable
E. access-list 101 permit udp any any
access-list 101 permit icmp any any protocol-unreachable

Answer: A

QUESTION 79:

Which statements are true regarding VPLS? Select two.

A. There is a full mesh of pseudowires.
B. There is a partial mesh of pseudowires.
C. Only L2TPv3 can be used for pseudorwire establishment.
D. STP runs in the core.
E. There is a split-horizon to avoid loops.

Answer: A, E

QUESTION 80:

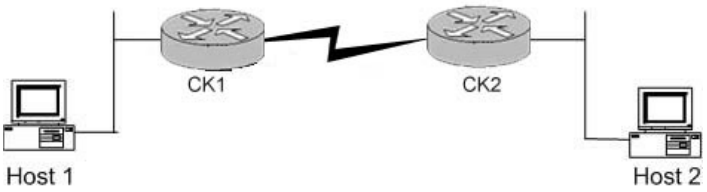
What is the primary benefit of the 'time-to-live' field in the IP header?

A. To improve buffer utilization.
B. To reduce the impact of routing loops.
C. To allow calculation of round-trip delays.
D. To remind us that all earthly joys are fleeting.
E. To avoid delivery of packets that are not longer useful.

Answer: E

QUESTION 81:

Exhibit:



Host 1 and Host 2 are on Ethernet LANs in different buildings. A serial link is installed between two

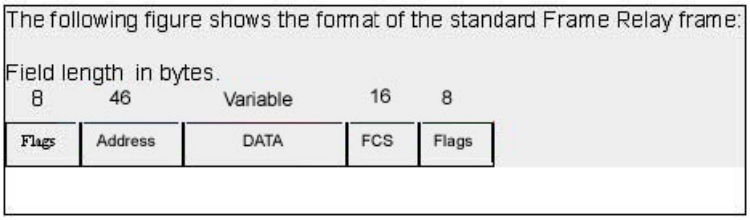
Cisco routers using Cisco HDLC serial line encapsulation. Routers CK1 and CK2 are configured to route IP traffic. Host 1 sends a packet to Host 2. A line hit on the serial line cause an error in the packet. When this is detected, the retransmission is sent by:

A. Host 1
B. Host 2
C. Router CK1
D. Router CK2
E. Protocol analyzer

Answer: A

QUESTION 82:

Exhibit:



The address field contains: (multiple answer) Select three.

A. The DLCI Value
B. The Extended Address (EA)
C. Congestion Control
D. FCS

Answer: A, B, C

QUESTION 83:

What type of protocol/port is used for L2TPv3?

A. TCP 115
B. UDP 115
C. IP 115
D. TCP 646
E. TCP 711

Answer: C

QUESTION 84:

The command to specify the Ethernet channel protocol is:

A. channel-group {number}protocol [pagp | lacp]

B. set Ethernet channelprotocol [pagp | lacp]
C. set ethertype [pagp | lacp]
D. set channelprotocol [pagp | lacp]
E. channelprotocol [pagep | lacp]
F. set spantree protocol [pagp | lacp]

Answer: A

QUESTION 85:

What does the Switchport block feature do? Select two.

A. Blocks unknown multicast forwarding to the port.
B. Blocks unknown spanning tree to the port.
C. Blocking unknown VLANS to the port.
D. Blocks unknown unicast forwarding to the port.

Answer: A, D

QUESTION 86:

What is possibly true concerning Traffic contract, Traffic shaping, and Traffic policing in ATM networks?

A. They are parameters of PNNI set during PNNI configuration.
B. They are types of SVCs.
C. They are types of PVCs.
D. They are forms of QoS features used in ATM networks.
E. They are only used between ATM switches to control traffic flows.

Answer: D

QUESTION 87:

After OSPF is defined on a broadcast medium, the network administrator now wants a specific router to act as the Designated Router (DR) for a particular segment. What must the administrator do to ensure this always occur?

A. Ensure the required router is the first to load, so it can assume the role of the Designated Router.
B. Configure the required router with the highest IP address on this segment.
C. Configure ip ospf priority on the interface, using a lower value then any other router on this segment.
D. Configure ip ospf priority on the interface, using a higher value than any other router on this segment.

Answer: D

Explanation:

Should be: highest priority.... which takes precedence over IP addresses.
See:
http://www.cisco.com/univercd/cc/td/doc/product/software/ios124/124cr/hirp_r/rte_osph.htm#wp1092061
Anyway, it could be a trick: the first router that comes up, keeps the DR role, despite of its OSPF priority and IP address.

QUESTION 88:

Within OSPF, what functionality best defines the use of 'stub' area?

A. It appears only on remote areas to provide connectivity to the OSPF backbone.
B. It is used to inject default route for OSPF.
C. It uses the no-summary keyword to explicitly block external routes, defines the non-transit area, and uses the default route to reach external networks.
D. It is a non-transit area that does not allow flooding of external networks and uses the default route to reach external networks.

Answer: D

QUESTION 89:

Exhibit:


```
PE1
!
l2tp-class ether-xconnect
 authentication
 hostname R3
 password 7 110A1016141D
 cookie size 4
!
pseudowire-class Ethernet_Over_L2TPv3
 encapsulation l2tpv3
 sequencing both
 protocol l2tpv3 ether-xconnect
 ip local interface Loopback0
!
crypto ipsec transform-set trvpn esp-des non-md5-hmac
!
crypto map combines 20 ipsec-isakmp
 description Encrypt L2VPN
 set peer 2.2.2.2
 set transform-set trvpn
 match address 106
!
interface Loopback0
 ip address 1.1.1.1 255.255.255.255
!
interface serial 0/0
ip address 207.67.1.1 255.255.255.0
crypto map combines
!
interface Ethernet0/0
 xconnect 2.2.2.2 100 pw-class Ethernet_Over_L2TPv3
!
access-list 106 permit 106 any any log
```

```
PE2
!
l2tp-class ether-xconnect
 authentication
 hostname R3
 password 7 110A1016141D
 cookie size 4
!
pseudowire-class Ethernet_Over_L2TPv3
 encapsulation l2tpv3
 sequencing both
 protocol l2tpv3 ether-xconnect
 ip local interface Loopback0
!
crypto ipsec transform-set trvpn esp-des esp-md5-hmac

crypto map combines 20 ipsec-isakmp
 description Encrypt L2VPN
 set peer 1.1.1.1
 set transform-set trvpn
 match address 106
!
interface Loopback0
 ip address 2.2.2.2 255.255.255.255
!
interface serial 0/0
ip address 207.67.1.2 255.255.255.0
crypto map combines
!
interface Ethernet0/0
 xconnect 1.1.1.1 100 pw-class Ethernet_Over_L2TPv3
!
access-list 106 permit 106 any any log
```

Observing the shown configuration, assume PE1 and PE2 already have IP connectivity, what behavior should be expected?

A. This configuration is valid. L2TPv3 will become up and CE1 will be able to communicate with CE2.

B. This is not a valid design because Crypto does not have any relationship to L2TPv3.
C. The configuration will not work for L2TP3 because to work it would require MPLS to be enabled in the core.
D. L2TPv3 will not come up and Cypto IPSec will not come up either because there is a misconfigured protocol type for L2TPv3.
E. This will not work because Crypto is misconfigured on PE1 and PE2.
F. This will not work because it is not possible to encrypt L2TPv3 session in IPSEC.

Answer: A

QUESTION 90:

Exhibit:
interface eth 0
ip add 10.0.0.1 255.255.255.0
router rip
network 10.0.0.0
passive-interface Ethernet 0
neighbor 10.0.0.2
What statement is correct concerning the shown configuration?

A. Two RIP updates will be sent out on Ethernet 0, one broadcast to 255.255.255.255 and one unicast to 10.0.0.2.
B. Only one RIP update will be sent out on Ethernet 0 to the broadcast address 255.255.255.255, but no RIP updates will be received on Ethernet 0.
C. Two RIP updates will be sent out on Ethernet 0, one broadcast to 10.255.255.255 and one unicast 10.0.0.2.
D. Only one RIP update will be sent out on Ethernet 0 to the unicast address 10.0.0.2.

Answer: D

QUESTION 91:

What is an Inter Switch Link (ISL)?

A. A protocol to interconnect switches across ATM only.
B. A protocol interconnect switches across FDDI only.
C. An IEEE protocol to interconnect multiple switches.
D. A Cisco proprietary protocol for interconnecting multiple switches.
E. An IEEE protocol to interconnect multiple switches across Fast Ethernet.

Answer: D

QUESTION 92:

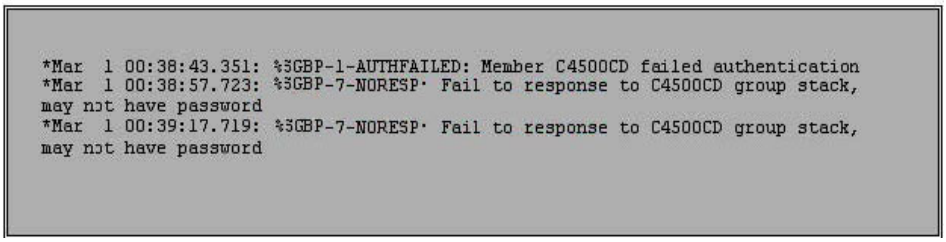
What kind of feature set would be needed to be transparent for the customers connecting through your switch?

A. bpduguard
B. bpdufilter
C. disable stp
D. dot1q stacking L2-Tunneling

Answer: D

QUESTION 93:

Exhibit:



Using the shown debugging excerpt, what option best describes the problem?

A. An ISDN router has a misconfigured username password pair.
B. An ISDN router is missing the stack password.
C. The offload server does not offload calls from ISDN routers not using PPP Multilink.
D. The offload server has a bad password.

Answer: B

QUESTION 94:

Which statements are false regarding the MPLS stack for EoMPLS packets? Select three.

A. There are at least 0 MPLS labels.
B. There is at least 1 MPLS labels.
C. There are at least 2 MPLS labels.
D. There are at least 3 MPLS labels.

Answer: A, C, D

QUESTION 95:

What is true regarding Policing for Frame Relay to Ethernet IW PW?

A. It is only possible on the Frame Relay end.
B. It is only possible on the Ethernet end.
C. It is possible on both ends.
D. It is only possible on the Ethernet end because there is no way of classifying traffic on the FR end.
E. None of the above.

Answer: C

QUESTION 96:

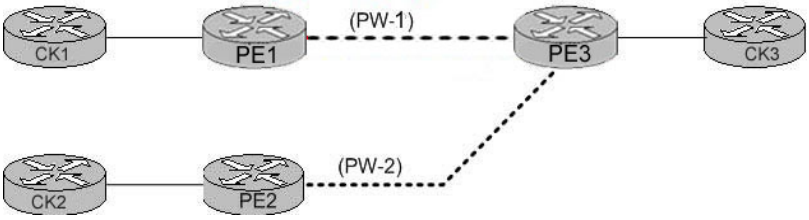
What describes a technique, used to encapsulate voice (Not data) over ATM?

A. RFC 1483
B. LANE
C. AAL-1
D. RFC 1577

Answer: C

QUESTION 97:

Exhibit:



PE1 and PE2 provision point-to-point EoMPLS pseudowires PW-1 and PW-2 to PE3, and both pseudowires have VC ID 100. PE3 provisions a multipoint VFI with a VPN ID 100. Which statements are correct? Select two.

A. This is an invalid configuration. Pseudowires PW-1 and PW-1 will not come up.
B. Pseudowire PW-1 and PW-2 will come up.
C. CK1 will have no Layer-2 connectivity to CK2 .
D. CK1 will have Layer-2 connectivity to CK2 .
E. CK3 has no Layer-2 connectivity to either CK1 or CK2 .

Answer: C, D

QUESTION 98:

What protocol is not disabled by the 'no service tcp-small-servers' command?

A. Echo
B. Finger
C. Chargen
D. Discard
E. Daytime

Answer: B

QUESTION 99:

Every time a typing mistake is made at the exec prompt of a router, the message from the router indicates a lookup is being performed. Also, there is a waiting period of several seconds before the next command can be typed. Can this behavior be changed?

A. No, this is a built in feature of Cisco IOS* software.
B. Yes, use the no ip domain-lookup command.
C. Yes, use the no ip helper-address command.
D. Yes, use the no ip multicast helper-map command.
E. Yes, use the no exec lookup command.

Answer: B

QUESTION 100:

What feature can be set to prevent local users from starting password recovery?

A. line con 0
no password
B. enable aaa per console
C. line con 0
no login
D. no service password-recovery
E. There is no way to prevent password recovery

Answer: E

QUESTION 101:

BGP can implement a policy of 'Route Dampening' to control route instability. What statement about route dampening is NOT correct?

A. A numeric penalty is applied to a route each time it flaps.
B. The penalty is exponentially decayed according to parameters, such as half-life-time.
C. The history of unstable routes is forwarded back to the sender to control future updates.
D. The route is eventually suppressed based on a configurable 'suppress limit'.

Answer: C

Explanation:
IP Event Dampening Overview
Interface state changes occur when interfaces are administratively brought up or down or if an interface changes state. When an interface changes state or flaps, routing protocols are notified of the status of the routes that are affected by the change in state. Every interface state change

requires all affected devices in the network to recalculate best paths, install or remove routes from the routing tables, and then advertise valid routes to peer routers. An unstable interface that flaps excessively can cause other devices in the network to consume substantial amounts of system processing resources and cause routing protocols to lose synchronization with the state of the flapping interface.
>>
The IP Event Dampening feature introduces a configurable exponential decay mechanism [choice "B"] to suppress the effects of excessive interface flapping events on routing protocols and routing tables in the network. This feature allows the network operator to configure a router to automatically identify and selectively dampen a local interface that is flapping. Dampening an interface removes the interface from the network until the interface stops flapping and becomes stable. Configuring the IP Event Dampening feature improves convergence times and stability throughout the network by isolating failures so that disturbances are not propagated, which reduces the utilization of system processing resources by other devices in the network and improves overall network stability.
Interface State Change Events
This section describes the interface state change events of the IP Event Dampening features. This feature employs a configurable exponential decay mechanism that is used to suppress the effects of excessive interface flapping or state changes. When the IP Event Dampening feature is enabled, flapping interfaces are dampened from the perspective of the routing protocol by filtering excessive route updates. Flapping interfaces are identified, assigned penalties, suppressed if the necessary, and made available to the network when the interface stabilizes. Figure 1 is a chart that displays interface state events as they are perceived by routing protocols.
Suppress Threshold
The suppress threshold is the value of the accumulated penalty that triggers the router to dampen a flapping interface. The flapping interface is identified by the router and assigned a penalty [choice "A"] for each up and down state change, but the interface is not automatically dampened. The router tracks the penalties that a flapping interface accumulates. When the accumulated penalty reaches the default or preconfigured suppress threshold [choice "D"], the interface is placed in a dampened state.
Reference:
http://www.cisco.com/en/US/partner/products/ps6350/products_configuration_guide_chapter09186a0080457c1d.html

---

QUESTION 102:

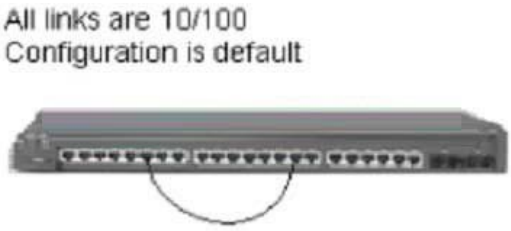
What IOS feature can be used to modify or redirect L2-attachment circuits over AToM with OSPF to a different path selection?

A. A GRE Tunnel with MPLS Enabled
B. a PW-class Tunnel Selection
C. Policy Base Routing
D. Modify cost

Answer: B

Explantion
http://www.cisco.com/en/US/products/sw/iosswrel/ps1829/products_feature_guide09186a0080223a1b.html#wp1092152

QUESTION 103:



The exhibit shows a network consisting of only one switch. Port 3/37 is being looped to port 3/38. What statement is true?

A. Port 3/38 will be blocking.
B. Port 3/37 will be blocking.
C. Both ports will be blocking.
D. Both ports will be forwarding.
E. Port 3/38 will keep transitioning between listening and learning.

Answer: A

Explanation:
See (port priority paragraph):
http://www.cisco.com/en/US/partner/products/hw/switches/ps5528/products_configuration_guide_chapter09186a00801

QUESTION 104:

An inverse ARP is sent:

A. To map a hostname to an IP address
B. To map an IP address to a hostname
C. To map MAC address to an IP address
D. To map a MAC address to a hostname
E. To map an IP address to a MAC address

Answer: C

QUESTION 105:

What is a major difference between PVST and PVST+?

A. PVST supports dot1q and PVST+ does not.
B. PVST+ supports 802.1q and ISL
C. PVST supports only 802.1q and doesn't support ISL
D. PVST+ is an enhancement to the 802.1q specification and is not supported on non-Cisco devices and PVST uses ISL Trunking.

Answer: B

QUESTION 106:

What statement is correct?

A. An IP header is always smaller than 20 bytes.
B. An IP header is always 20 bytes.
C. An IP header is never bigger than 20 bytes.
D. An IP header is 20 bytes long, or larger if options are used.
E. None of the above.

Answer: D

QUESTION 107:

Assume there are two attachment circuits (AC-1, AC-2) and two pseudowires (PW-1, PW-2) connected to a multipoint VFI on PE-1. When receiving an Ethernet frame from AC-1 and the destination MAC address is unknown to PE-1, to what circuit will the Ethernet frame NOT be forwarded?

A. AC-1
B. AC-2
C. PW-1
D. PW-2

Answer: D

QUESTION 108:

What is the protocol that On-Demand Routing relies on?

A. IP
B. TCP
C. CDP
D. UDP

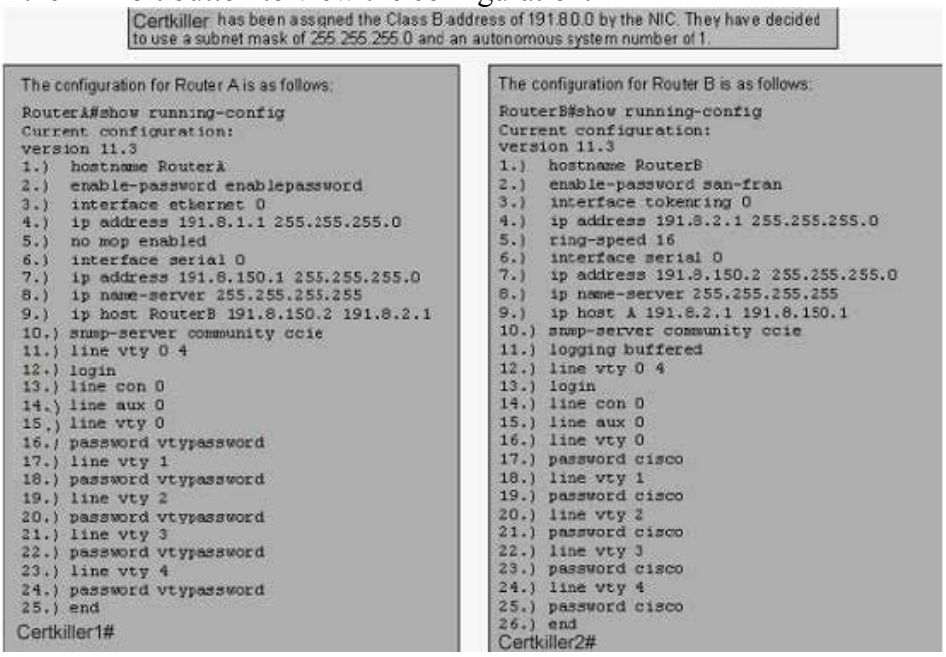
E. PPP

Answer: C

Explanation:
ODR uses the Cisco Discovery Protocol (CDP) to carry minimal routing information between the hub and stub routers. The stub routers send IP prefixes to the hub router. The hub router provides default route information to the stub routers, thereby eliminating the need to configure a default route on each stub router.
Reference:
http://www.cisco.com/univercd/cc/td/doc/product/software/ios124/124cg/hirp_c/ch12/odrconfg.htm#wp1000910

QUESTION 109:

Click the Exhibit button to view the configuration.



Debug is enabled on Router Certkiller 2, but no debug messages appear on the terminal. Other commands (show commands, etc) seem to be working. What are the probable causes for this? (multiple answer) Select two.

A. Router Certkiller 2 is not turned on.
B. Debug information is being sent to Certkiller 1
C. The "terminal monitor" command needs to be executed if this is a virtual terminal session.
D. Debug information is being sent to the buffer instead of to the console terminal.
E. Debug information is configured at low priority, and will be displayed at a time when the router is less congested.

Answer: C, D

QUESTION 110:

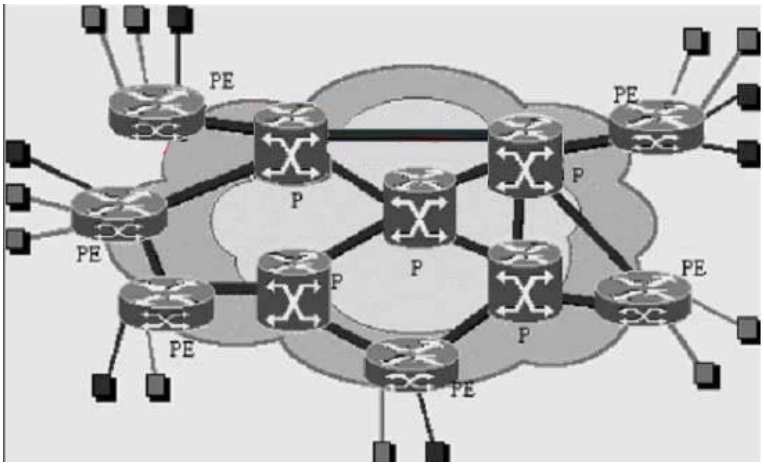
IEEE 802.1D describes a method to prevent the disconnection of a single end station from disrupting Spanning Tree. What does the method describe?

A. Re-setting the Topology Change flag to zero (0).
B. Disabling the 801.1D Change Detection parameter.
C. Configuring the BridgeForwardDelay to 1/2 of the bridgeMaxage.
D. Using the BridgeForwardDelay timer to age dynamic entries.

Answer: A

QUESTION 111:

Exhibit



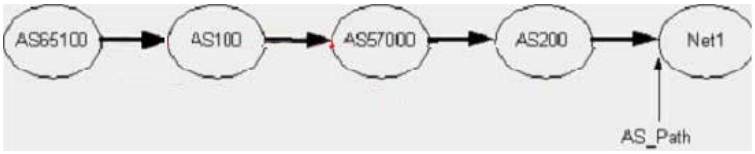
Customers green and blue must communicate with each other. Which condition is required?

A. Customer Blue and Customer Green must use BGP for routing to the Internet.
B. Customer Blue and Customer Green must use unique addresses in their corporate networks.
C. All Service Providers routers must use BGP.
D. The Service Provider must provide BGP Peering to another Service Provider.

Answer: B

QUESTION 112:

Exhibit:



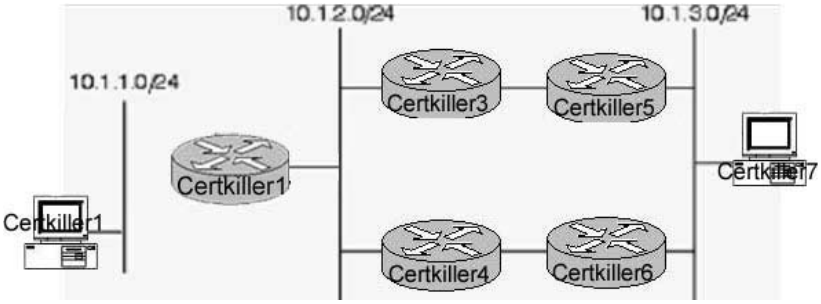
Using the above diagram, which are valid BGP AS_Path Attributes received at Net1 for a route originating from AS65100? (multiple answer) Select three.

A. 200 57000 100 65100
B. 200 57000 100100
C. 100 57000 200
D. 200 57000 100
E. 65100 100 57000 200

Answer: A, B, E

QUESTION 113:

Exhibit:



Routers Certkiller 5 and Certkiller 6 are configured for HSRP (Hot Standby Routing Protocol). Certkiller 5 has a priority of 100, while Certkiller 6 has a priority of 50. At one point, when Certkiller 5 is the active router, it fails, and Certkiller 6 takes over as the active router. A few minutes later, Certkiller 5 returns to service. What happens?

A. Certkiller 6 will remain the active router, there is no way for Certkiller 5 to become the active router again unless Certkiller 6 fails.
B. Certkiller 5 and Certkiller 6 will negotiate witch router should be the active based on their IP addresses.
C. Certkiller 5 will always take over the active role, there is no way for Certkiller 6 to remain active once another
router with higher priority is on the network.
D. Certkiller 5 will become the active router, if it is configured preempt.
E. Certkiller 6 will remain the active router because having a lower priority is better.

Answer: D

QUESTION 114:

Exhibit:

Router Certkiller 1 has a 512K-access port into the frame relay cloud. Router Certkiller 2 has 128K-access port into the frame relay cloud. The two routers are connected with symmetrical PVCs that are configured for 64K committed information rate (CIR). What Frame Relay Traffic Shaping map-class

sub-command should be entered on Router Certkiller 1 to prevent workstation Certkiller A from overrunning the access port on router Certkiller 2?

A. frame-relay traffic-rate 128000 512000
B. frame-relay traffic-rate 64000 512000
C. frame-relay traffic-rate 512000 64000
D. frame-relay traffic-rate 128000 64000
E. frame-relay traffic-rate 64000 128000

Answer: E

QUESTION 115:

What statement is true?

A. AToM does not require matching MTU
B. AToM has integrated MTU auto-discovery
C. AToM requires matching MTU from P to PE for L2-attachment to work
D. AToM requires matching MTU from PE to CE on each side to function

Answer: B

QUESTION 116:

What is true about the EoMPLS control word?

A. It is optional, but Cisco implementation never uses it.
B. It is optional, but Cisco implementation always uses it.
C. It is optional, and Cisco implementation uses it only whenever possible.
D. It is required.
E. There is no such a thing as EoMPLS control word.

Answer: C

QUESTION 117:

What command should you use to modify MTUs on a 3550 switch?

A. ip mtu x
B. system mtu
C. mtu x
D. mpls mtu x
E. ip tcp path-mtu-discovery

Answer: B

QUESTION 118:

What mechanism enables cut-through switches to process a frame with reduced latency?

A. The destination address is at or near the beginning of the frame.
B. The CRC is at the end of the frame.
C. The CRC is at or near the beginning of the frame.
D. The data is compressed in the middle of the frame.

Answer: A

QUESTION 119:

What statement is true?

A. Pseudowire will never come up if MTU mismatches at both ends.
B. Pseudowire will always come up even if MTU mismatches at both ends.
C. For ATM Cell Relay, pseudowire will come up if MTU mismatches at both ends.
D. For local switching, pseudowire will come up if MTU mismatches at both ends.
E. For ethernet transport, pseudowire will come up if MTU mismatches at both ends.

Answer: C

QUESTION 120:

According to the IEEE 802.3 CSMA/CD specification, what MAC address is used for the PAUSE mechanism to inhibit the flow of frames for specified period of time?

A. 00-00-00-00-00-00
B. 00-00-0c-00-00-01
C. 00-00-0c-07-AC-3C
D. 01-80-C2-00-00-01
E. 11-11-11-11-11-11

Answer: D
http://www.techfest.com/networking/lan/ethernet3.htm

QUESTION 121:

The negotiation for whether or not an LDP session is being targeted, happens: Select two.

A. During session discovery
B. During session initialization
C. By setting the D-bit in the Common Hello Parameters TLV
D. By setting the T-bit in the Common Hello Parameters TLV
E. By setting the T-bit in the Common Session Parameters TLV

Answer: B, E

QUESTION 122:

How many bits is the EoMPLS control word?

A. 4
B. 8
C. 16
D. 32
E. There is no such thing as EoMPLS control word.

Answer: D
32bits (4bytes).

QUESTION 123:

The NNI specification defines communication between:

A. An ATM end system and an ATM switch
B. Two ATM end systems
C. An ATM device and a non-ATM device
D. Two ATM switches from different carriers
E. Two ATM switches

Answer: E

QUESTION 124:

For communication systems what describes the over-all health of the system?

A. Bit-Error-Rate (BER)
B. Synchronous Optical NETwork (SONET)
C. Optical Signal Noise Ratio (OSNR)
D. None of the above

Answer: D

QUESTION 125:

Which are the correct ways to release IBGP from the condition that all IBGP neighbors need to be fully meshed? (multiple answer) Select two.

A. Configure local preference
B. Configure route reflectors

C. Configure IBGP neighbors several hops away
D. Configure confederations

Answer: B, D

QUESTION 126:

"tunnel mpls traffic-eng priority 7 7"means: Select three.

A. We are assigning the highest priority to this tunnel.
B. We are assigning the lowest priority to this tunnel.
C. This is the default priority and does not need to be configured.
D. We are setting a setup priority of 7 and holding priority of 7.

Answer: B, C, D

QUESTION 127:

Below are four 'out' access-lists, configured on an interface. What list will block an IP packet with source address 144.23.67.94, destination address 197.55.34.254, destination TCP port 23 from leaving the router?

A. access-list 100 deny ip tcp 144.23.67.0 0.0.0.7 eq telnet 197.55.34.240 0.0.0.15 eq telnet
access-list 100 permit ip any any
B. access-list 100 deny tcp 144.23.67.94 0.0.0.7 any eq telnet
access-list 100 permit ip any any
C. access-list 100 deny tcp 144.23.67.86 0.0.0.7 eq telnet 197.55.34.240 0.0.0.15
access-list 100 permit ip any any
D. access-list 100 deny ip 144.23.67.94 0.0.0.7 host 144.23.67.94
access-list 100 permit ip any any

Answer: C

QUESTION 128:

Why is Frame Check Sequence (FCS) used in Frame Relay?

A. Congestion Control
B. To ensure the integrity of transmitted data
C. To retransmit data
D. To provide SNMP traps

Answer: B

QUESTION 129:

What technology is used for Point to Multipoint Ethernet? Select two.

A. VPLS
B. VPWS
C. L2TPv3
D. Local Switching
E. Interworking

Answer: A, D
http://www.cisco.com/application/pdf/en/us/guest/tech/CK8 91/c1482/cdccont_0900aecd80162184.pdf

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QUESTION 130:

An incoming frame is received by a transparent bridge. If the destination address of the frame is not present in the database, the bridge will:

A. Discard the frame
B. Send out the frame on all interfaces, except on the interface where the frame originate
C. Put the destination MAC address in the table
D. Broadcast the frame on all interfaces
E. None of the above

Answer: B

QUESTION 131:

What is Not an ATM class of service?

A. CBR
B. VBR-t
C. ABR
D. UBR
E. CAR

Answer: E

QUESTION 132:

What is the best definition of the use of "Area 0" in OSPF?

A. Area 0 is used for administrative reasons, and is restricted from user definition.
B. Area 0 is defined as the backbone, designed to be at the center of all routing updates, and controls the dissemination of updates between areas.
C. Area 0 is used to authenticate messages received from other routers in the same area.
D. Area 0 is used for forwarding all routing updates received within the same Autonomous System from directly connected areas only.

E. Area 0 allows for routing updates to be forwarded between different Autonomous Systems.

Answer: B

QUESTION 133:

A service provider plans to offer Transparent LAN Service to a customer who has 10 sites using VPLS, and the customer edge switches are attached to 9 provider edge switches. What is the maximum number of pseudowires needed to be provisioned throughout the service provider network?

A. 10
B. 8
C. 28
D. 45

Answer: B

QUESTION 134:

Which do not exist? Select two.

A. Per VLAN Spanning Tree (PVST).
B. Per VLAN Spanning Tree Plus (PVST+).
C. Per VLAN Spanning Tree Plus Plus (PVST++).
D. Rapid STP (RSTP).
E. Resilient STP (RSTP)

Answer: C, E

QUESTION 135:

On each LAN segment with multiple bridges running spanning tree, the bridges closest to the:

A. Destination bridge is selected as root bridge
B. Root bridge is selected as designated bridge
C. Root bridge is not selected as designated bridge
D. Designated bridge is not selected as root bridge

Answer: B

QUESTION 136:

Which parts of an FR q.922 header are transported in FRoMPLS DLCI? Select two.

A. DLCI in the AToM Payload
B. DE in the control word

C. EA in the control word
D. FECN in the control word

Answer: A, C

QUESTION 137:

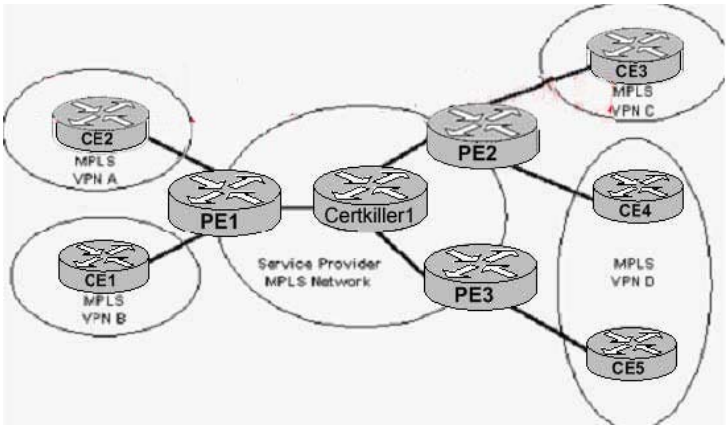
What command syntax do you need to use to allow only VLAN 3 through 5 and 9?

A. switchport trunk allowed 3,4,5,9
B. switchport modedot1q-tunnel 3-5,9
C. switchport trunk allowed vlan 3-9
D. switchport trunk allowed vlan 3-5,9
E. switch trunk vlan 3,4,5,9 allowed
F. switchport trunk encapsulation allowed dot1q 3-5,9

Answer: D

QUESTION 138:

Exhibit:



In the MPLS network shown, how many routing tables are on Router PE1?

A. 1
B. 2
C. 3
D. 4
E. 5

Answer: C
One VRF for VPN-A, one for VPN-B and one global instance.

QUESTION 139:

Policing on a Fast Ethernet Interface has been configured using Committed Access Rate (CAR) to allow

for extended burst. Traffic has been bursty and a packet arrives on the interface that caused the compounded debt to be greater than the extended burst. What statement is FALSE?

A. The packet is dropped.
B. A token is removed from the tocken bucket.
C. The compounded debt value is effectively set to zero (0).
D. The packet is not buffered by the CAR process.

Answer: B

Explanation:
http://www.cisco.com/en/US/products/sw/iosswrel/ps1835/products_configuration_guide_chapter09186a00800bd8ed.ht

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QUESTION 140:

Using the debug mpls l2transport signaling messagecommand, what kind of attachment is connected?
00:19:51: AToM LDP [172.168.1.102]: Sending label withdraw msg
vc type 4, cbit 1, vc id 100, group id 0, vc label 20, status 0, mtu 1500
00:19:51: AToM LDP [172.168.1.102]: Sending label release msg, id 78
vc type 4, cbit 1, vc id 100, group id 0, vc label 20, status 0, mtu 0

A. Frame over MPLS
B. Ethernet over MPLS Port mode
C. Ethernet over MPLS VLAN mode
D. Ethernet VLAN mode to Ethernet Port mode

Answer: B

QUESTION 141:

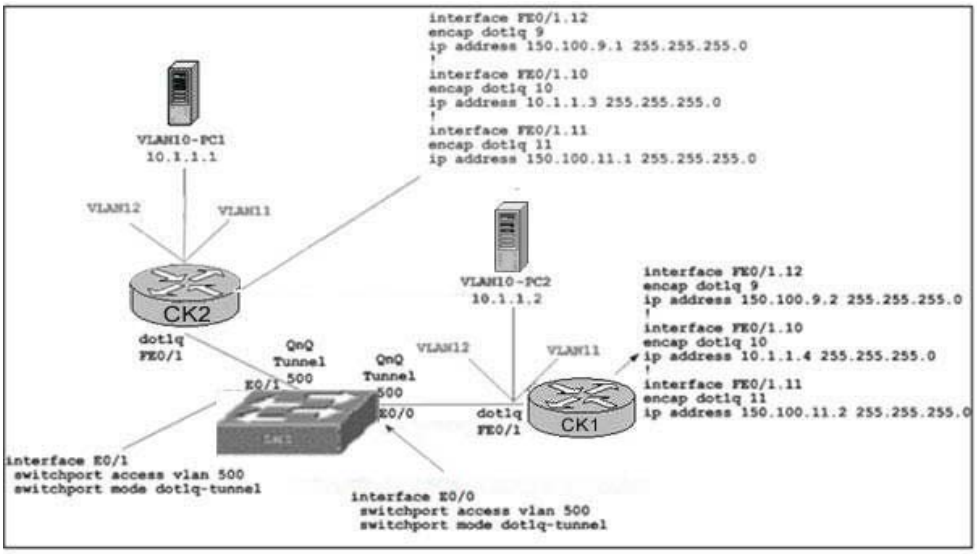
What statement is true?

A. L2TPv2 and L2TPv3 are the same protocol with enhanced features in L2TPv3.
B. L2TPv2 and L2TPv3 are both commonly used for dial-in services.
C. L2TPv2, not L2TPv3, is commonly used for dial-in services.
D. L2TPv3 is used for Layer2 attachment services.
E. None of the above

Answer: E

QUESTION 142:

Exhibit



The exhibit shows the SW1 topology and configuration. When the show vlan command is executed on SW1:

A. SW1 will ignore VLAN10 but allow 11 and 12. Also, VLAN 500 and VLAN 11 will be seen through 12 on SW1.
B. SW1 will show VLANs 10 through 12 and ignore VLAN 500.
C. SW1 will ignore all VLANs and accept the VLAN 500 basic double tagging scenarion.
D. This network scenario is not valid.

Answer: C

QUESTION 143:

What kind of packet is being decoded, using the captured debug mpls l2transport packet data command, below?

```
*Apr 26 16:39:09.092: AToM imposition: out Et1/0, size 128, EXP 0x0, seq 0, control word 0x0
*Apr 26 16:39:09.092: XX XX XX XX XX XX YY YY YY YY YY YY 88 47 00 01
                      ^^^^^^^^^^^^ ^^^^^^^^^^^^ ^^^^^ ^^^^^
                      SA MAC       DA MAC       etype top_shim-->
                                                MPLS
                                                Unic

*Apr 26 16:39:09.092: 00 FF 00 01 01 02 00 00 00 00 00 CC 45 00 00 64
                      ^^^^^ ^^^^^^^^^^ ^^^^^^^^^^ ^^ ^^ ^^^^^...
                <--top_shim VC_Label   Ctrl-word   |  |  Begins IP Packet
                   Label=17 Label=16               |  IP NLPID
                   S=0      S=1                    Control
                   TTL*355  TTL*2

*Apr 26 16:39:09.092: 08 00 80 00 00 83 93 04 00 00 00 0C 1A 0A 07 C8
*Apr 26 16:39:09.092: 08 00 80 46 00 83 00 04 00 00 00 00 14 4E E9 A8
*Apr 26 16:39:09.092: AB CD AB CD AB CD AB CD AB CD AB CD AB CD AB CD
*Apr 26 16:39:09.092: AB CD AB CD AB CD AB CD AB CD AB CD AB CD AB CD
*Apr 26 16:39:09.092: AB CD AB CD AB CD AB CD AB CD AB CD AB CD AB CD
*Apr 26 16:39:09.092: AB CD AB CD AB CD AB CD AB CD AB CD AB CD AB CD
```

A. HDLC
B. PPP
C. Ethernet
D. RFC 2427/RFC1490

Answer: D

QUESTION 144:

What is true regarding PAgP and LACP?

A. PAgP is Cisco proprietary and LACP is IEEE standard.
B. PAgP is Cisco proprietary and LACP is ITU standard.
C. PAgP is ITU standard and LACP is Cisco proprietary.
D. PAgP is IEEE standard and LACP is Cisco proprietary.
E. None of the above.

Answer: A

QUESTION 145:

Exhibit:

```
stllab-8510>sh bootflash
-#- ED --type-- --crc--- -seek-- nlen -length- -  -- Date/time ------ name
1   .. unknown  9DA13DA5  3576AC   31  3241516 Aug 22 1998 08:34:22 cat8510c-in
2   .D unknown  8CDE134F  453BA3   22  2494584 Jul 20 1997 09:33:02 cat8510b-in
```

Upon deleting an IOS image file from flash, an execution of show flash shows the file still in flash, with a 'D' preceding it (as shown in the exhibit). What step must be taken in order to remove the file completely?

A. Erase the file from flash.
B. Format the flash device.
C. Replace the flash card - it is defective.
D. Execute a squeeze command on the flash device.

Answer: D

QUESTION 146:

What establishes routing table precedence in a routing table?

A. Default metrics
B. Routing priority
C. Type of service
D. Lambic pentameter
E. Administrative distance

Answer: E

QUESTION 147:

What command is used to send pseudowire traffic over an MPLS-TE tunnel?

A. 'preferred-path' command under Tunnel interface config.
B. 'preferred-path' command under pseudowire-class config.
C. 'mpls pseudowire path' command under pseudowire-class config.
D. 'mpls pseudowire route' command under pseudowire-class config.
E. It is not possible to send PW traffic over a TE tunnel.

Answer: B

QUESTION 148:

The command Rip v2 broadcast is used:

A. To allow rip v2 broadcasts to be sent as broadcast packets instead of multicast packets.
B. To send RIP broadcasts as unicast packets instead of multicast packets.
C. To suppress rip v1 broadcasts.
D. Both a and c.

Answer: B

QUESTION 149:

Exhibit:
version 11.2
!
hostname router
!
boot system flash slot0:rsp-isv-mz.112-8.P
enable password cisco
Look at the router configuration above. If this router has a configuration-register setting of 0x101, select the proper boot sequence:

A. The router will try to use the image "rsp-isv-mz.112-9 P" on slot 0, then attempt to boot from a network server, and finally boot from ROM.
B. The router will try to use the image "rsp-isv-mz.112-8 P" on slot 0, then attempt to boot from any other valid image in flash, and finally boot from ROM.
C. The router will try to use the image "rsp-isv-mz.112-8.P" on slot 0, then it will boot from ROM.
D. The router will try to use the image "rsp-isv-mz.112-8.P" on slot 0, and then attempt to boot from a network server.

Answer: C

QUESTION 150:

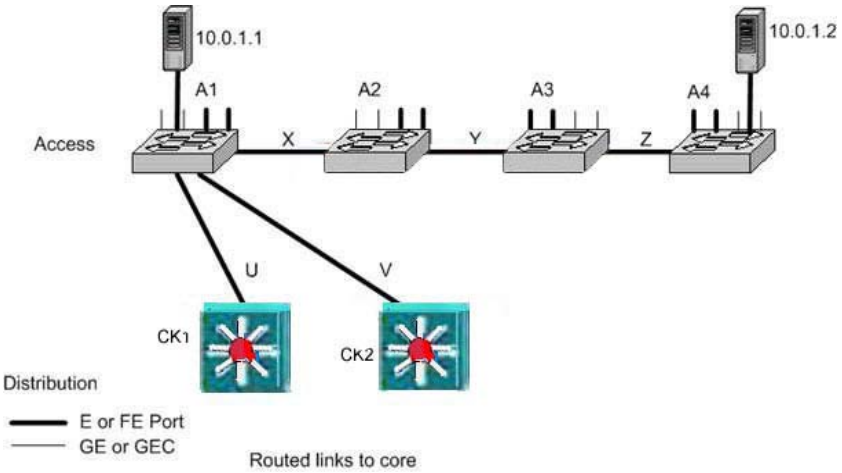
Regard the ATM cell transport, which statements are FALSE? Select two.

A. The Max Packed Cells is advertised in the control word.
B. The Max Packed Cells is advertised in an LDP interface parameter.
C. The only mode supported is VC mode.
D. The control word is optional but used whenever possible.

Answer: B

QUESTION 151:

Exhibit:



The diagram shows a wiring closet stack of four L2 switches A1, A2, A3, and A4. A1, A2, A3 and A4 are connected in series. Switch A1 is the root switch and connects to CK1 and CK2 . There are no loops in the wiring closet VLAN (=subnet). The architect wants to remove X, Y and Z, and connect A1 directly to A2, A3, and A4 in s star. Is this a good idea?

A. Yes, because packets from CK2 to host 10.0.1.2 will take fewer L2 hops.
B. Yes, because with A1, A2, and A3, and A4 in series, link Z will become a bottleneck.
C. No, because switch A1 will become a bottleneck.
D. No, because A1 must be replaced by a L3 switch.
E. No, because it will create an STP loop.

Answer: A

QUESTION 152:

What does a CFI represent in 802.1q?

A. Cisco Forwarding Interface
B. Canonical format indicator
C. Class Flag Input
D. None of the above

Answer: B

QUESTION 153:

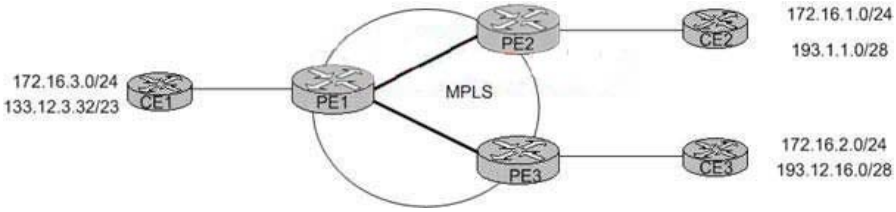
What is the command switched-fr-dlci used for?

A. To create a local switching FR DLCI endpoint.
B. To allow PW Interworking with Frame Relay.
C. To provide DLCI-to-subinterface mapping to apply a service-policy.
D. To configure a Frame Relay pseudowire using L2TPv3.
E. There is no such command.

Answer: E

QUESTION 154:

Exhibit:



In the MPLS network shown, which subnets would be in the same Forwarding Equivalance Class (FEC) on router PE1:

A. 172.16.3.0/24 and 193.1.1.0/28
B. 172.16.1.0/24 and 172.16.2.0/24
C. 172.16.1.0/24 and 193.1.1.0/28
D. 172.16.1.0/24, 172.16.2.0/24, and 172.16.3.0/24

Answer: C

QUESTION 155:

How many bits does TCI contain?

A. 1
B. 3
C. 6
D. 12
E. 16
F. 20

Answer: E

Explanation:

Search for TCI through this doc:
http://www.cisco.com/en/US/products/sw/iosswrel/ps1829/products_feature_guide09186a00801a2c39.html

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QUESTION 156:

Which best describes the advantages of L2VPN vs. L3VPN? Select two.

A. Layer 2 VPNs appeal to subscribers who run their own Layer 3 networks over the wide area and require Layer 2 connectivity from service providers. In this case, the subscriber manages their own routing information.
B. Layer 2 VPNs and Layer 3 VPNs are the same service and there is no difference between them.
C. Layer 3 VPNs (or the traditional RFC2547) appeal to subscribers who prefer to outsource their routing to service providers. The service provider manages routing for the customer's sites.
D. Layer 2 VPNs allow service providers to route IPX and DecNet for customers over their cire.
E. Layer 3 VPNs allow service providers to route and bridge IPX and DecNet for customers over their core.

Answer: A, C

QUESTION 157:

The command 'show vfi' does not display:

A. The VFI name
B. The VFI state
C. The VFI local attachment circuits
D. The VFI remote attachment circuits
E. The VFI neighbors

Answer: D

Explanation:
http://www.cisco.com/en/US/partner/products/sw/iosswrel/ps1829/products_feature_guide09186a0080442133.html#wp

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QUESTION 158:

Regarding ATM Cell Transport, how many bytes per cell are transported?

A. 48, only the ATM cell payload.
B. 49, the cell payload plus a control byte per cell.
C. 52, the ATM cell without CRC.
D. 53, the complete ATM cell.
E. 24, the complete ATM cell.

Answer: C

Explanation:
Without HEC (CRC), payload 48, header 4 bytes

QUESTION 159:

When a TCP segment is lost, the TCP sender reacts by: (multiple answer) Select two.

A. Resending the segment.
B. Increasing the window size.
C. Resetting the session.
D. Increasing the amount of time it will wait when timing out the next segment that is sent.

Answer: A, D

QUESTION 160:

What command would you use on a 7600 switch to enable link-usage based load balancing for AToM VC?

A. mpls load-balance per-label
B. mpls ldp maxhops 2
C. ip cef load-sharing algorithm original
D. mpls load-balance per-12transport-circuit
E. ip cef load-sharing algorithm tunnel

Answer: D

Explanation:
http://www.cisco.com/en/US/products/hw/routers/ps368/products_configuration_guide_chapter09186a00803f3770.html

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QUESTION 161:

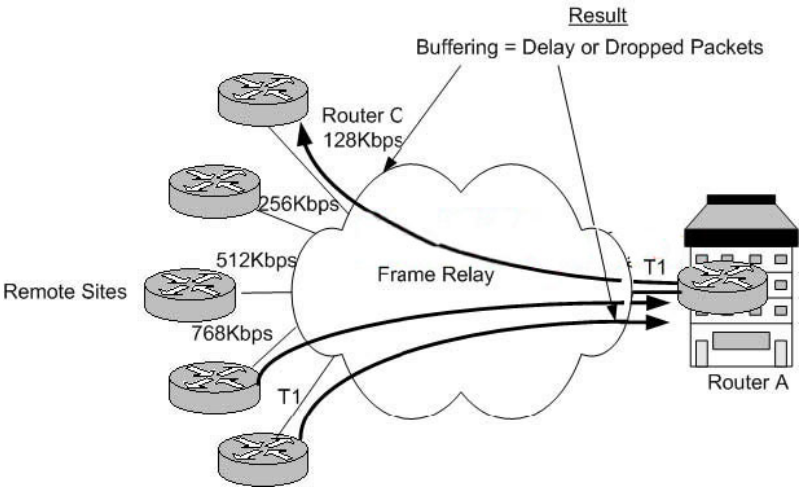
A router is receiving updates for a subnet from different routing protocols. The administrator wishes to take advantage of a path via a route with a less favorable Administrative Distance. What can be done to affect this without losing any of the updates?

A. Configure a static route with and Administrative Distance of 120.
B. Use the Router Configuration mode command distance with an appropriate 'weight' for this subnet.
C. Create a distribute-list to block this subnet.
D. Modify the default-metric weight of the routing protocol offering the more favorable Administrative Distance.

Answer: D

QUESTION 162:

Exhibit:



In the diagram shown, what mechanism needs to be employed on the remote site routers to aid congestion avoidance in the core, based on traffic properties?

A. IP Precedence Tagging
B. Weighted Random Early Detection
C. Random Early Detection
D. Class Based Weighted Fair Queuing

Answer: B

Explanation:
Should be WRED, not CB-WFQ. The former is congestion avoidance, the latter is congestion management.
See: "Cisco IOS Quality of Service Solutions Configuration Guide - Release 12.2"

QUESTION 163:

What is true regarding MPLS label stacks for EoMPLS packets?

A. There are no labels.
B. There is at most 1 label.
C. There is at most 2 labels.
D. There is at most 3 labels.
E. None of the above.

Answer: C

Explanation:
At least 2 labels
at most 3 labels (dengan FRR)

QUESTION 164:

EIGRP applies the principle of Feasible Successor (FS) in resolving a new path to a lost route. What statement regarding the FS is correct?

A. Information is stored for the FS as part of the Link-State Routing updates forwarding for EIGRP.
B. EIGRP estimates the FS from each neighbor for each network after an exchange of database information during the normal update process. It uses this information for path selection when a route is lost.
C. When EIGRP is notified that a route is lost, it will always send requests to each neighbor for ways to reach the lost route. The neighbor that returns the best path will qualify as the FS.
D. EIGRP nominates a central router as the FS for all lost routes during configuration.

Answer: B

QUESTION 165:

What is Fast EtherChannel?

A. A feature to bundle multiple Ethernet point-to-point links quickly into one logical high speed link.
B. A feature to bundle multiple Fast-Ethernet point-to-point links into one logical high speed link.
C. Another name for full-duplex Fast Ethernet.
D. Another name for Gigabit Ethernet.
E. None of the above.

Answer: B

QUESTION 166:

Exhibit:
192.168.10.0/24
192.168.16.64/26
192.168.0.0/27
Which addresses below are appropriate supernets to contain the addresses shown in the exhibit? (Multiple answer) Select two.

A. 192.168.0.0/16
B. 192.168.0.0/19
C. 192.168.32.0/19
D. 192.168.1.0/24

Answer: A, B

QUESTION 167:

Which addresses below would be valid IP addresses of hosts on the Internet? (Multiple answer) Select two.

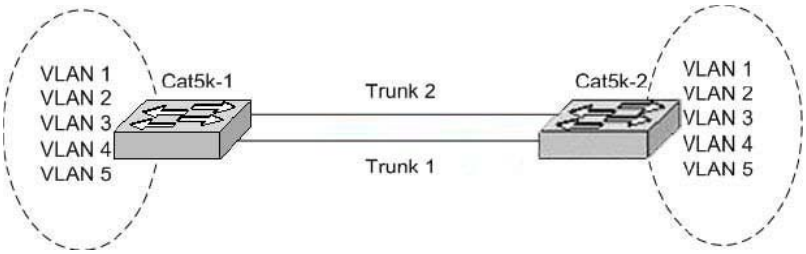
A. 235.1.1.1
B. 223.20.1.1
C. 10.100.1.1
D. 127.0.0.1
E. 24.15.1.1

Answer: B, E

Explanation:
Incorrect Answers:
Not A: Multicast
The multicast addresses are in the range 224.0.0.0 through 239.255.255.255.
Not C: Private
These private IP address ranges exist:
10.0.0.0 through 10.255.255.255
169.254.0.0 through 169.254.255.255 (APIPA only)
172.16.0.0 through 172.31.255.255
192.168.0.0 through 192.168.255.255
Not D: Loopback

QUESTION 168:

Exhibit:



Assuming default spanning tree configurations are running between two switches with redundant trunks:

A. Both trunk 1 and trunk 2 will go into blocking mode to avoid loops.
B. One trunk will go into blocking mode for all VLANs.
C. Certain VLANs can be blocked on one trunk and other VLANs on the second trunk.
D. Both trunks can be in a forwarding state for all VLANs.

Answer: B

QUESTION 169:

Which are the components of a TCI? Select three.

A. TPID
B. CFI
C. L/T

D. Priority
E. VID

Answer: B, D, E

Explanation:
TCI 2 bytes of Tag Control Information that in turn contain the following:
Priority 3 bits that define the 802.1p user priority. They are also referred to as the class of service (CoS) bits.
CFI 1-bit Canonical Format Identifier (CFI) for compatibility issues between Ethernet-type networks and Token Ringtype networks.
VLAN ID A 12-bit field that identifies the VLAN.

QUESTION 170:

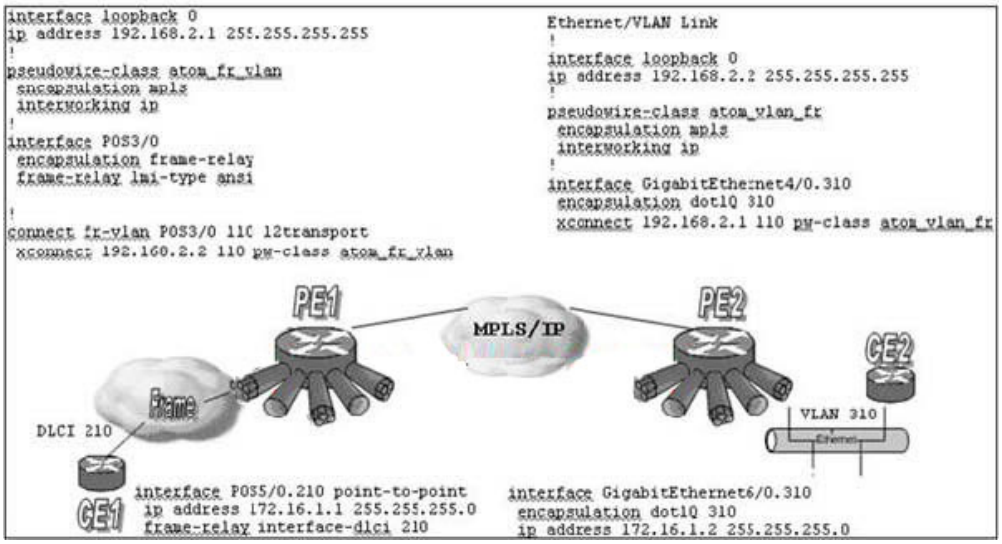
ATM cells are received across a link on a:

A. Known PVC or SVC value.
B. Known VCI or VPI value.
C. Known PVC or VCI value.
D. Known SVC or VPI value

Answer: B

QUESTION 171:

Exhibit:



By looking at the configuration shown, determine why CE1 will not be able to communicate with CE2. Select three.

A. The Frame-Relay interface is not configured correctly.
B. There is an MTU mismatch on Frame-Relay and Gigabit Ethernet.

C. The DLCI does not match with 802.1q VLAN.
D. The Frame-Relay switching is not configured on Frame Relay on PE1.
E. The Frame-Relay switching needs to be enabled on both PE1 and PE2.
F. You can not configure Frame-Relay on POS interface.

Answer: A, B, E

Explanation:
A. Since the POS mtu is 4470 and the GigE mtu is 1500, this will not work unless the mtu is set to 1500 on the POS port.
B. The interface type must be set to DCE or the FR link will not come up. The DLCI also needs to match the VC ID. (not the VLAN)
D. FR switching must be configured on PE1.However, FR switching must be configured on both PE1 and PE2 if you see the example config in the abovementioned document.
See
http://www.cisco.com/en/US/partner/products/sw/iosswrel/ps1829/products_feature_guide09186a00801b2407.h

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QUESTION 172:

What Q.931 message cannot be received in response to sending a Q.931 SETUP message?

A. Alerting
B. Call Proceeding
C. Connect
D. USER Information
E. Progress

Answer: D
Not A: http://www.freesoft.org/CIE/Topics/126.htm

QUESTION 173:

Exhibit:

Certkiller 1 and Certkiller 2 are on Ethernet LANs in different buildings. A serial line is installed between two Cisco routers using HDLC serial line encapsulation. Routers A and B are configured to route IP traffic. Certkiller 1 sends a packet to Certkiller 2. What is the destination MAC address of the packet on Certkiller 's 1 Ethernet?

A. Certkiller 1
B. Certkiller 2

C. Router A
D. Router B
E. The broadcast address

Answer: C

QUESTION 174:

Which of the following CGMP (Cisco Group Management Protocol) statements is correct? (Multiple answer) Select two.

A. CGMP manages multicast traffic in Catalyst 5000 series switches by allowing directed switching of IP multicast traffic.
B. CGMP will switch IP multicast packets to all ports in one specific VLAN.
C. CGMP filtering requires a network connection from the Catalyst 5000 series switch to a router running CGMP.
D. CGMP handles ARP, SAP, UDP, SSAP, and DSAP.

Answer: A, C

Explanation:
See:
http://www.cisco.com/en/US/products/hw/switches/ps700/products_tech_note09186a00800b0871.shtml#cgmp

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QUESTION 175:

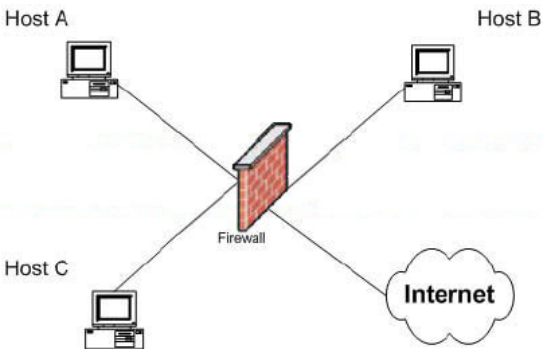
What is the usual procedure taken if an unrecognized non-mandatory ISDN IE is received by a network?

A. Final handle the call
B. Final handle the call if 2 such IE is received
C. Ignore only if the IE received is not CS0, otherwise final handle the call
D. Send a Facility msg to the user notifying the user of sending unknown IEs but don't final handle
E. Ignore the IE's

Answer: E

QUESTION 176:

Exhibit:



A network engineer is troubleshooting a connectivity problem between host A and B. The following conditions exist:
- Host A can ping the firewall, but cannot ping Host B.
- Host B can ping both the firewall and www. Certkiller .com.
- The firewall can ping www. Certkiller .com.
- Host C can ping the firewall and www. Certkiller .com.
- Host A and Host C have the same permissions on the firewall.
What is the most likely problem?

A. Routing protocols in the network are not set up properly, and not propagating across the firewall.
B. Host A has an incorrect default gateway configured.
C. Host B has an incorrect default gateway configured.
D. Host C has an incorrect default gateway configured.
E. The firewall has an incorrect default gateway configured.

Answer: B

QUESTION 177:

The Hold-Down Timer used in Distance Vector protocols:

A. Sets the time limit of how long a route may keep a packet in its buffer, if the routing protocol is in the process of converging
B. Determines the number of seconds a router will wait before sending another update to neighbor routers
C. Sets a specific period for routers to neither accept nor advertise a route from a destination where an original route was recently lost
D. Sets a duration where routes are not accepted from the neighbor router that caused a routing loop

Answer: C

QUESTION 178:

What VC Type does IP Interworking use?

A. 11 - IP Layer2 Transport
B. 0 - No VC Type for IP
C. 5 - Ethernet

D. 0x8003 - IP Layer2 Transport
E. None of the above

Answer: C

QUESTION 179:

What protocol is used to bonding or link aggregating multiple ethernet ports into one virtual interface?

A. 802.3ab
B. 802.3ac
C. 802.3ad
D. 802.3z
E. 802.1q

Answer: C

QUESTION 180:

Which statement is true regarding the AToM control word? Select two.

A. The control word is required for Ethernet transport.
B. The control word is required for AAL5 SDU transport.
C. The control word is required for HDLC transport.
D. The control word is required for Frame Relay DLCI transport.
E. The control word is never required.

Answer: B, D

QUESTION 181:

What is TCI?

A. Tag Calling Interface
B. Tag Control Identifier
C. ToS Class Interface
D. Tag Control Information

Answer: D

Explanation:
See cisco sample question for SP-written in cisco site.

QUESTION 182:

Exhibit:

If a router had the three routes listed, which one of the routes would forward a packet destined for 10.1.1.1?

A. 10.1.0.0/16 through EIGRP, because EIGRP routes are always preferred over OSPF or static routes.
B. 10.1.0.0/16 static, because static routes are always preferred over OSPF or EIGRP routes.
C. 10.1.1.0/24 through OSPF because the route with the longest prefix is always chosen.
D. Whichever route appears in the routing table first.
E. The router will load share between the 10.1.0.0/16 route through EIGRP and the 10.1.0.0/16 static route.

Answer: C

QUESTION 183:

How long is an ATM cell header?

A. 5 octets (bytes)
B. 3 octets (bytes)
C. 8 octets (bytes)
D. The size varies by AAL type used

Answer: A

QUESTION 184:

What Delimits the beginning and the end of the Frame Relay frame?

A. Address
B. FCS
C. Data
D. Flags
E. Packets

Answer: D

QUESTION 185:

The two label distribution protocols that provide support for MPLS traffic engineering are:

A. RSVP and OSPF
B. CR-LDP and IBG
C. RSVP and CR-LDP
D. LPS and LDS

Answer: C

Explanation:
Constraint-based routing dan RSVP

QUESTION 186:

The network administrator has forgotten the enable password of the router. Luckily, no one is currently logged into the router, but all passwords on the router are encrypted. What should the administrator do to recover the enable password?

A. Call the Cisco Technical Assistance Center (TAC) for a special code that will erase the existing password.
B. Reboot the router, press the break key during bootup, boot the router into ROM monitor mode, and modify the configuration register so that the current configuration is ignored during normal bootup.
C. Reboot the router, press the BREAK key during bootup, and boot the router into ROM Monitor mode to erase the configuration, and re-install the entire configuration as it was saved on a TFTP server.
D. Erase the configuration, boot the router into ROM Monitor mode, press the BREAK key, and overwrite the previous enable password with a new one.

Answer: B

QUESTION 187:

To restrict SNMP access to a router, what configuration command could be used?

A. snmp-server community
B. snmp-server enable
C. snmp-server log
D. snmp-server host

Answer: A

QUESTION 188:

MPLS traffic engineering data is carried by:

A. Opaque LSAs or IS-IS TLVs
B. BGP MEDs
C. RTP or RTCP packets
D. MGBP

Answer: A

QUESTION 189:

What technology can be used to hide customer VLANs from the service provider's core?

A. Private VLAN
B. 802.1x
C. Tag Stacking (also known as Q in Q)
D. Port Security

Answer: C

Explanation:
See l2 book cahpter ch15 VPLS case studies

QUESTION 190:

What network is a supernet?

A. 134.176.64.0 255.255.192.0
B. 16.0.1.0 255.255.255.240
C. 134.176.0.16 255.255.255.240
D. 195.97.16.0 255.255.240.0

Answer: D

QUESTION 191:

Which standard defines the STP algorithm?

A. IEEE 802.1D
B. IEEE 802.11
C. IEEE 802.1q
D. ITU Q.2727-STP
E. IETF RFC 1483

Answer: A

QUESTION 192:

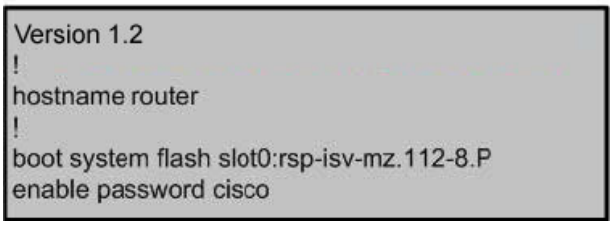
Which are supported ways of transporting ATM over MPLS? Select two.

A. AAL5 SDU VC Mode
B. AAL5 SDU VP Mode
C. Packet Cell Relay AAL5 Trunk Mode
D. Packet Cell Relay Trunk Mode
E. AAL2oMPLS

Answer: A, D

QUESTION 193:

Exhibit:



Look at the router configuration above, if this router has a configuration-register setting of 0x102, select the proper boot sequence:

A. The router will try to use the image "rsp-isv-mz.112-8.P" on slot 0, then attempt to boot from a network server, and finally boot from ROM.
B. The router will try to use the image "rsp-isv-mz.112-8.P" on slot 0, then attempt to boot from any other valid image in flash, and finally boot from ROM.
C. The router will try to use the image "rsp-isv-mz.112-8.P" on slot 0, and then it will boot from ROM.
D. The router will try to use the image "rsp-isv-mz.112-8.P" on slot 0, and then attempt to boot from a network server..

Answer: C

Explanation:
http://www.cisco.com/en/US/products/sw/iosswrel/ps1835/products_configuration_guide_chapter09186a00800ca739.html

QUESTION 194:

What technology allows Transporting Layer2 attachment circuits over IP-only backbones?

A. GRE
B. AToM
C. L2TPv3
D. DLSW4+

Answer: C

QUESTION 195:

What is true about the EoMPLS control word?

A. It is optional, but Cisco implementation never uses it.
B. It is optional, but Cisco implementation always uses it.
C. It is optiona, and Cisco implementation uses it only whenever possible.
D. It is required

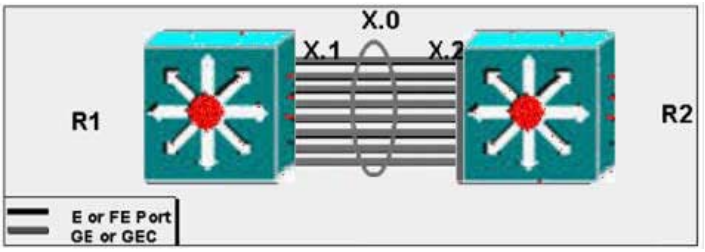
E. There is no such thing as EoMPLS control word

Answer: A

Explanation:
http://www.cisco.com/en/US/products/sw/iosswrel/ps1838/products_feature_guide_chapter09186a0080134a1c.html
The PE router copies the control word from the header, even though it is not used.

QUESTION 196:

Exhibit:



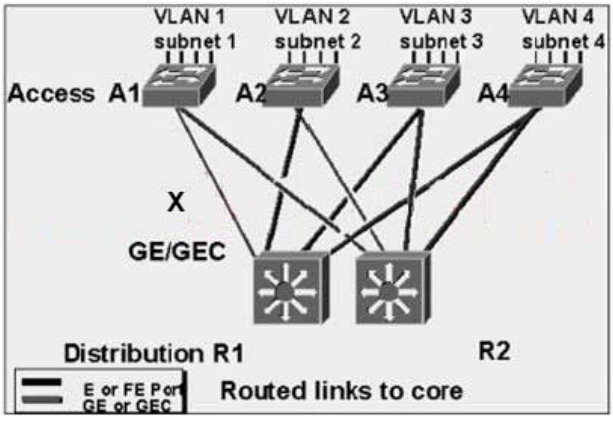
L3 switches R1 and R2 are in the backbone of the network. They are connected by a routed EtherChannel bundle consisting of eight Gigabit Ethernet ports. The routed link is represented as subnet X.0 in the diagram. Since X.0 is routed, it is not a VLAN trunk. How can spanning tree loops be prevented in the backbone of this network?

A. Since EtherChannel X is routed there are no spanning tree loops.
B. Configure seven of the eight ports in the bundle as passive interfaces.
C. Configure UplinkFast on R1 and R2
D. Disable Spanning Tree Protocol (STP) on R1 and R2
E. Disable VLAN X on seven of the eight ports in the bundle

Answer: A

QUESTION 197:

Exhibit:



As shown in the diagram, a building in your campus network has two layer 3 switches in the distribution

layer and four layer 2 switches in the wiring closets. The Layer 3 switches are labeled R1 and R2. The layer 2 switches are labeled A1, A2, A3, and A4. Access switch A1 is configured as the root switch of VLAN 1. Each access switch has a single subnet and the uplinks are configured as access ports, not VLAN trunks. If the uplink labeled X is cut, how long does spanning tree protocol interrupt connectivity before it converges?

A. About 2 to 3 seconds if UplinkFast is enabled
B. About 15 seconds
C. About 30 seconds
D. About 50 seconds
E. There should be no loss in connectivity

Answer: E

Explanation:
The correct answer is E (no loss in connectivity since its only l3 links).
We note at the begining that it is A (2-3s) according to bellow url 1-5s with uplinkfast
http://www.cisco.com/en/US/products/hw/switches/ps708/products_configuration_guide_chapter09186a008007f989.htm

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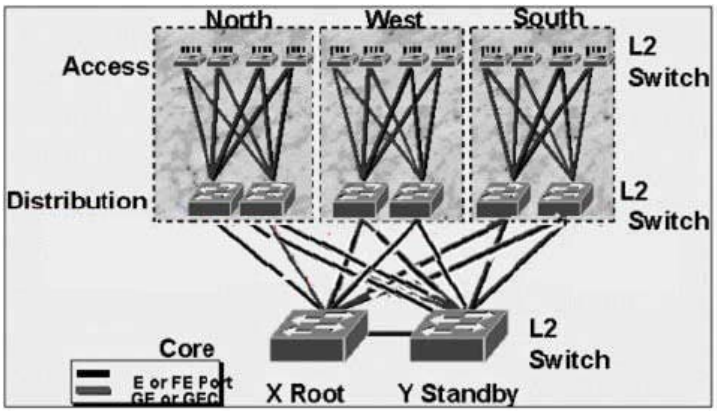
QUESTION 198:

Exhibit:



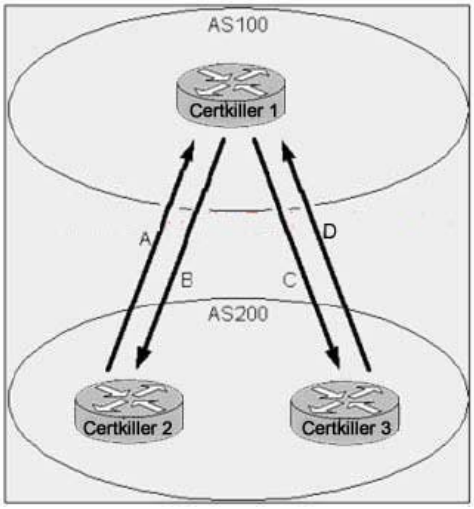
The diagram shows an L2 switched campus. Switch X is the STP root and switch Y is the standby root. How many of the links in the diagram will be placed in blocking mode by STP?

A. 6
B. 7
C. 12
D. 13
E. 18
F. 19

Answer: E

QUESTION 199:

Exhibit:



According to the diagram, what attribute is initiated by AS200 (IBGP) to give preference to the path A or D traffic will take when going from AS200 to AS100? What attribute is initiated by AS200 (EBGP) to give preference to the path B or C traffic will take when going from AS100 to AS200?

A. MED; Origin
B. MED; Local Preference
C. Community; Origin
D. Local Preference; MED
E. Origin; Community

Answer: D

QUESTION 200:

Regarding the VFI configuration, which are not true? (Choose two.)

A. The command to enter VFI mode is 'vfi'.
B. The command to enter VFI mode is 'l2 vfi'.
C. The configuration of a 'vpn id' is optional.
D. The configuration of a 'vpn id' is required.
E. There is no such a thing as VFI.

Answer: B, D

Explanation:
http://www.cisco.com/en/US/products/sw/iosswrel/ps1829/products_feature_guide09186a0080442133.html#wp

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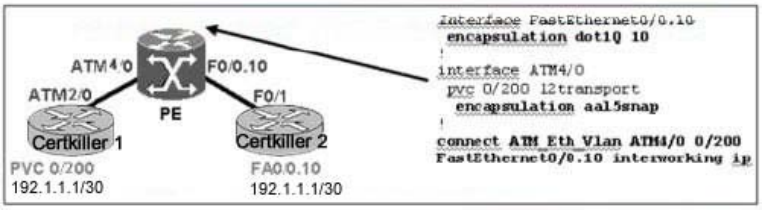
QUESTION 201:

Exhibit:



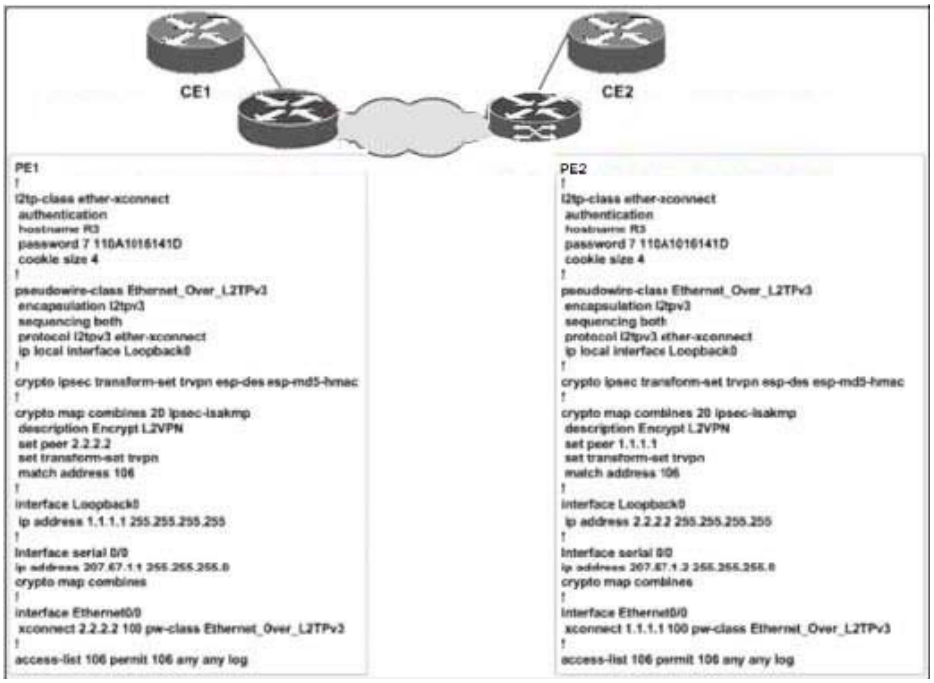
By observing the shown configuration and diagram, will Certkiller 1 be able to communicate with Certkiller 2?

A. No, this configuration will not work because you can not have an ATM switch connected to an Ethernet locally on the router.
B. No, this configuration will not work because of the MTU mismatch on the ATM and Ethernet interfaces (by default, ATM 4460 and Ethernet 1500).
C. Yes, this configuration is valid and Certkiller 1 will be able to communicate with Certkiller 2 regardless of MTU
size on each of the attachment circuits.
D. No, for this configuration to work dot1q must match with the VCI number.

Answer: C

QUESTION 202:

Exhibit:



Observing the shown configuration, assume PE1 and PE2 already have IP connectivity, what behavior should be expected?

A. This configuration is valid. L2TPv3 will come up and CE1 will be able to communicate with CE2.
B. This is not a valid design because Crypto does not have any relationship to L2TPv3.
C. This configuration will not work for L2TP3 because to work it would require MPLS to be enabled in the core.
D. L2TPv3 will not come up and Crypto IPSec will not come up either because there is a misconfigured protocol type for L2TPv3.
E. This will not work because Crypto is misconfigured on PE1 and PE2.
F. This will not work because it is not possible to encrypt L2TPv# session in IPSec.

Answer: A

QUESTION 203:

Within OSPF, what functionality best defines the use of a 'stub' area?

A. It appears only on remote areas to provide connectivity to the OSPF backbone.
B. It is used to inject the default router OSPF.
C. It uses the no-summary keyword to explicitly block external routes, defines the non-transit area, and uses the default route to reach external networks.
D. It is a non-transit area that does not allow flooding of external networks and uses the default route to reach external networks.

Answer: D

QUESTION 204:

With CGMP enabled, which are unique about the following MAC address range: 01-00-5E-00-00.00 to 01-00-5E-00-00-FF? (Multiple answer) Select three.
E. CGMP does not prune those MAC addresses.
F. They contain the CGMP Multicast Addresses for the IGMP Leaves and IGMP Queries.
G. CGMP filters those MAC addresses when they arrive at the processor.
H. They are the reserved IP addresses of 224.0.0.0 to 224.0.0.255 for forwarding local IP multicast traffic in a single Layer 3 hop.

Answer: A, B, D

Explanation:
B: When CGMP Leave is enabled, two entries are added to the show cam system command output, as shown below.
01-00-5e-00-00-01
01-00-5e-00-00-02
IGMP Leave uses 224.0.0.2 and IGMP Query uses 224.0.0.1.
See http://www.cisco.com/warp/public/473/22.html#cgmp.

QUESTION 205:

What command would you use on a 7600 switch to enable load balancing mode per incoming label?

A. mpls load-balancing per-label
B. mpls ldp maxhops 2
C. ip cef load-sharing algorithm original
D. mpls load-balance per-l2transport-circuit
E. ip cef load-sharing algorithm tunnel

Answer: A

Explanation:
http://www.cisco.com/univercd/cc/td/doc/product/core/cis7600/cfgnotes/osm_inst/mpls.htm

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QUESTION 206:

What type of signaling is most relevant to ATM networks supporting SVCs?

A. H.323
B. Q.2931
C. ETSI.761
D. G.723

Answer: D

Explanation:
http://www.cisco.com/en/US/tech/ CK3 31/ CK3 39/tech_digest09186a0080181316.html

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QUESTION 207:

While entering commands on a console, the break key is pressed accidentally and the router reboots.
What action could disable this problem?

A. In configuration mode, enter disable break
B. In configuration mode, enter no service break.
C. Change configuration register.
D. Replace the router - this is an invalid response to pressing the break key when past 60 seconds after boot.

Answer: C

QUESTION 208:

A Fast Ethernet connection supporting multiple VLANs is referred to as:

A. A circuit group
B. An emulated LAN (LANE)
C. A trunk

D. All of the above

Answer: C

QUESTION 209:

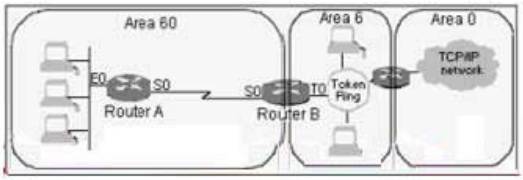
What is the purpose of Administrative Distance, as used by Cisco routers, is:

A. To choose between routes from different routing protocols when receiving updates for the same network
B. To identify which routing protocol forwarded the update
C. To define the distance to the destination used in deciding the best path.
D. To be used only for administrative purpose

Answer: A

QUESTION 210:

Exhibit:



In a reorganization, OSPF areas are realigned. Is this a valid network design? If not, which changes could be made to the network and/or router configuration? (Choose two)

A. No changes are necessary
B. A virtual link could be configured between Area 60 and Area 0.
C. A serial line or other physical connection could be installed between devices in Area 60 and Area 0.
D. Router B could be configured as an Area Border Router between Area 60 and Area 6.
E. This is not a valid design, and no changes can make it work.

Answer: B, C

QUESTION 211:

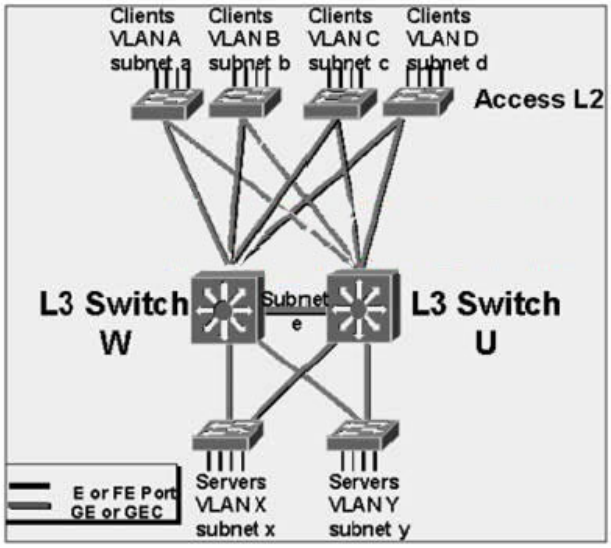
What is RPF?

A. Reverse Path Forwarding
B. Reverse Path Flooding
C. Router Protocol Filter
D. Routing Protocol File
E. None of the above

Answer: A

QUESTION 212:

Exhibit:



The diagram shows a collapsed L3 switched building backbone consisting of two L3 switches: W and U. Each L3 switch has a routed interface on every subnet (VLAN) in the building. There are no VLAN trunks in the network. In other words the L3 switches are acting as native routers. There are exactly 4 client-side VLANs (subnets): a, b, c, d. There are exactly 2 server-side VLANs (subnets): x and y. There is one routed link (Subnet e) connecting the L3 switches in the core. How many equal-cost paths to Subnet d does L3 switch W keep in its routing table?

A. 1
B. 2
C. 3
D. 4
E. 5

Answer: A

QUESTION 213:

The configuration register does not retain settings for:

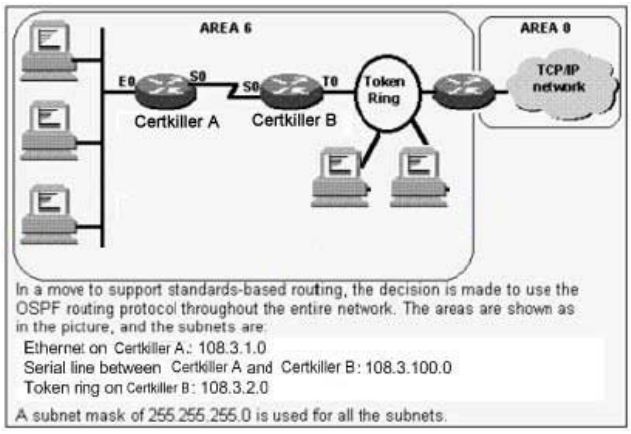
A. An enabled 'Break' key
B. The console baud rate
C. The boot method
D. An enabled AUX port

Answer: D

Explanation:
http://www.cisco.com/en/US/products/hw/routers/ps274/products_installation_guide_chapter09186a008007de4c.html#1

QUESTION 214:

Exhibit:



How should OSPF be configured on Certkiller B?

A. router ospf
network 108.3.0.0
B. router ospf 1
network 108.3.100.0 0.0.0.255 area 6
network 108.3.2.0 0.0.0.255 area 6
C. router ospf 1
network 108.3.100.0 0.0.0.255 area 6
network 108.3.2.0 0.0.0.255 area 0
D. router ospf 1
network 108.3.100.0 255.255.255.0 area 6
network 108.3.2.0 255.255.255.0 area 6
E. router ospf 1
network 108.3.1.0 0.0.0.255 area 6
network 108.3.100.0 0.0.0.255 area 6
network 108.3.2.0 0.0.0.255 area 6

Answer: B

QUESTION 215:

What does not contribute to lowered throughput in practical IP over ATM networks?

A. ILMI overhead
B. SAR delay
C. Cell tax
D. Cell padding

Answer: A

QUESTION 216:

What is NOT used for implementing QoS?

A. Provisioning
B. Classification
C. Scheduling
D. Random Detect

Answer: D

QUESTION 217:

In order to avoid loops when sending routing updates, what is the correct technique to prevent a network from being forwarded on the same interface it is learned?

A. Poison Reverse
B. The use of access-lists used with distribute-list
C. Split Horizon
D. This is not a problem, since this cannot happen

Answer: C

Explanation:
Question about
-FrameRelay BECN answer set by FR Service prov to avoid congested
-FrameRelay FECN answer set by dte
-VLAN ciscuit attachment
- supervisor synhronization protocol = answer in exam SSP not SSO
Note:
Normally, routers that are connected to broadcast-type IP networks and that use distance-vector routing protocols employ the split horizon mechanism to reduce the possibility of routing loops. Split horizon blocks information about routes from being advertised by a router out of any interface from which that information originated. This
http://www.cisco.com/en/US/products/sw/iosswrel/ps1828/products_configuration_guide_chapter09186a00800ca569.html

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QUESTION 218:

Consider a redundant switched environment where some of the ports are blocked by running spanning tree on a switch. When are BPDUs sent out on blocked ports?

A. Every time the switch is rebooted
B. BPDUs are always sent out blocked ports
C. BPDUs are never sent out blocked ports
D. Only when calculating the spanning tree

Answer: C

QUESTION 219:

Telcordia has defined national ISDN, which is basically within the construct of Q.931 protocol with some modifications. If National ISDN requires a new information element (IE), how will this need be handled?

A. Use CS8 IE
B. Telcordia should define a new CS7 IE
C. No new IE can be defined by standard bodies other than ITU-T; therefore, Telcordia must pass the information in open fields of
D. existing IE.
E. Telcorida has to define a new codeset (CS) 0 IE.
F. Telcordia should define a new CS5 IE

Answer: E

QUESTION 220:

Select the group of technologies which are listed in descending order of bandwidth scale:

A. ATM, DWDM, Frame Relay
B. DWDM, SDH, ATM
C. DWDM, SDH, Frame Relay
D. SDH, X.25, ATM

Answer: B

QUESTION 221:

In a Distance Vector protocol, "counting to infinity":

A. Calculates the time taken for a protocol to converge
B. Causes the router to enter an infinite loop and requires the router to be restarted
C. Sets an upper limit for hop count, so that routing loops can be broken if this limit is reached
D. Counts the packets dropped during a routing loop
E. Checks to make sure the number of route entries do not exceed a set upper limit

Answer: C

QUESTION 222:

QoS Low Latency Queuing is used for:

A. Traffic Shaping
B. Traffic Policing
C. Congestion Avoidance
D. Congestion Management

Answer: D

QUESTION 223:

What signaling protocol does Cisco use to provide support for MPLS traffic engineering?

A. SS7
B. TDP
C. RSVP
D. LDP

Answer: C

QUESTION 224:

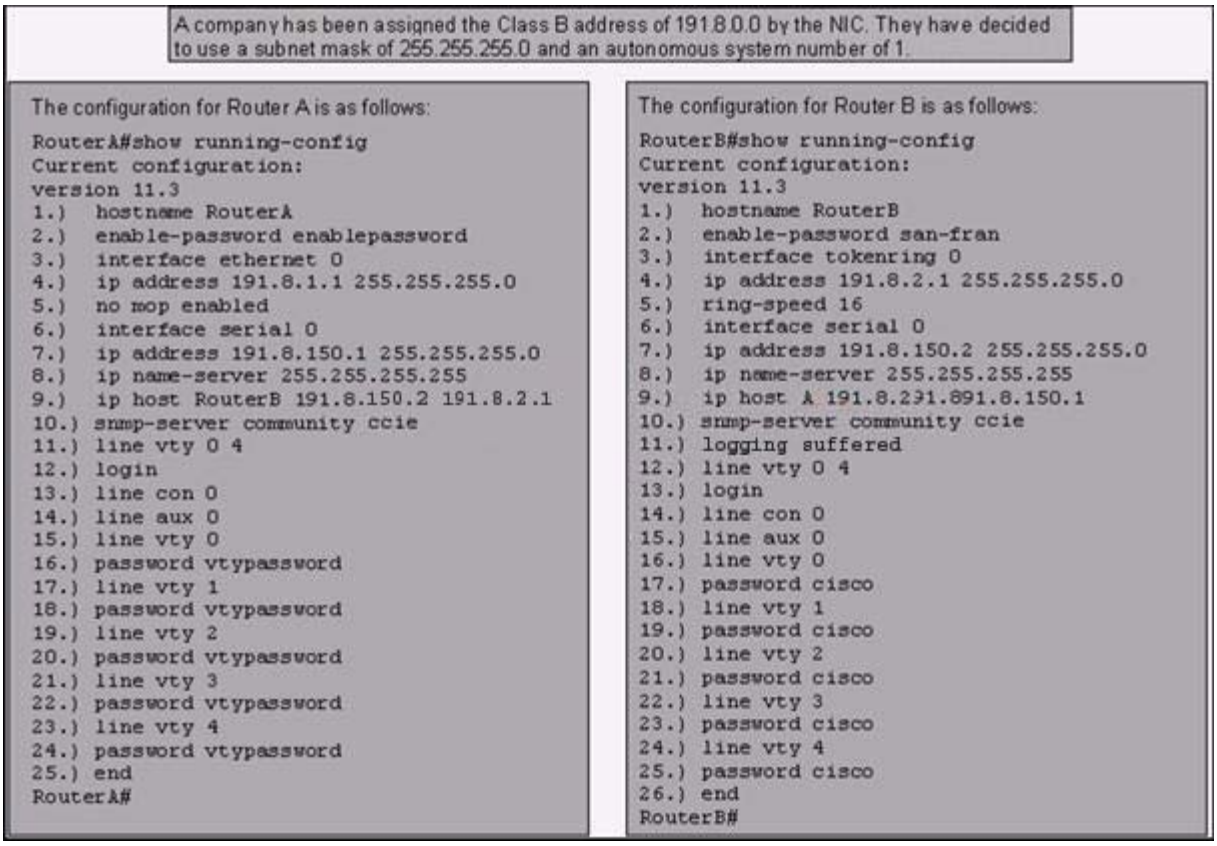
A network administrator is using debug commands to check the performance of a network. What steps can the administrator take to ensure that the "debug" will not require too much CPU, or at least that she will not have to reboot the router to disable debug? (multiple answer)

A. Configure a loopback to channel debug traffic
B. Use the max-time parameter of the debug command
C. Make the debug command as specific as possible
D. In configuration mode, enter scheduler interval 15

Answer: C,D

QUESTION 225:

Click the Exhibit button to view the configuration. What effect will this configuration command have? line vty 0 4 no password vtypassword
Exhibit:



A. Virtual terminal sessions will not be asked a user-level password.
B. Virtual terminal sessions will not be able to enter enable mode.
C. It will have no effect.
D. All telnet connections to the router will be denied.
E. Only one telnet connection at the router will be allowed at a time.

Answer: D

QUESTION 226:

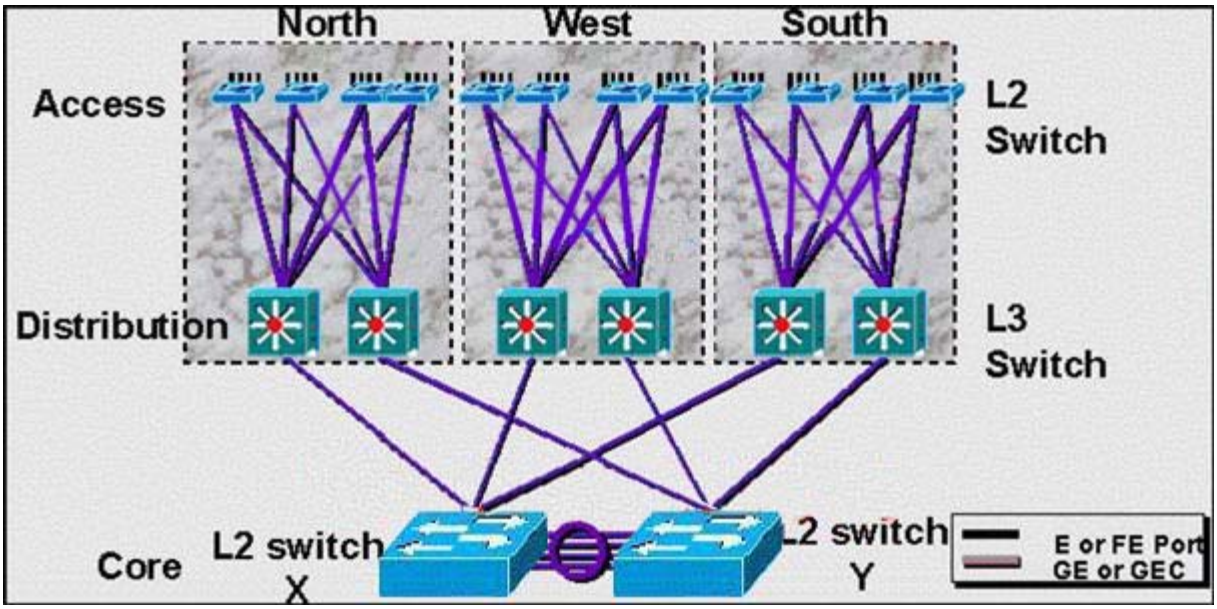
Which commands are valid in ethernet or ethernet VLAN attachment circuits?

A. match vlan
B. match source-mac
C. match ethernet cos
D. match cos
E. match ethernet multicast

Answer: A,D

QUESTION 227:

Click the Exhibit button to view the topology. The diagram shows a campus with a L2 switched backbone. The backbone has a single VLAN (= subnet) with no loops. The links into the backbone are routed interfaces, not VLAN trunks. Switch X is the STP root of the core VLAN and switch Y is the standby root. The connection between X and Y is an EtherChannel. The network architect wants to add more redundancy by connecting the L3 switches in the distribution layer to both X and Y. What best describes that plan?
Exhibit:



A. It is a sound idea because packets take a single L2 hop across the backbone.
B. It will cause loops that STP cannot resolve.
C. It is a sound idea because it increases bandwidth and redundancy.
D. It is impossible because routers cannot have two interfaces on the same subnet.
E. It is not sound financially because the extra links will be blocking.

Answer: D

QUESTION 228:

If two routers connected to the same Ethernet are configured to run HSRP (Hot Standby Router Protocol) in the same group number, which router's MAC address will be associated with the virtual IP address?

A. Neither - a virtual MAC address will be assigned based on the group number, unless the routers are configured to use their burned
B. in addresses (BIA).
C. Neither - the hosts will broadcast all traffic which needs to travel off-segment.

D. The routers will negotiate and decide automatically which MAC address to use based on the routers' IDs.
E. Both routers' MAC addresses will be associated with the virtual IP address.
F. It depends on which router is active.

Answer: A

QUESTION 229:

A router interface address is 180.60.45.96 with a mask of 255.255.255.224. What configuration statement will allow this interface to participate in OSPF Area 0?

A. router ospf 1
network 180.60.45.96 0.0.0.224 area 0
B. router ospf 1
network 180.60.45.96 0.255.255.224 area 0
C. router ospf 1
network 180.60.45.96 255.255.255.32 area 0
D. router ospf 1
network 180.60.45.96 0.0.0.31 area 0

Answer: D

QUESTION 230:

What are the 4 bridge port states in a transparent bridging environment?

A. Connecting, learning, spanning, forwarding
B. Spanning, learning, blocking, forwarding
C. Broadcasting, listening, forwarding, blocking
D. Listening, learning, blocking, forwarding
E. Learning, forwarding, connecting, blocking

Answer: D

QUESTION 231:

What happens to an incoming frame on a Layer 2 switch?

A. The switch looks for an entry in its routing table for the source MAC address and an associated outgoing port.
B. The switch looks for an entry in its switching table for the source MAC address and an associated outgoing port.
C. The switch makes an entry in its routing table for the destination MAC address and an associated incoming port.
D. The switch looks for an entry in its switching table for the destination MAC address

and an associated outgoing port.

Answer: D

QUESTION 232:

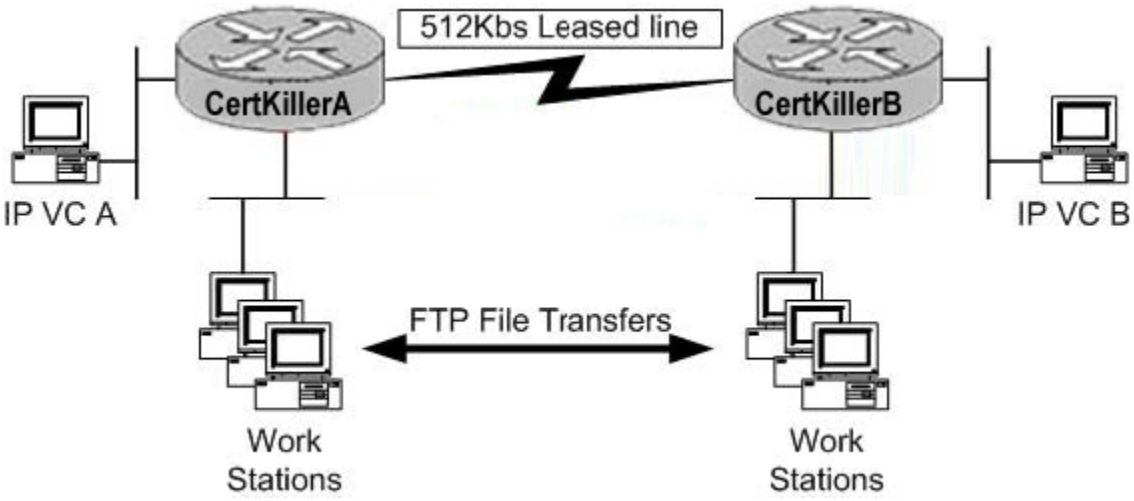
When using IS-IS for IP routing, Dual IS-IS defined by RFC 1195, what is true? (multiple answer)

A. It is necessary to configure a NSAP address.
B. Dual IS-IS does not support VLSM information.
C. It is not possible to perform both IP and CLNS routing wih the same process.
D. IP address and subnet information is carried in the TLV field on the L-1/L-1 LSPs.

Answer: A,D

QUESTION 233:

Click the Exhibit button to view the topology. Assume IP Videoconference station A places a 384Kb call to IP Videoconference station B and the Workstations are transferring files back and forth between themselves during the same time period. What Cisco feature should be used on both routers to avoid unwanted jitter and guarantee the videoconference will get enough bandwidth for the duration of the call?
Exhibit:



A. Frame Relay Traffic Shaping (FRTS) with FRF.12 packet fragmentation
B. Generic Traffic Shaping (GTS) with FECN Rate Adaptation activated
C. Bandwidth Guarantee for Videoconferencing (BGV)
D. Weighted Fair Queuing (WFQ) with IP Precedence

E. Resource Reservation Protocol (RSVP)

Answer: E

QUESTION 234:

What statement is FALSE concerning the use of SPAN on the Catalyst 6500?

A. It is possible to configure SPAN to have a Gigabit port, such as source port, and a 10/100 port as the destination port.
B. If the source port is configured as a trunk port, the traffic on the destination port will be tagged as well,regardless of the
C. configuration on the destination port.
D. In one SPAN session it is possible to monitor multiple ports that do not belong to the same VLAN.
E. With SPAN an entire VLAN can be configured to be the source.
F. When a SPAN session is active the destination port does not participate in Spanning Tree.

Answer: B

QUESTION 235:

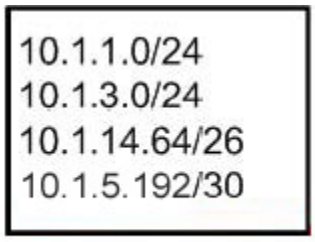
What IE is not mandatory in a Q.931 Service msg?

A. Bearer capability
B. Channel ID
C. Change Status
D. Call Reference
E. Message Type

Answer: A

QUESTION 236:

Click the Exhibit button. Given the four networks listed, what valid summary address (below) contains the longest prefix?
Exhibit:



A. 10.1.0.0/16
B. 10.1.16.0/19
C. 10.1.0.0/20
D. These networks cannot be summarized.
E. 10.1.1.0/23

Answer: C

QUESTION 237:

OSPF is defined on a Frame Relay interface providing point-to-multipoint connections. The remote neighbors can reach this central site, but are complaining of routing failures between each of the remote sites. The central router has all the routes for each remote site. Based on this information, what can be diagnosed as the biggest potential problem?

A. There is an incorrect DLCI assigned on a point-to-point sub-interface.
B. An over-subscribed Frame Relay switch will cause some packet loss.
C. There are problems in the use of OSPF Authentication.
D. There is an incorrect selection of the Designated Router.

Answer: D

QUESTION 238:

In Frame Relay, the BECN bit is set by:

A. The receiving DTE, to inform the Frame Relay network that it is overloaded and that the switch should throttle back
B. The sending DTE, to inform the Frame Relay network that it is overloaded and that the switch should throttle back
C. The Frame Relay network, to inform the DTE receiving the frame that congestion was experienced in the path from source to
D. destination
E. Any device that uses an extended DLCI address
F. The Frame Relay network, in frames traveling in the opposite direction from those frames that encountered congestion

Answer: E

QUESTION 239:

What is Forwarding Equivalence Class assignment NOT likely to be based upon?

A. Destination address
B. Class of service
C. Fragment offset
D. Application protocol

Answer: C

QUESTION 240:

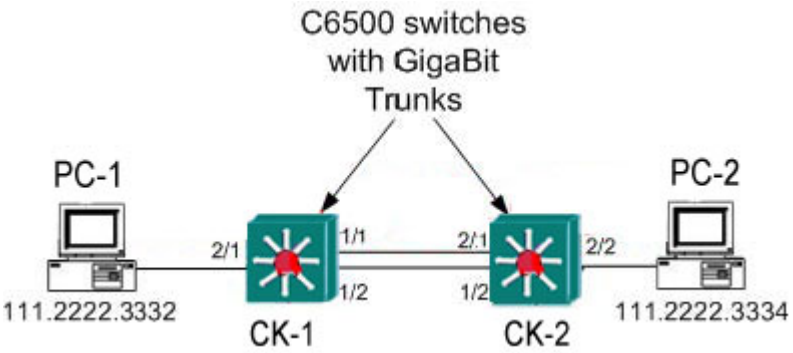
When connecting two different VLAN Trunk Protocol domains together via an ISL trunk, the switches fail to form the trunk automatically. What is the likely cause?

A. The Unidirectional Link Detection timers are shorter than the Spanning Tree Protocol (STP) timers.
B. The trunks need to be set to "on" or "nonegotiate".
C. The native VLANs are the same.
D. The VTP domain names carried in the Dynamic Inter-Switch Link (DISL) messages are not the same.
E. The VLAN Trunk Protocol multicast address was set to 01-00-0c-cc-cc-cc.

Answer: D

QUESTION 241:

Click the Exhibit button to view the topology. If Switch CK-1 is the root of the spanning tree for all VLANs in the network, what ports will be blocking on Switch CK-1?
Exhibit:



A. Both 1/1, and 1/2
B. 1/2 only
C. 1/1 only
D. Not enough information

Answer: D

QUESTION 242:

ATM switches use the VPI/VCI fields of the cell header:

A. To determine if the header contains a checksum error and should be discarded
B. To determine if the cell should be discarded in preference to others that have not exceeded their traffic envelope
C. To identify the QOS parameters specified in the traffic contract between the ATM end station and the network
D. To determine if the cell contains user data or control data
E. To identify the next intermediate destination to which the cell should be passed

Answer: E

QUESTION 243:

In Frame Relay, the FECN bit is set by:

A. The Frame Relay network, to inform the DTE receiving the frame that congestion was experienced in the path from source to
B. destination
C. Any device that uses an extended DLCI address
D. The Frame Relay network, in frames traveling in the opposite direction from those frames that encountered congestion
E. The receiving DTE, to inform the Frame Relay network that it is overloaded and that the switch should throttle back
F. The sending DTE, to inform the Frame Relay network that it is overloaded and that the switch should throttle back

Answer: A

QUESTION 244:

MPLS traffic engineering routing information is carried by:

A. BGP MEDs
B. RTP or RTCP packets

C. MP-BGP
D. OSPF Opaque LSAs or IS-IS TLVs

Answer: D

QUESTION 245:

Regarding ATM cell transport, which statements are FALSE?

A. The only mode supported is VC mode.
B. The Max Packed Cells is advertised in the control word.
C. The Max Packed Cells is advertised in an LDP interface parameter.
D. The control word is optional but used whenever possible.

Answer: A,B

QUESTION 246:

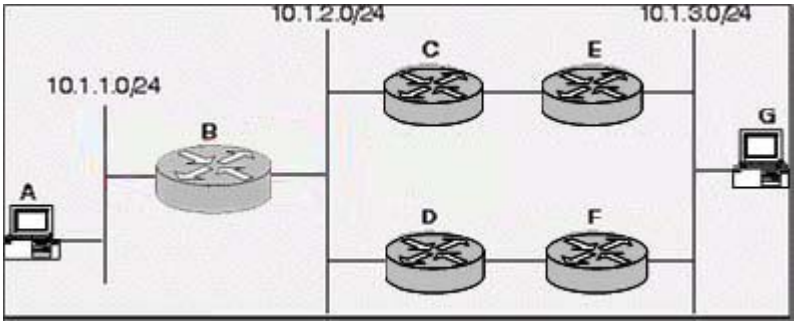
What IEEE standard allows several VLANs to be mapped to reduce a number of spanning-tree instances?

A. 802.1p
B. 802.1q
C. 802.1w
D. 802.1s
E. 802.1d

Answer: D

QUESTION 247:

Click the Exhibit button to view the topology. Routers E and F are running HSRP (Hot Standby Router Protocol). Router E has a higher priority, and both routers have standby preempt configured. Since Router E is normally the active router, what IP address should Host G use for its default gateway?
Exhibit:



A. 10.1.3.1
B. The virtual address configured when enabling HSRP
C. The virtual address assigned by HSRP; this address is dependent on the group number configured
D. Router E's IP address, since it is normally active; Router F will take over Router E's address if it fails.
E. Router F's IP address; the active router will take over the standby router's IP address until it fails

Answer: B

QUESTION 248:

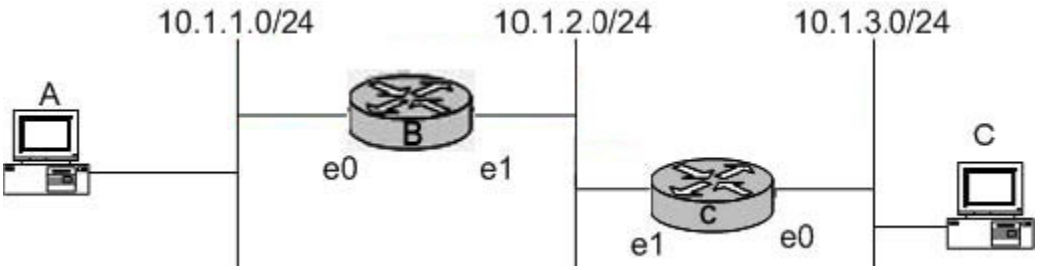
In BGP, why should a Route Reflector be used?

A. To overcome issues of split-horizon within BGP
B. To reduce the number of External BGP peers by allowing updates to 'reflect' without the need to be fully meshed
C. To divide Autonomous Systems into mini-Autonomous Systems, allowing the reduction in the number of peers
D. To allow the router to 'reflect' updates from one Internal BGP speaker to another without the need to be fully meshed
E. None of the above

Answer: D

QUESTION 249:

Click the Exhibit to view the topology. In this network, Host A is trying to reach Host D. There is no routing protocol running, but Router B and C have the following static routes configured: Router B: ip route 10.1.3.0 255.255.255.0 ethernet 1 Router C: ip route 10.1.1.0 255.255.255.0 ethernet 1
Exhibit:



A. This will work because Router B will recognize that Router C is on the 10.1.2.0/24 network through a router discovery protocol and
B. will forward traffic for 10.1.3.0/24 to Router C.
C. This will not work because a broadcast interface in a static route command cannot be specified.
D. This will work because Router B will ARP for Host D's IP address on the 10.1.2.0/24 network and Router C will answer.
E. This will not work because Router B has no idea of how to forward traffic to the 10.1.3.0/24 network.

Answer: C

QUESTION 250:

Routers running OSPF and sharing a common segment become neighbors on that segment. What statement regarding OSPF neighbors is FALSE?

A. The Primary and Secondary addresses on an interface allow the router to belong to different areas at the same time.
B. All routers must agree on the stub area flag in the OSPF Hello Packets.
C. Neighbors will fail to form an adjacency if their Hello and Dead intervals differ.
D. Two routers will not become neighbors if the Area-ID and Authentication password do not match.

Answer: A