

PrepKing

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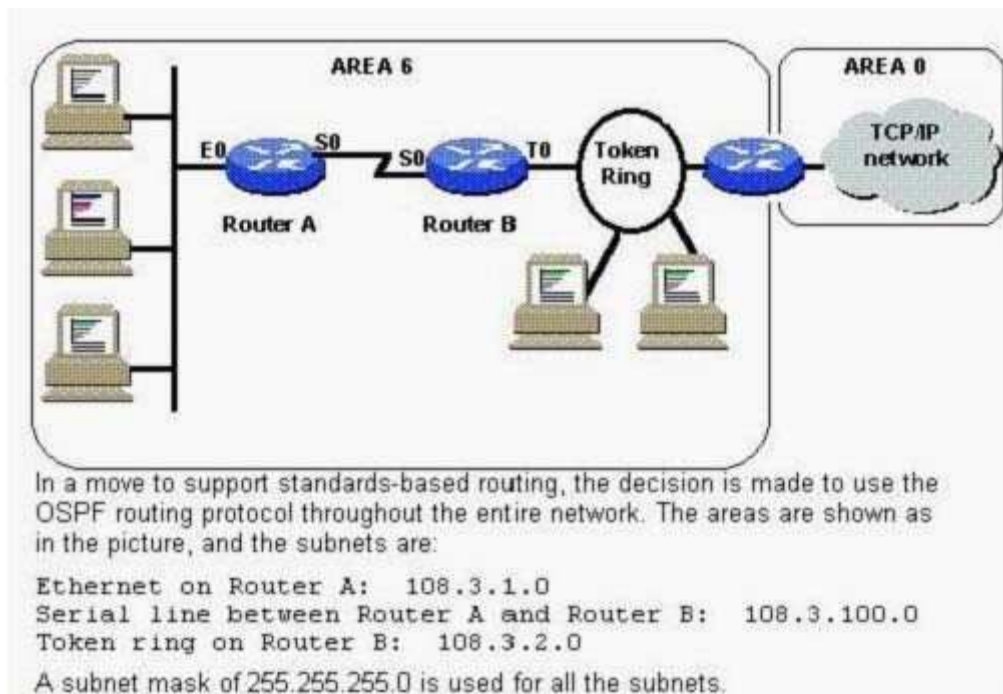
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PrepKing 350-022

Exam A

QUESTION 1

How should OSPF be configured on Router 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

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 2

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

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 3

CIDR is primarily used:

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

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 4

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 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.

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 5

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

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

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 6

MPLS traffic engineering routing information is carried by:

- A. BGP MEDs

- B. MP-BGP
- C. OSPF Opaque LSAs or IS-IS TLVs
- D. RTP or RTCP packets

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:



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QUESTION 7

MPLS does not support:

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

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 8

A DSL customer has subscribed to a service that provides 2 mbps downstream and 256 kbps upstream. The cable length is 10 kft (3 km). The customer reports that file transfers on the DSL line seem slower than normal in recent days. After reviewing the DSL profile parameters for the DSL port, and the actual status of the line, what is the possible reason why the subscriber's data rates are slower than usual?

DSLAM#show dsl int atm 1/1

DMT profile parameters

Maximum Bitrates: Interleave Path: downstream: 2048 kb/s, upstream: 256 kb/s

Fast Path: downstream: 0 kb/s, upstream: 0 kb/s

Minimum Bitrates: Interleave Path: downstream: 0 kb/s, upstream: 0 kb/s

Fast Path: downstream: 0 kb/s, upstream: 0 kb/s

Margin: downstream: 6 dB, upstream: 6 dB

Interleaving Delay: downstream: 16000 usecs, upstream: 16000 usecs

Check Bytes (FEC): Interleave Path: downstream: 16, upstream: 16

Fast Path: downstream: 0, upstream: 0

R-S Codeword Size: downstream: auto, upstream: auto

Trellis Coding: Disabled

Overhead Framing: Mode 3

Operating Mode: Automatic

Training Mode: Quick

Minrate blocking: Disabled

SNR Monitoring: Disabled

Status: Bitrates: Interleave Path: downstream: 640 kb/s, upstream: 256 kb/s

Fast Path: downstream: 0 kb/s, upstream: 0 kb/s

Margin: downstream: 6 dB, upstream: 9 dB

Attenuation: downstream: 45 dB, upstream: 31 dB

Interleave Delay: downstream: 16000 usecs, upstream: 16000 usec

Transmit Power: downstream: 19.4 dB, upstream: 12.0 dB

Check Bytes (FEC): Interleave Path: downstream: 16, upstream: 16

Fast Path: downstream: 0, upstream: 0

R-S Codeword Size: downstream: 1, upstream: 8

Trellis Coding: Not In Use

Overhead Framing: Mode 3

Line Fault: NONE

Operating Mode: ITU G dmt

Issue 1

Line Type: Interleaved Only

- A. The signal-to-noise margin on the line will not allow downstream DSL rates faster than 640 kbps. If the subscriber's service was in fact faster at some time, then something has changed in the line characteristics or noise spectrum.
- B. The subscriber is provisioned for 640 kbps downstream, and the service appears to be working normally.

The problem is apparently not related to the DSL (physical layer) part of the service.

- C. The service is running in G.DMT, and 640 kbps is normal for the subscriber's cable length. Change the mode to ANSI T1.413 for faster rates.
- D. The DSL profile is set for 16 milliseconds interleave delay. Change the interleave delay to 0, or change the profile to fastpath for faster line rates.

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 9

The following are wire sizes used in telephone company cables. Which will allow the greatest "reach" (distance) in DSL service?

- A. 24 AWG (0.5 mm)
- B. 26 AWG (0.4 mm)
- C. A line that is 50% of #24 (0.5mm) and 50 % of #26 (0.4mm).
- D. None of the above will allow enough reach for DSL service.

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 10

What is the effect of changing DMT interleaved delay from 16 milliseconds to 2 milliseconds?

- A. Fewer ATM PVCs can be provisioned on the DSL line.
- B. Latency is reduced, but error correction effectiveness may also be reduced.
- C. Latency remains the same, but faster error correction occurs.
- D. Latency remains the same, but throughput is increased.

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 11

Three of the following are common symptoms of a bridge tap ("half tap") on a DSL line. Which three are symptoms that result from placing a bride tap on a DSL line?

- A. The line may not train.
- B. The DSL service will interfere with telephone (POTS) service on the same line.
- C. DSL line rates will be lower than expected (lower than provisioned).
- D. The line may have degraded DSL service, but POTS service may appear normal.

Correct Answer: ACD

Section: (none)

Explanation

Explanation/Reference:

QUESTION 12

The telephone company has placed a bridge-tap (half-tap) on all the pairs in a cable in preparation to reroute the cable. DSL customers are served by this cable. Three of the following five statements are correct. Which three of the following statements describes the possible effect of placing bride-taps on a DSL line? (multiple answer)

- A. It may not cause a problem, depending on the location and length of the half taps.
- B. It can cause the DSL modems to train at lower line rates.
- C. It will degrade upstream rates (lower frequencies), but will not degrade downstream rates (higher frequencies).
- D. DSL modems operating at 15 kft (4.5 km) of cable may not train after the bridge-taps are installed.
- E. Bridge-taps will not cause a problem for DSL service unless a telephone or modem is connected at the end of the new cable (half-tap) section, or unless the new section is shorted.

Correct Answer: ABD

Section: (none)

Explanation

Explanation/Reference:

QUESTION 13

A DSL modem will not train up. It is on a "shared line" (DSL and POTS), and the telephone on the shared line is working normally. Nine of the ten conditions are possible causes of the symptom, and one is not. What is NOT a possible cause of the problem?

- A. A defective DSL line card in the DSLAM
- B. A defective DSL CPE modem
- C. An open (cut or broken) tip or ring lead on the phone line between the customer premises and the telco C.O
- D. The DSL port in the DSLAM is in "shutdown" state
- E. The DSL port in the CPE DSL modem is in "shutdown" state
- F. The DSL operating mode in the DSLAM does not match the operating mode of the CPE DSL modem
- G. A loose cable between the telco POTS splitter and DSLAM
- H. A loose or broken connection between the DSL modem and telephone line
- I. An incorrectly connected POTS splitter between the DSL modem and telephone line
- J. A DSL microfilter was accidentally installed in the DSL line between the DSL modem and DSL line

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 14

What best describes RADSL?

- A. The DSL line trains at the highest rate possible, limited mainly by line conditions and provisioning options.
- B. The DSL line rate (bandwidth) is automatically increased when data queues are filled to a predetermined threshold.

- C. The DSL line rate remains constant while noise margins are automatically adjusted.
- D. The DSL modems detect the presence of CAP, DMT, SDSL, or G.SHDSL modulation at the receiver input and automatically select the appropriate mode to transmit.

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 15

The function of the ATU-R is:

- A. To multiplex xDSL signals into the network core.
- B. To provide a network connection for the end-user.
- C. To split ADSL bandwidth from telephony bandwidth.
- D. To switch ATM cells received from CPE.
- E. To extend xDSL signals past the distance limitation.

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 16

What will significantly degrade DSL performance, regardless of DSL rate or line length?

- A. POTS splitters at the subscriber's end of the DSL line
- B. POTS splitters at the telco C.O
- C. Microfilters installed between a telephone and shared line
- D. Radio-frequency filters on the telephone line

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 17

Which three are major inhibitors of ADSL line quality? (multiple answer)

- A. Bridge Taps
- B. Distance
- C. Squirrels
- D. Load Coils
- E. Line shared by a telephone

Correct Answer: ABD

Section: (none)

Explanation

Explanation/Reference:

QUESTION 18

The following are wire sizes used in telephone company cables. What will allow the best overall DSL performance?

- A. 7 kft (2.1 km) of #26 AWG (0.4 mm) cable
- B. 9 kft (2.75 km) of #26 AWG (0.4 mm) cable
- C. 7 kft (2.1 km) of #24 AWG (0.5 mm) cable
- D. 9 kft (2.75 km) of #24 AWG (0.5 mm) cable

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 19

A DSL line status report shows a high number of corrected and uncorrected errors. The line is configured at 4 milliseconds interleave delay and 4 FEC check-bytes. To reduce the number of uncorrected errors without a detailed analysis of whether the errors are continuous or "bursty", which of the following should provide improved error correction?

- A. Change the interleave delay to 2 milliseconds to reduce latency and change the number of FEC check-bytes to 2 for reduced overhead
- B. Leave the interleave delay at 4 milliseconds and change the FEC check-bytes to 2
- C. Leave the FEC check-bytes at 4 and change the interleave delay to 2 milliseconds
- D. Change the interleave delay to 16 milliseconds and the FEC check-bytes to 16

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 20

The ATU-C refers to the:

- A. CPE
- B. Modem
- C. Attachment Unit for Consumer
- D. Port on the DSLAM
- E. Line splitter

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 21

A subscriber's DSL service was not working correctly. The subscriber discovered that a DSL microfilter was

accidentally installed between the DSL modem and telephone line instead of between the telephone and telephone line. What was the symptom observed by the subscriber?

- A. The modem would train up, but only when the telephone was off-hook (conversation in progress).
- B. DSL service was normal, but the telephone on the same line would not work.
- C. DSL service was normal, but there was excessive noise heard during telephone conversations.
- D. The DSL modem would either not train up, or it trained at very low DSL rates. The modem would not train up when the telephone was off-hook.

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 22

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.

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 23

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

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 24

The address field contains: (multiple answer)

The following figure shows the format of the standard Frame Relay frame:

Field length, in bytes.

8	16	Variable	16	8
Flags	Address	DATA	FCS	Flags

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

Correct Answer: ABC

Section: (none)

Explanation

Explanation/Reference:

QUESTION 25

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

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 26

What effect will this configuration command have?
line vty 0 4
no password
vtypassword

A company has been assigned the Class B address of 191.8.0.0 by the NIC. They have decided to use a subnet mask of 255.255.255.0 and an autonomous system number of 1.

The configuration for Router A is as follows:

```
RouterA#show running-config
Current configuration:
version 11.3
1.) hostname RouterA
2.) enable-password enablepassword
3.) interface ethernet 0
4.) ip address 191.8.1.1 255.255.255.0
5.) no mop enabled
6.) interface serial 0
7.) ip address 191.8.150.1 255.255.255.0
8.) ip name-server 255.255.255.255
9.) ip host RouterB 191.8.150.2 191.8.2.1
10.) snmp-server community ccie
11.) line vty 0 4
12.) login
13.) line con 0
14.) line aux 0
15.) line vty 0
16.) password vtypassword
17.) line vty 1
18.) password vtypassword
19.) line vty 2
20.) password vtypassword
21.) line vty 3
22.) password vtypassword
23.) line vty 4
24.) password vtypassword
25.) end
RouterA#
```

The configuration for Router B is as follows:

```
RouterB#show running-config
Current configuration:
version 11.3
1.) hostname RouterB
2.) enable-password san-fran
3.) interface tokenring 0
4.) ip address 191.8.2.1 255.255.255.0
5.) ring-speed 16
6.) interface serial 0
7.) ip address 191.8.150.2 255.255.255.0
8.) ip name-server 255.255.255.255
9.) ip host A 191.8.2.1 191.8.150.1
10.) snmp-server community ccie
11.) logging buffered
12.) line vty 0 4
13.) login
14.) line con 0
15.) line aux 0
16.) line vty 0
17.) password cisco
18.) line vty 1
19.) password cisco
20.) line vty 2
21.) password cisco
22.) line vty 3
23.) password cisco
24.) line vty 4
25.) password cisco
26.) end
RouterB#
```

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

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 27

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

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 28

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 the configuration register.
- D. Replace the router - this is an invalid response to pressing the break key when past 60 seconds after boot.

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 29

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 source address is at or near the beginning of the frame.
- E. The data is compressed in the middle of the frame.

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 30

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.

Correct Answer: C

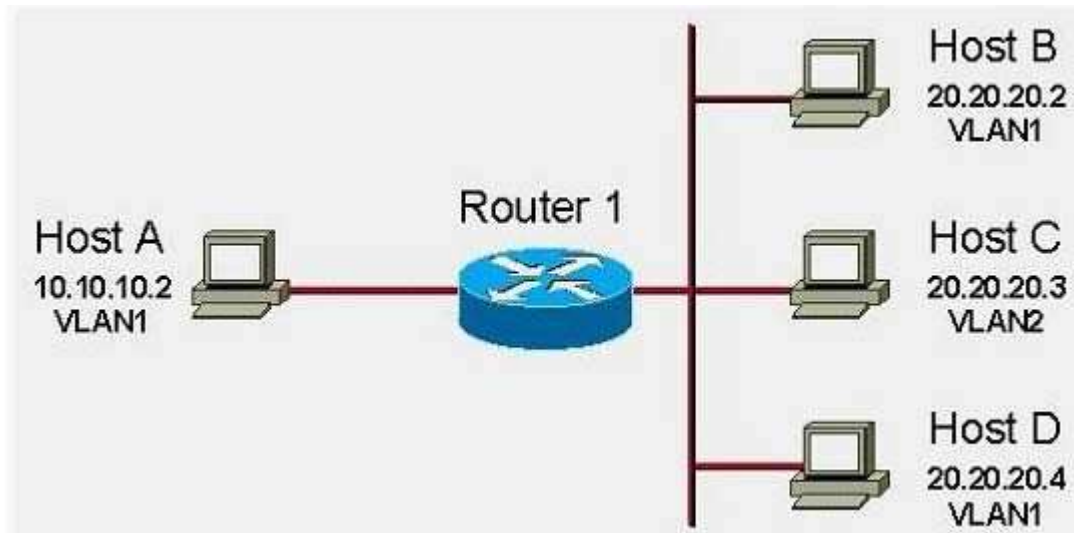
Section: (none)

Explanation

Explanation/Reference:

QUESTION 31

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 1, 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 & 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.

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 32

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

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

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 33

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 no longer useful

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 34

A new Cisco router has no configuration defined. Which methods can be used to configure the router for the first time? (multiple answer)

- 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 port 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

Correct Answer: BCDE

Section: (none)

Explanation

Explanation/Reference:

QUESTION 35

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

Correct Answer: AC

Section: (none)

Explanation

Explanation/Reference:

QUESTION 36

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

- 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

Correct Answer: AD

Section: (none)

Explanation

Explanation/Reference:

QUESTION 37

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)

- 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.

Correct Answer: ABD

Section: (none)

Explanation

Explanation/Reference:

QUESTION 38

Which of the following CGMP (Cisco Group Management Protocol) statements is correct? (multiple answer)

- 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.

Correct Answer: AC

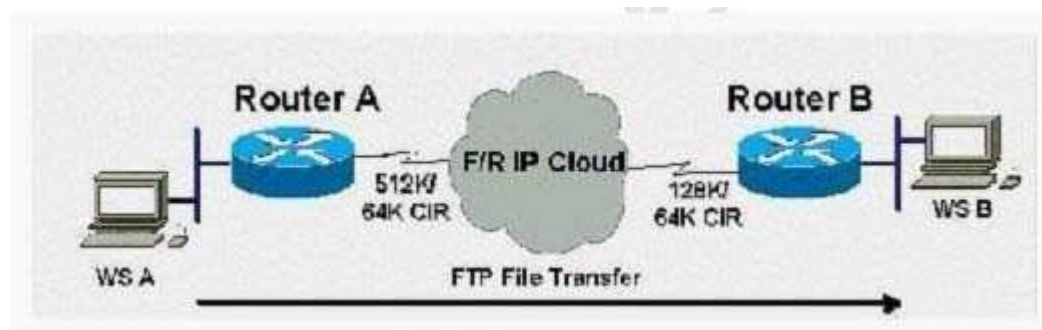
Section: (none)

Explanation

Explanation/Reference:

QUESTION 39

Router A has a 512K-access port into the frame relay cloud. Router B 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 A to prevent workstation A from overrunning the access port on Router B?



- 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

Correct Answer: E

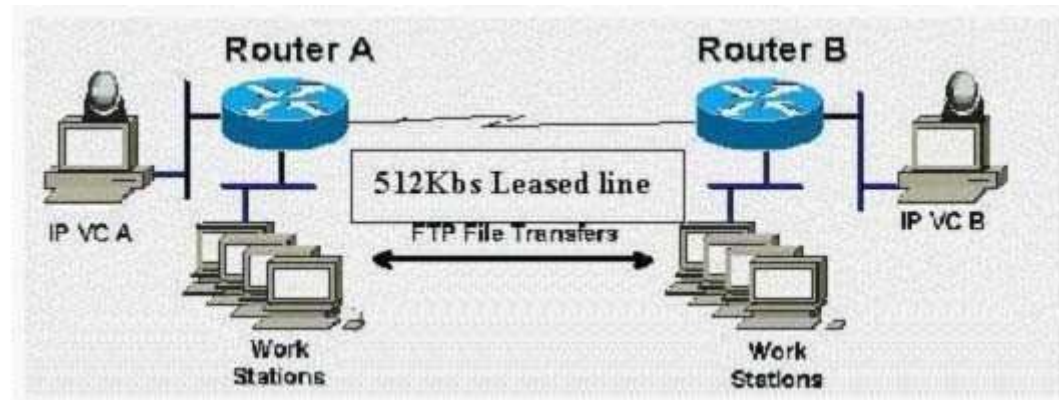
Section: (none)

Explanation

Explanation/Reference:

QUESTION 40

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?



- 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. Resource Reservation Protocol (RSVP)
- E. Weighted Fair Queuing (WFQ) with IP Precedence

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 41

What VCI value is reserved for PNNI ATM routing?

- A. 5
- B. 16
- C. 18
- D. 22
- E. 31

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 42

The following is an excerpt from a "show run" display in a Cisco DSLAM:
interface ATM1/1
no ip address
atm clock INTERNAL
no atm ilmi-keepalive
atm soft-vc 2 32
dest-address 47.0091.8100.0000.0030.949c.0b81.4000.0c80.8000.00 4 100

Referring to this output message, what is true?

- A. The CPE DSL modem is using ATM VPI 2, VCI 32.
- B. The CPE DSL modem is using ATM VPI 4, VCI 100.
- C. The "dest-address" is the ATM NSAP address in the CPE DSL modem.
- D. The destination address can be reached via ATM VPI 2, VCI 32.

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 43

Find the problem in the following configuration:
vpdn enable
vpdn-group 1
request-dialin
protocol pppoe
virtual-template 2
interface atm 2/0.1
point-to-point
pvc 0/101
encapsulation aal5snap
protocol pppoe
interface atm 2/0.2
point-to-point
pvc 0/102
encapsulation aal5snap
protocol pppoe
interface atm 2/0.3
point-to-point
pvc 0/103
encapsulation aal5snap
protocol pppoe
interface virtual-template 2
ip unnumbered FastEthernet 4/0
interface FastEthernet 4/0
ip address 172.22.32.1 255.255.255.0

- A. The ATM subinterfaces cannot be defined point to point.
- B. The encapsulation on the PVCs should be aal5mux.
- C. The VPDN-group definition should have the command 'accept-dialin' instead of the command 'request-dialin'.
- D. A static IP address should be configured on the virtual template.
- E. The virtual template number should be the same as the VPDN-group number.

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 44

The following configuration is entered on an ATM interface:
interface atm 0/0/0
encapsulation aal5mux
ppp virtual-template 1
interface atm 0/0/0.10
multipoint
pvc 0/100
exit
pvc 0/101
encapsulation aal5snap
What will the encapsulation type for the PVCs be?

- A. PVC 0/100 will have encapsulation type MUX PPP, and PVC 0/101 will have encapsulation type SNAP.
- B. Both PVC 0/100 and PVC 0/101 will have encapsulation type MUX PPP.
- C. PVC 0/100 will have encapsulation type UNDEFINED, and PVC 0/101 will have encapsulation type SNAP.
- D. Both PVC 0/100 and PVC 0/101 will have encapsulation type SNAP.
- E. The above configuration is invalid.

Correct Answer: E
Section: (none)
Explanation

Explanation/Reference:

QUESTION 45

The ATM Transmission Convergence Sublayer is NOT responsible for:

- A. Cell delineation
- B. Header error control sequence generation and verification
- C. Cell rate decoupling
- D. Transmission frame adaptation
- E. Fast ReRoute

Correct Answer: E
Section: (none)
Explanation

Explanation/Reference:

QUESTION 46

The following message is from a Cisco DSLAM: Status: Bitrates: Interleave Path: downstream: 2048 kb/s, upstream: 256 kb/s Fast Path: downstream: 0 kb/s, upstream: 0 kb/s Margin: downstream: 18 dB, upstream: 22 dB Attenuation: downstream: 30 dB, upstream: 20 dB Interleave Delay: downstream: 16000 usecs, upstream: 16000 usecs Transmit Power: downstream: 16.0 dB, upstream: 0.0 dB Check Bytes (FEC): Interleave Path: downstream: 16, upstream: 16 Fast Path: downstream: 0, upstream: 0 R-S Codeword Size: downstream: 1, upstream: 8 Trellis Coding: Not In Use Overhead Framing: Mode 3 Operating Mode: ANSI T1 413 Issue 2 Line Type: Interleaved Only This information was presented as a result of what command?

- A. show dsl status atm 1/1
- B. show interface atm 1/1
- C. show dsl interface atm 1/1
- D. show dsl profile atm 1/1

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 47

A subscriber complains that his DSL rates are slower than the service he ordered. The customer ordered ADSL at 1 mbps downstream and 256 kbps upstream, but the maximum bitrate observed during file downloads is never more than 128 kbps downstream. Initial troubleshooting shows that the subscriber's DSL modem is trained at 1024 kbps downstream and 256 kbps upstream. Which one of the following presented choices is clearly the most appropriate information needed to begin troubleshooting the problem?

- A. The ATM QoS parameters assigned to the subscriber's PVC in the DSLAM, ATM switch, and router.
- B. The software version running in the CPE and DSLAM.
- C. The manufacturer and model of ADSL CPE that is used, to determine correct interoperability with the

DSLAM.

- D. The FEC parameters used for the subscriber's ADSL port in the DSLAM, which could be causing the degraded throughput.

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 48

What is the use of a VC class in IOS configuration?

- A. It defines a template for virtual circuits which can be applied to a (sub)interface such that all PVCs on that (sub)interface which will inherit the configuration from that template.
- B. It defines various priorities for the PVCs to enable priority queuing of cells transmitted on a (sub)interface.
- C. It is another name for Virtual Paths.
- D. It is used to classify incoming cells on a physical interface as CBR/ABR/ and UBR traffic.
- E. It defines a template for switching ATM pvcs from one interface to another.

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 49

All of the following are components of LANE except:

- A. LAN Emulation Client (LEC)
- B. LANE Configuration Server (LECS)
- C. LAN Emulation Server (LES)
- D. Broadcast and Unknown Server (BUS)
- E. LANE Routing Table (LRT)

Correct Answer: E

Section: (none)

Explanation

Explanation/Reference:

QUESTION 50

ATM carries IP and PPP information within ATM cells. What ATM Adaptation Layer is used when an ATM cell carries IP packets and PPP frames?

- A. AAL1
- B. AAL2
- C. AAL3
- D. AAL4
- E. AAL5

Correct Answer: E

Section: (none)

Explanation

Explanation/Reference:

QUESTION 51

The following configuration is from a Cisco DSLAM: interface ATM1/1 no ip address dsl profile basic no atm ilmi-keepalive atm pvc 2 32 interface ATM0/1 1 32 This configuration is from a Cisco 2600 router with an ADSL WIC installed: interface ATM0/0.1 point-to-point ip address 192.168.1.2 255.255.255.0 pvc 1/32 protocol ip 192.168.1.1 broadcast encapsulation aal5snap The CPE is connected to DSLAM DSL port 1/1 via a DSL line. The subscriber's DSL service is not working correctly. Based on the information shown in these two "show run" output messages, what is the subscriber's trouble symptom?

- A. The ADSL WIC will not train up to the DSLAM.
- B. The subscriber can access the internet, but the data throughput is slower than it should be.
- C. The ADSL WIC will train up to the DSLAM, but the subscriber can not access the internet.
- D. The subscriber can only access destination hosts on network 192.168.1.0.

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 52

What is the difference between AAL5 SNAP and AAL5 MUX virtual circuits?

- A. AAL5 SNAP is used to carry IP packets embedded in PPP encapsulation and AAL5 MUX is used to carry raw IP data.
- B. SNAP allows multiplexing of multiple protocols over a single VC, while AAL5 MUX can carry only one protocol per VC.
- C. SNAP VCs define real time data and MUX VC defines mixed (real time and non real time) data.
- D. SNAP VCs are used inside public carrier network while MUX VCs are used on the edge.
- E. None of the above

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 53

The field of an ATM address that states what type of address is being used is:

- A. AA
- B. RD
- C. AFI
- D. DCC
- E. ICD

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 54

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

- A. Designated 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

Correct Answer: B

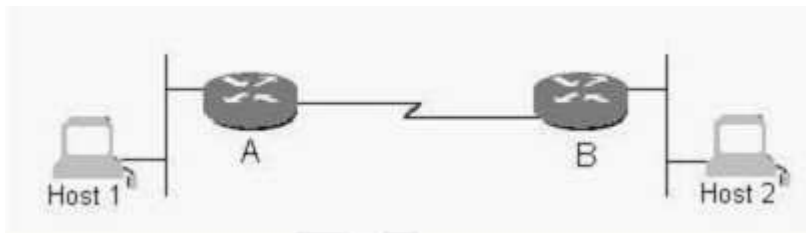
Section: (none)

Explanation

Explanation/Reference:

QUESTION 55

Host 1 and Host 2 are on Ethernet LANs in different buildings. A serial line is installed between two Cisco routers using Cisco HDLC serial line encapsulation. Routers A and B are configured to route IP traffic. Host 1 sends a packet to Host 2. A line hit on the serial line causes an error in the packet. When this is detected, the retransmission is sent by:



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

Correct Answer: A

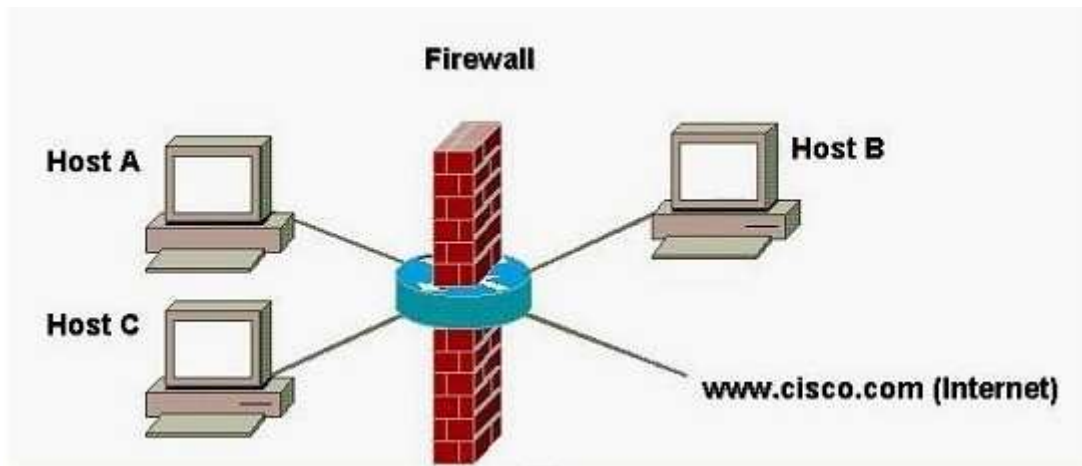
Section: (none)

Explanation

Explanation/Reference:

QUESTION 56

A network engineer is troubleshooting a connectivity problem between Hosts 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.cisco.com.- The firewall can ping www.cisco.com.- Host C can ping the firewall and www.cisco.com.- Host A and Host C have the same permissions on the firewallWhat 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.

Correct Answer: B

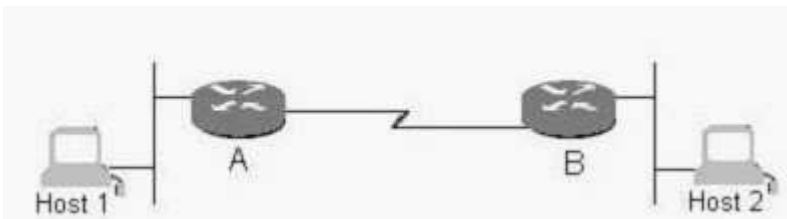
Section: (none)

Explanation

Explanation/Reference:

QUESTION 57

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



- A. Host 1
- B. Host 2
- C. Router A
- D. Router B
- E. The broadcast address

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 58

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.

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 59

What establishes routing table precedence in a routing table?

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

Correct Answer: E

Section: (none)

Explanation

Explanation/Reference:

QUESTION 60

What ATM cell header is used for cell delineation?

- A. GFC
- B. HEC
- C. PTI
- D. VPI/VC

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 61

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

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 62

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

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

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 63

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

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

Correct Answer: B

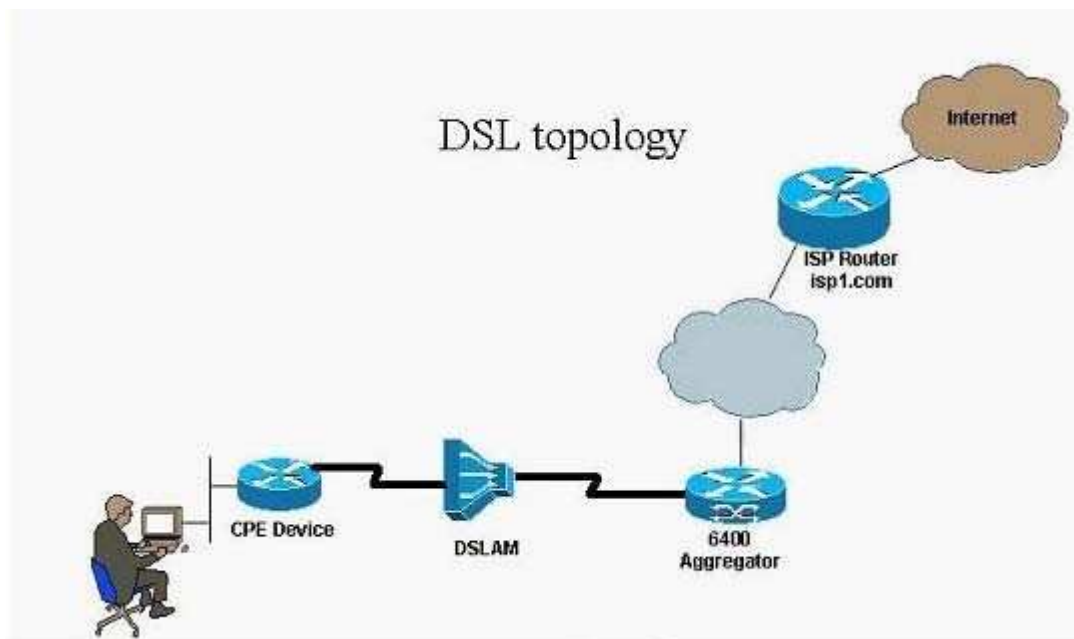
Section: (none)

Explanation

Explanation/Reference:

QUESTION 64

According to the diagram, a PPPoE session is initiated by the user from the PC using the username johndoe@isp1.com. This PPPoE session ultimately terminates on the ISP router, using domain based tunneling on 6400. What is the correct sequence of events which occur during user authentication?



- A. The 6400 will query the PC to get the domain name. The 6400 will issue a PPP authentication challenge to which the PC will respond using the username johndoe@isp1.com. Once the tunnel is established, the ISP router will issue a challenge to the user and will authenticate the response.
- B. The 6400 will issue a PPP authentication challenge to which the PC will respond using the username johndoe@isp1.com. The 6400 will authenticate the user. It will also use the domain name to find out the tunnel endpoint. The tunnel is established and user traffic will now be allowed to flow without any further authentication.
- C. The 6400 will issue a PPP authentication challenge to which the PC will respond using the username johndoe@isp1.com. The 6400 will use the domain name isp1.com to find out the tunnel endpoint. It will forward the authentication information to the ISP router which will authenticate the user.
- D. The 6400 will use the PVC number to decide the tunnel endpoint. Once the tunnel is established, the ISP router will issue a challenge to the user and will authenticate the response.
- E. None of the above

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 65

An architecture that utilizes PPPoA deals with IP address allocation by what type of negotiation?

- A. DHCP
- B. LDAP
- C. IPCP
- D. RADIUS
- E. NIS

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 66

Virtual path identifier (VPI) and virtual channel identifier (VCI) values on the NRP-2 must share ____bits. By default, VPI values are limited to ____ bits (0-15), and VCI values are limited to ____ bits (0-1023). A Network Administrator can change the VPI and VCI ranges, but together the VPI and VCI values cannot exceed ____ bits. Which numbers below, correctly fill in the blanks?

- A. 16, 6, 10, 16
- B. 18, 4, 12, 16
- C. 18, 4, 8, 12
- D. 14, 4, 10, 14
- E. 14, 5, 9, 14

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 67

What statement regarding Service Selection Gateway is INCORRECT?

- A. For Proxy Service, the SSG will proxy the Access-Request to the remote AAA server. Upon receiving an Access-Accept from the remote RADIUS server, the NRP-SSG responds to the subscriber with the Access-Accept.
- B. Transparent passthrough service allows unauthenticated subscriber traffic to be routed through the NRP-SSG in either direction.
- C. For Proxy service, the SSG can perform NAT between the address assigned by the remote server and the subscriber's real IP address.
- D. For non-PPP users, such as those in bridged networks, if the user disconnects from a service without logging off, the connection will remain open and the user can reaccess the service without going through logon procedure as long as the session has not timed out.
- E. The PPP Termination Aggregation (PTA) service can be used only in dialup environments and with PPPoE in DSL environments. It cannot be used with PPPoA.

Correct Answer: E

Section: (none)

Explanation

Explanation/Reference:

QUESTION 68

A Network Administrator is unable to configure a PVC with the value of 8/49. He looks at the running config and notices the following entry for the interface he is working with. What is the likely cause of the problem?
interface ATM0/0/0
no ip address
atm vc-per-vp 2048
no atm ilmi-keepalive

- A. ILMI has timed out without keepalives.
- B. The config is fine; the NSP must be the source of the problem.
- C. An IP address is required to turn up PVCs.
- D. The interface is shutdown.
- E. Too many bits have been assigned to the VCs reducing the possible values of the VP.

Correct Answer: E

Section: (none)

Explanation

Explanation/Reference:

QUESTION 69

What does the Service Selection Gateway (SSG) feature on the NRP support to authenticate and authorize users?

- A. RADIUS
- B. TACACS+
- C. Kerberos
- D. MS-CHAP
- E. Radius and Tacacs+

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 70

What is the purpose of the following command? `virtual-template {template-number}pre-clone {number}`

- A. Used in a PPPoA environment, it will improve the memory utilization by decreasing the number of dynamic interfaces created.
- B. Used in either a PPPoA or PPPoE environment, it will decrease the time needed to boot the NRP by creating needed access interfaces before they are needed.
- C. Used in a PPPoE environment, it will increase the time needed for a user to connect to the NRP by allocating access interfaces at boot time.
- D. Used in a PPPoE environment, it will pre-create a defined number of dynamic access interfaces to reduce the load on the NRP during times of peak user logins.
- E. Used in either a PPPoA or PPPoE environment, it will increase the initial load on the NRP by pre-creating a defined number of dynamic access interfaces.

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 71

Interface FastEthernet 0/0/0ip address 192.168.1.1 255.255.255.0!interface ATM 0/0/0.30 multipointpvc 1/43encapsulation aal5ciscoppp Virtual-Template 2!!interface Virtual-Template 2ip unnumbered FastEthernet 0/0/0no peer default ip addressppp authentication pap chapppp ipcp mask 255.255.255.224!Refer to the configuration above. A customer connected to PVC 1/43 boots their CPE (PPPoA encapsulation). The Radius server is properly configured and recognizes the customer. The Radius server assigns the Framed-IP-netmask 192.168.10.1/29. What information does the CPE receive from the NRP via PPP IPCP negotiation?

- A. 192.168.10.1 IP Address, subnet mask 255.255.255.248
- B. 192.168.10.1 IP Address, subnet mask 255.255.255.224
- C. 192.168.1.1 IP Address, subnet mask 255.255.255.224

- D. 192.168.1.1 IP Address, subnet mask 255.255.255.248
- E. 192.168.1.1 IP Address, subnet mask 255.255.255.0

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 72

When a subscriber is configured for PPPoE service, the DSL modem is usually configured as:

- A. A basic router (RFC 1483 routing)
- B. A basic bridge (RFC 1483 bridging)
- C. A router configured for PPPoA session termination
- D. A router configured for PPPoE session origination

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 73

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 allow the router to reflect updates from one Internal BGP speaker to another without the need to be fully meshed
- D. To divide Autonomous Systems into mini-Autonomous Systems, allowing the reduction in the number of peers
- E. None of the above

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 74

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'.

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 75

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

- A. Configure local preference
- B. Configure route reflectors
- C. Configure IBGP neighbors several hops away
- D. Configure confederations

Correct Answer: BD

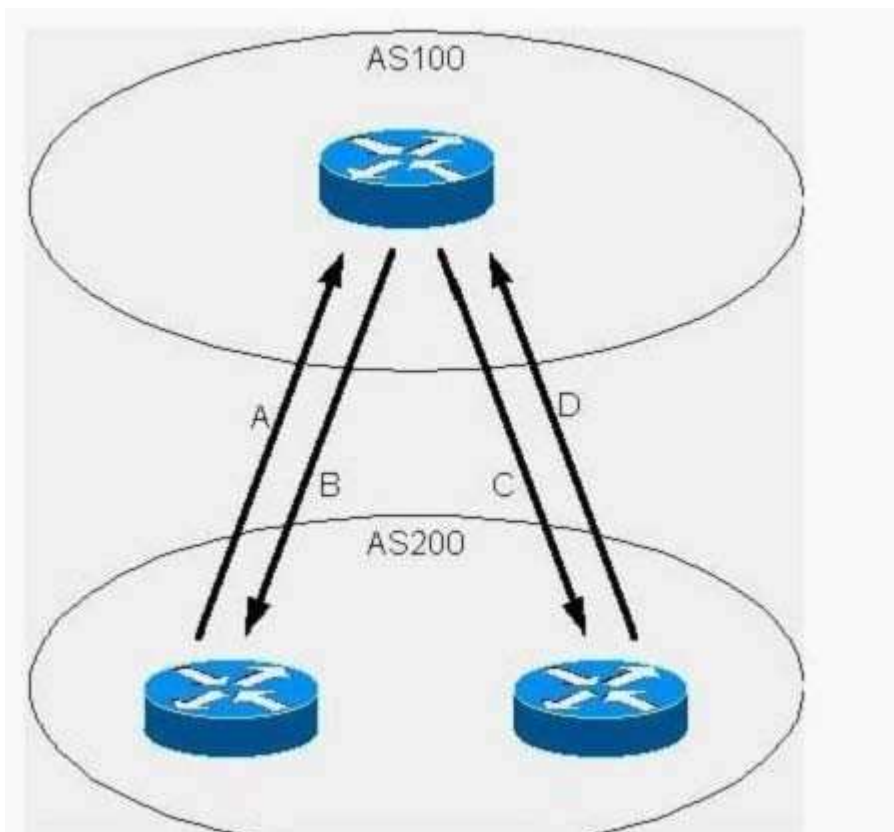
Section: (none)

Explanation

Explanation/Reference:

QUESTION 76

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

Correct Answer: D

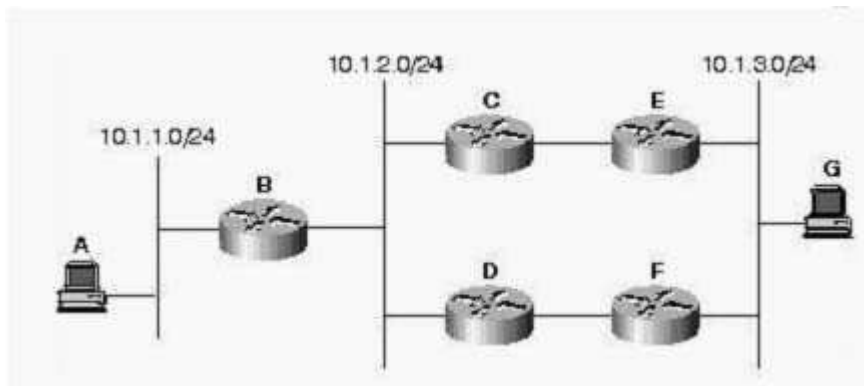
Section: (none)

Explanation

Explanation/Reference:

QUESTION 77

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?



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

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 78

What statement is correct concerning the shown configuration?

```
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
```

- 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 to 10.0.0.2.
- D. Only one RIP update will be sent out on Ethernet 0 to the unicast address 10.0.0.2.

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 79

A DSL subscriber says that his DSL modem is trained at the subscribed rates, 1024 kbps downstream and 256 kbps upstream, but he has no access to the internet. The internet service was working until today. The modem remains trained - it is not dropping train or frequently retraining. Manually retraining the modem does not correct the problem. The customer can ping from his PC to the Ethernet interface on the DSL modem, but not addresses "in the network". Initial troubleshooting shows that the DSL modem can ping the subscriber's PC, but no addresses in the network. What could cause this problem?

- A. A telephone is connected to the DSL line with no microfilter or splitter installed. The phone is "loading" the line and disrupting DSL service.
- B. The subscriber powered-down the DSL modem, and when it was powered-up it defaulted to G.Lite mode (G.992.2). The port in the DSLAM is full-rate DMT (G.992.1).
- C. The DSL port in the DSLAM was left in a "shutdown" state by mistake following DSLAM maintenance.
- D. There is a problem with the subscriber's ATM PVC between the DSLAM and ATM switch. An incorrect VCI was assigned between the DSLAM and ATM switch shortly after midnight, during the service provider's network rearrangements.

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 80

Which DSL modulation types allows line sharing (DSL and POTS voice on the same line)?

- A. G.SHDSL, IDSL, and DMT
- B. CAP and DMT
- C. DMT and G.SHDSL
- D. IDSL and SDSL

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 81

What is not a valid service type between an 827 and a 6400?

- A. PPPoA

- B. HDLC
- C. PPPoE
- D. L2TP
- E. RFC1483

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 82

What ADSL DMT line rate requires (occupies) the most bandwidth on a telephone line?

- A. 8 mbps downstream, 800 kbps upstream on 1 kft (300 meters) of cable.
- B. 8 mbps downstream, 800 kbps upstream on 9 kft (2.75 km) of cable.
- C. 1 mbps downstream, 256 kbps upstream on 1 kft (300 meters) of cable.
- D. 512 kbps downstream, 128 kbps upstream on 17 kft (5.2 km) of cable.

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 83

In DMT DSL transmission systems, what is the effect of turning off half of the available downstream carriers (tones)?

- A. The downstream DSL bandwidth is reduced.
- B. The downstream line rate and throughput remains unchanged, but FEC efficiency is reduced.
- C. The upstream DSL bandwidth can be increased, since more carriers become available for upstream traffic.
- D. Downstream RS error correction effectiveness is reduced.

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 84

What is true concerning interleaved versus fastpath mode in DMT DSL service?

- A. Fastpath mode allows higher DSL rates.
- B. Interleaved mode allocates traffic to more than one ATM PVC.
- C. Interleaved mode allows greater forward error correction (FEC).
- D. Fastpath mode gives data precedence over voice traffic.

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 85

The major difference between DMT and CAP is:

- A. CAP uses a single center frequency; DMT is multiple-carrier.
- B. DMT is single-carrier; CAP is multiple-carrier.
- C. CAP is used in IDSL; DMT is used in ADSL.
- D. DMT is used in VDSL; CAP is used in ADSL.
- E. CAP is used in ADSL, DMT is used in SDSL.

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 86

In ADSL DMT systems, the highest downstream transmit power occurs at what rate/reach combinations?

- A. 384 kbps at 17 kft (5.1 km)
- B. 8 mbps at 1 kft (305 meters)
- C. 1 mbps at 9 kft (2.75 km)
- D. 8 mbps at 9 kft (2.75 km)

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 87

What is true concerning fastpath versus interleaved mode in DMT DSL service?

- A. Fastpath mode provides lower latency (delay) than interleaved mode.
- B. Fastpath mode allows higher DSL trained rates.
- C. Fastpath mode allows higher effective throughput on noisy transmission lines.
- D. Interleaved mode ensures that all provisioned ATM PVCs on a DSL line are given equal bandwidth.

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 88

A DSLAM is using Reed-Solomon forward error correction on a DMT DSL line. The DSL service is using TCP/IP over ATM over DSL. A high number of upstream RS uncorrected errors are occurring on the DSL line, as reported by the DSLAM in the following status message: DSL Statistics: Init Events: 2 Transmitted Superframes: near end: 93681573 far end: 0 Received Superframes: near end: 93516422 far end: 0 Corrected Superframes: near end: 142631 far end: 31571 Uncorrected Superframes: near end: 191 far end: 1 LOS Events: near end: 0 far end: 0 LOF/RFI Events: near end: 0 far end:

0ES Events: near end: 5 far end: 1What is the result of the uncorrected errors?

- A. The DSL frames will be continuously retransmitted by the DSL transceivers until an error-free frame is received.
- B. If errors on the DSL line can not be corrected by the RS algorithm, the line will be automatically taken out of service.
- C. The errored data resulting from uncorrected layer-1 errors will be handled by TCP.
- D. When Reed-Solomon forward error correction is used, all errors are corrected at layer 1. The uncorrected state was present only until forward error correction algorithms corrected the errors.

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 89

A DSL subscriber reports that the CPE modem untrains and retrains several times each hour, but not at regular intervals. The subscriber has a DMT modem operating on 10 kft of #26 cable (3 km of 0.4 mm cable). The provisioned downstream rate is 2 mbps, and the provisioned upstream rate is 256 kbps. When the modem retrains, the downstream DSL may be as low as 512 kbps. Sometimes manually retraining the modem allows it to return to a 2 mbps line rate, and sometimes manually retraining the modem does not improve the DSL line rate. Which options would cause the intermittent train/untrain symptom as described? (multiple answer)

- A. A telephone on the same phone line was installed without a microfilter. When the telephone handset is taken off-hook, the phone causes excessive attenuation of the DSL frequencies and the resulting high error rate results in a retrain. Because of the degraded signal levels while the phone is off-hook, the modem can not retrain at 2 mbps.
- B. There is an interfering signal in the same cable. When the interfering signal is present, an excessive error rate results. The modem retrains at a lower line rate in order to recover an acceptable noise margin and error rate.
- C. The noise margin was incorrectly set too high. Reducing the noise margin will correct the symptom.
- D. ADSL DMT will not permit 2 mbps downstream rates at 10 kft of #26 cable (3 km of 0.4 mm cable). ADSL 2 megabit service will always be unreliable and intermittent on this cable length and wire size.
- E. The DMT profile is using interleaved mode. Changing to fastpath will correct the symptom.
- F. The ATM QoS is UBR, and the subscriber's traffic is yielding to VBR or CBR traffic.

Correct Answer: AB

Section: (none)

Explanation

Explanation/Reference:

QUESTION 90

IDSL and SDSL use what line coding scheme?

- A. B8ZS
- B. 2B1Q
- C. QAM
- D. CAP
- E. DMT

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 91

Which modulation techniques are typical of ADSL, but not SDSL, SHDSL, or IDSL?

- A. CAP and DMT
- B. TC/PAM and DMT
- C. CAP and TC/PAM
- D. CAP and 2B1Q

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 92

The network associated with Router A's Ethernet 0 port is designed to be publicly accessible. However, Router B's Token Ring 0 network should be accessible only to hosts from Router A's Ethernet 0 network. What access list for Router B would accomplish this?

A company has been assigned the Class B address of 191.8.0.0 by the NIC. They have decided to use a subnet mask of 255.255.255.0 and an autonomous system number of 1.

The configuration for Router A is as follows:

```
RouterA#show running-config
Current configuration:
version 11.3
1.) hostname RouterA
2.) enable-password enablepassword
3.) interface ethernet 0
4.) ip address 191.8.1.1 255.255.255.0
5.) no mop enabled
6.) interface serial 0
7.) ip address 191.8.150.1 255.255.255.0
8.) ip name-server 255.255.255.255
9.) ip host RouterB 191.8.150.2 191.8.2.1
10.) snmp-server community ccie
11.) line vty 0 4
12.) login
13.) line con 0
14.) line aux 0
15.) line vty 0
16.) password vtypassword
17.) line vty 1
18.) password vtypassword
19.) line vty 2
20.) password vtypassword
21.) line vty 3
22.) password vtypassword
23.) line vty 4
24.) password vtypassword
25.) end
RouterA#
```

The configuration for Router B is as follows:

```
RouterB#show running-config
Current configuration:
version 11.3
1.) hostname RouterB
2.) enable-password san-fran
3.) interface tokenring 0
4.) ip address 191.8.2.1 255.255.255.0
5.) ring-speed 16
6.) interface serial 0
7.) ip address 191.8.150.2 255.255.255.0
8.) ip name-server 255.255.255.255
9.) ip host A 191.8.2.1 191.8.150.1
10.) snmp-server community ccie
11.) logging buffered
12.) line vty 0 4
13.) login
14.) line con 0
15.) line aux 0
16.) line vty 0
17.) password cisco
18.) line vty 1
19.) password cisco
20.) line vty 2
21.) password cisco
22.) line vty 3
23.) password cisco
24.) line vty 4
25.) password cisco
26.) end
RouterB#
```

- A. access-list 99 permit 191.8.1.0 0.0.0.255access-list 99 deny 0.0.0.0 255.255.255.255
- B. access-list 103 permit 191.8.1.0 0.0.0.255access-list 103 deny 0.0.0.0 255.255.255.255
- C. access-list 88 deny 0.0.0.0 255.255.255.255access-list 88 permit 191.8.1.0 0.0.0.255

- D. access-list 3 permit 191.8.1.0 255.255.255.0access-list 3 deny 0.0.0.0 0.0.0.0
- E. access-list 99 permit 191.8.10.0 0.0.0.0access-list 99 deny 0.0.0.0 255.255.255.255

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 93

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

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 94

If a Dialer Profile exists in the local configuration of a router, what is true?

- A. A virtual-access password is configured automatically.
- B. A virtual-access interface will inherit all configurations from the dialer profile.
- C. AAA parameters cannot be applied to an interface.
- D. None of the above

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 95

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

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 96

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

Correct Answer: AC

Section: (none)

Explanation

Explanation/Reference:

QUESTION 97

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

```
S* 0.0.0.0/0 [1/0] via 172.31.116.65
D   172.16.0.0/24 [90/48609] via 10.1.1.1
R   172.16.0.0/16 [120/4] via 192.168.1.4
```

- 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.

Correct Answer: C

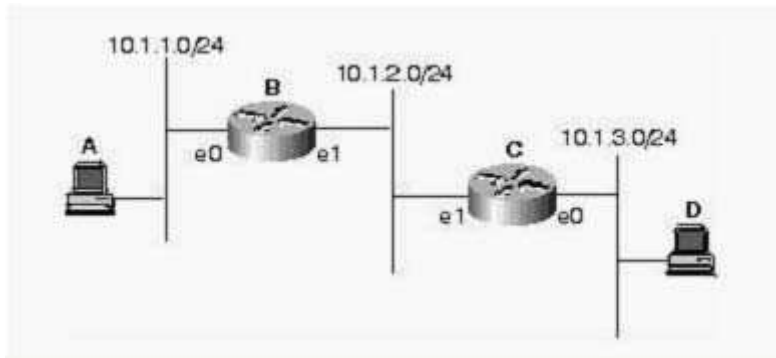
Section: (none)

Explanation

Explanation/Reference:

QUESTION 98

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



- A. This will not work because Router B has no idea of how to forward traffic to the 10.1.3.0/24 network.
- B. 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 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.

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 99

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.

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 100

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 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.

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 101

CIDR is primarily used:

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

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 102

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 180.60.45.96 255.255.255.32 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 0.0.0.31 area 0
- D. router ospf 1 network 180.60.45.96 0.0.0.224 area 0

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 103

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 no longer useful

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 104

The network associated with Router A's Ethernet 0 port is designed to be publicly accessible. However, Router B's Token Ring 0 network should be accessible only to hosts from Router A's Ethernet 0 network. What access

list for Router B would accomplish this?

A company has been assigned the Class B address of 191.8.0.0 by the NIC. They have decided to use a subnet mask of 255.255.255.0 and an autonomous system number of 1.

The configuration for Router A is as follows:

```
RouterA#show running-config
Current configuration:
version 11.3
1.) hostname RouterA
2.) enable-password enablepassword
3.) interface ethernet 0
4.) ip address 191.8.1.1 255.255.255.0
5.) no mop enabled
6.) interface serial 0
7.) ip address 191.8.150.1 255.255.255.0
8.) ip name-server 255.255.255.255
9.) ip host RouterB 191.8.150.2 191.8.2.1
10.) snmp-server community ccie
11.) line vty 0 4
12.) login
13.) line con 0
14.) line aux 0
15.) line vty 0
16.) password vtypassword
17.) line vty 1
18.) password vtypassword
19.) line vty 2
20.) password vtypassword
21.) line vty 3
22.) password vtypassword
23.) line vty 4
24.) password vtypassword
25.) end
RouterA#
```

The configuration for Router B is as follows:

```
RouterB#show running-config
Current configuration:
version 11.3
1.) hostname RouterB
2.) enable-password san-fran
3.) interface tokenring 0
4.) ip address 191.8.2.1 255.255.255.0
5.) ring-speed 16
6.) interface serial 0
7.) ip address 191.8.150.2 255.255.255.0
8.) ip name-server 255.255.255.255
9.) ip host A 191.8.2.1 191.8.150.1
10.) snmp-server community ccie
11.) logging buffered
12.) line vty 0 4
13.) login
14.) line con 0
15.) line aux 0
16.) line vty 0
17.) password cisco
18.) line vty 1
19.) password cisco
20.) line vty 2
21.) password cisco
22.) line vty 3
23.) password cisco
24.) line vty 4
25.) password cisco
26.) end
RouterB#
```

- A. access-list 99 permit 191.8.1.0 0.0.0.255access-list 99 deny 0.0.0.0 255.255.255.255
- B. access-list 103 permit 191.8.1.0 0.0.0.255access-list 103 deny 0.0.0.0 255.255.255.255
- C. access-list 88 deny 0.0.0.0 255.255.255.255access-list 88 permit 191.8.1.0 0.0.0.255
- D. access-list 3 permit 191.8.1.0 255.255.255.0access-list 3 deny 0.0.0.0 0.0.0.0
- E. access-list 99 permit 191.8.10.0 0.0.0.0access-list 99 deny 0.0.0.0 255.255.255.255

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 105

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)

- 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.

Correct Answer: ABD

Section: (none)

Explanation

Explanation/Reference:

QUESTION 106

Which of the following CGMP (Cisco Group Management Protocol) statements is correct? (multiple answer)

- 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.

Correct Answer: AC

Section: (none)

Explanation

Explanation/Reference:

QUESTION 107

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.

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 108

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.

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 109

What effect will this configuration command have? line vty 0 4 no password vtypassword

A company has been assigned the Class B address of 191.8.0.0 by the NIC. They have decided to use a subnet mask of 255.255.255.0 and an autonomous system number of 1.

The configuration for Router A is as follows:

```
RouterA#show running-config
Current configuration:
version 11.3
1.) hostname RouterA
2.) enable-password enablepassword
3.) interface ethernet 0
4.) ip address 191.8.1.1 255.255.255.0
5.) no mop enabled
6.) interface serial 0
7.) ip address 191.8.150.1 255.255.255.0
8.) ip name-server 255.255.255.255
9.) ip host RouterB 191.8.150.2 191.8.2.1
10.) snmp-server community ccie
11.) line vty 0 4
12.) login
13.) line con 0
14.) line aux 0
15.) line vty 0
16.) password vtypassword
17.) line vty 1
18.) password vtypassword
19.) line vty 2
20.) password vtypassword
21.) line vty 3
22.) password vtypassword
23.) line vty 4
24.) password vtypassword
25.) end
RouterA#
```

The configuration for Router B is as follows:

```
RouterB#show running-config
Current configuration:
version 11.3
1.) hostname RouterB
2.) enable-password san-fran
3.) interface tokenring 0
4.) ip address 191.8.2.1 255.255.255.0
5.) ring-speed 16
6.) interface serial 0
7.) ip address 191.8.150.2 255.255.255.0
8.) ip name-server 255.255.255.255
9.) ip host A 191.8.2.1 191.8.150.1
10.) snmp-server community ccie
11.) logging buffered
12.) line vty 0 4
13.) login
14.) line con 0
15.) line aux 0
16.) line vty 0
17.) password cisco
18.) line vty 1
19.) password cisco
20.) line vty 2
21.) password cisco
22.) line vty 3
23.) password cisco
24.) line vty 4
25.) password cisco
26.) end
RouterB#
```

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

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 110

MPLS does not support:

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

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 111

MPLS traffic engineering data is carried by:

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

Correct Answer: A

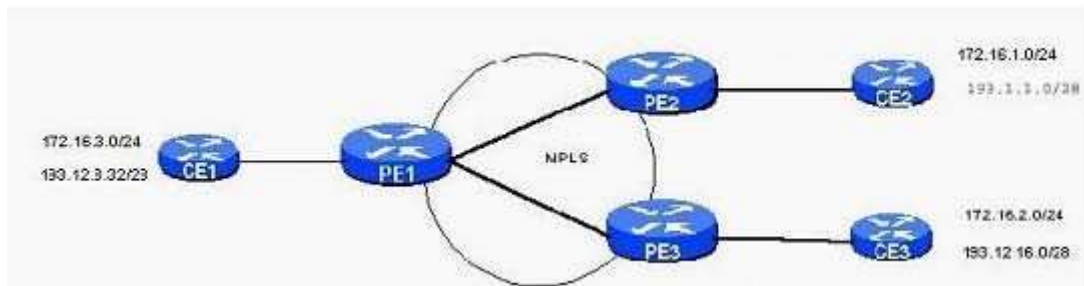
Section: (none)

Explanation

Explanation/Reference:

QUESTION 112

In the MPLS network shown, which subnets would be in the same Forwarding Equivalence 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

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 113

MPLS traffic engineering routing information is carried by:

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

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 114

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

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

Correct Answer: D

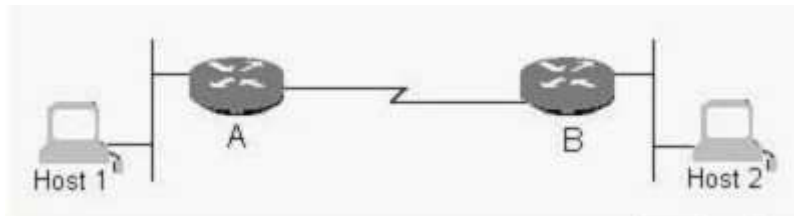
Section: (none)

Explanation

Explanation/Reference:

QUESTION 115

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



- A. Host 1
- B. Host 2
- C. Router A
- D. Router B
- E. The broadcast address

Correct Answer: C

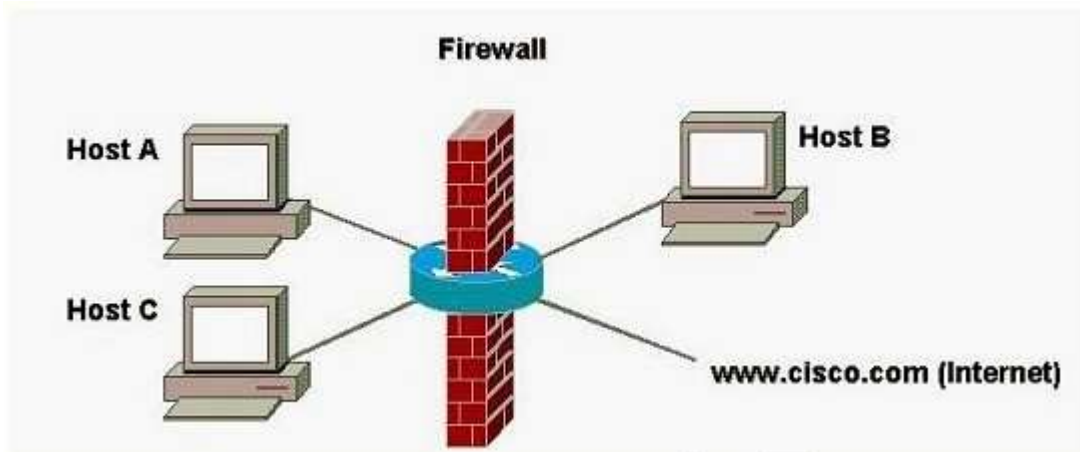
Section: (none)

Explanation

Explanation/Reference:

QUESTION 116

A network engineer is troubleshooting a connectivity problem between Hosts 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.cisco.com.- The firewall can ping www.cisco.com.- Host C can ping the firewall and www.cisco.com.- Host A and Host C have the same permissions on the firewallWhat 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.

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 117

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

```
version 11.2
|
hostname router
|
boot system flash slot0:rsp-isv-mz.112-8.P
enable password cisco
```

- 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 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.

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 118

A new Cisco router has no configuration defined. Which methods can be used to configure the router for the first time? (multiple answer)

- 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 port 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

Correct Answer: BCDE

Section: (none)

Explanation

Explanation/Reference:

QUESTION 119

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 onto the wire.
- D. This session is about to end.

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 120

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

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

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 121

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

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 122

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

```
*Mar 1 00:38:43.351: %SGBP-1-AUTHFAILED: Member C4500CD failed authentication
*Mar 1 00:38:57.723: %SGBP-7-NORESP: Fail to response to C4500CD group stack,
may not have password
*Mar 1 00:39:17.719: %SGBP-7-NORESP: Fail to response to C4500CD group stack,
may not have password
```

- 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.

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 123

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.

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 124

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

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 125

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

Correct Answer: B

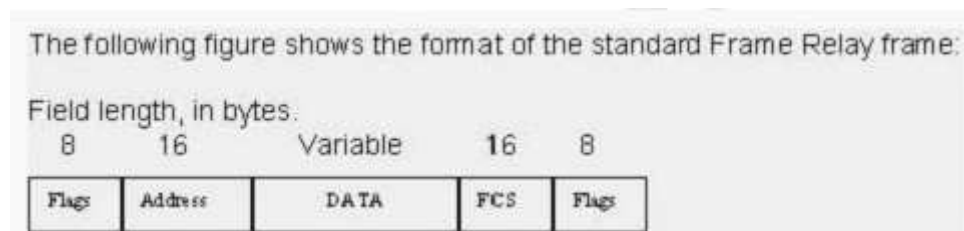
Section: (none)

Explanation

Explanation/Reference:

QUESTION 126

The address field contains: (multiple answer)



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

Correct Answer: ABC

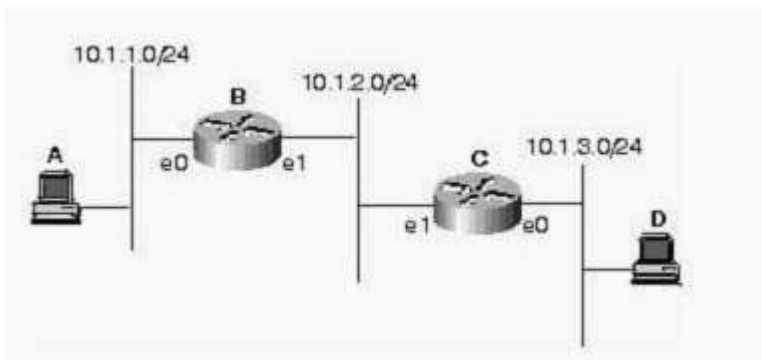
Section: (none)

Explanation

Explanation/Reference:

QUESTION 127

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



- A. This will not work because Router B has no idea of how to forward traffic to the 10.1.3.0/24 network.
- B. 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 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.

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 128

Given the four networks listed, what valid summary address (below) contains the longest prefix?

10.1.1.0/24
10.1.3.0/24
10.1.14.64/26
10.1.5.192/30

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

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 129

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 purposes

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 130

What establishes routing table precedence in a routing table?

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

Correct Answer: E

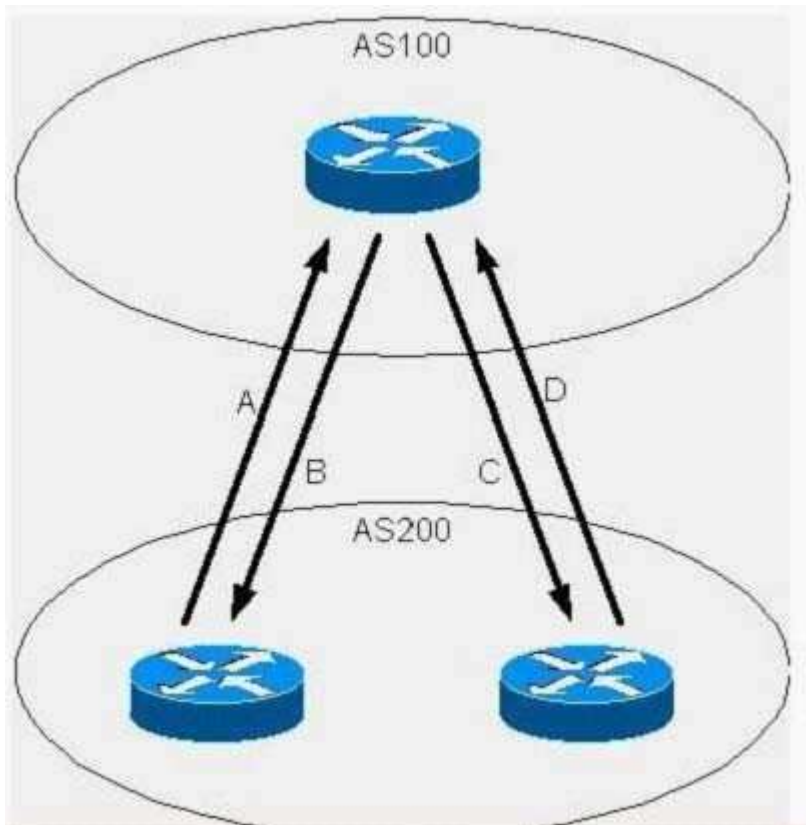
Section: (none)

Explanation

Explanation/Reference:

QUESTION 131

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

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 132

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 allow the router to reflect updates from one Internal BGP speaker to another without the need to be fully meshed
- D. To divide Autonomous Systems into mini-Autonomous Systems, allowing the reduction in the number of peers
- E. None of the above

Correct Answer: C

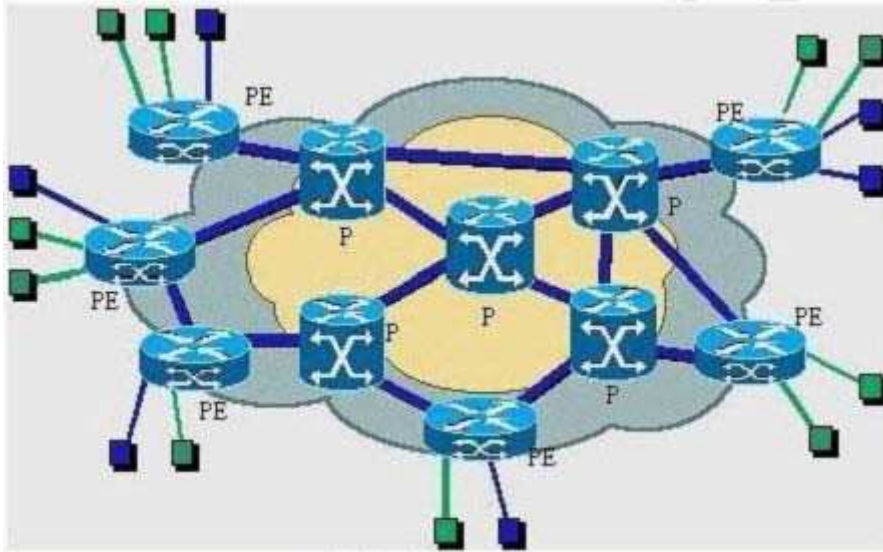
Section: (none)

Explanation

Explanation/Reference:

QUESTION 133

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 Provider routers must use BGP.
- D. The Service Provider must provide BGP Peering to another Service Provider.

Correct Answer: B

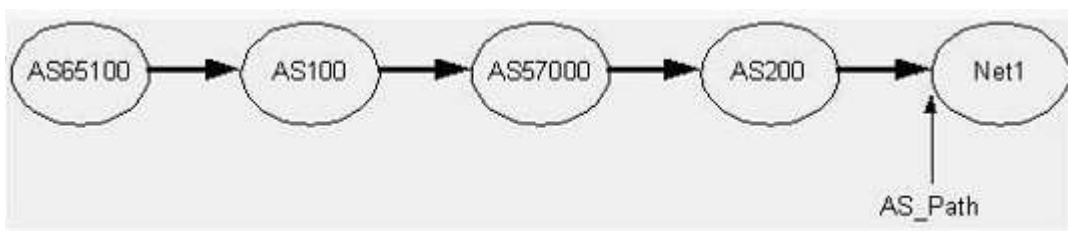
Section: (none)

Explanation

Explanation/Reference:

QUESTION 134

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



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

Correct Answer: AD

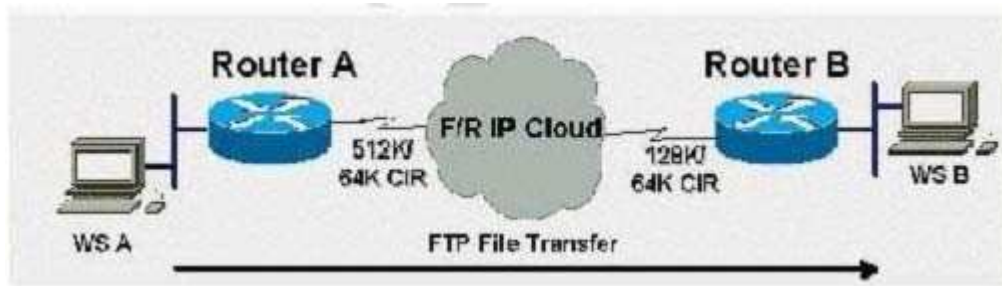
Section: (none)

Explanation

Explanation/Reference:

QUESTION 135

Router A has a 512K-access port into the frame relay cloud. Router B 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 A to prevent workstation A from overrunning the access port on Router B?



- 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

Correct Answer: E

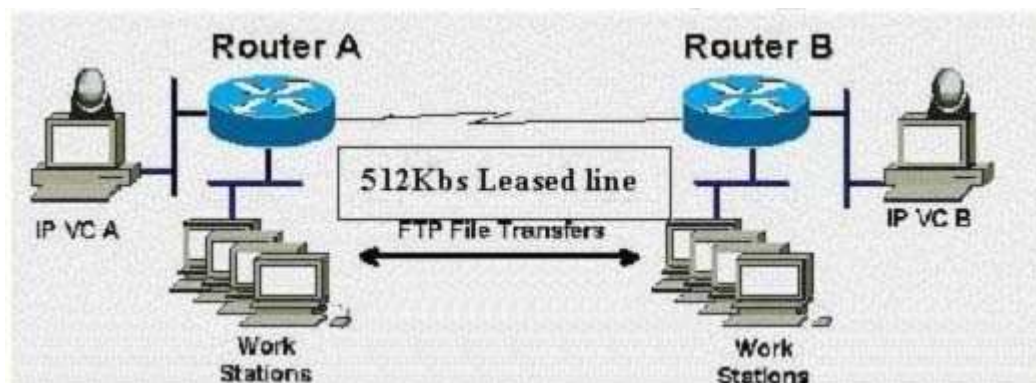
Section: (none)

Explanation

Explanation/Reference:

QUESTION 136

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?



- 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. Resource Reservation Protocol (RSVP)
- E. Weighted Fair Queuing (WFQ) with IP Precedence

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 137

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

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 138

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 source address is at or near the beginning of the frame.
- E. The data is compressed in the middle of the frame.

Correct Answer: A

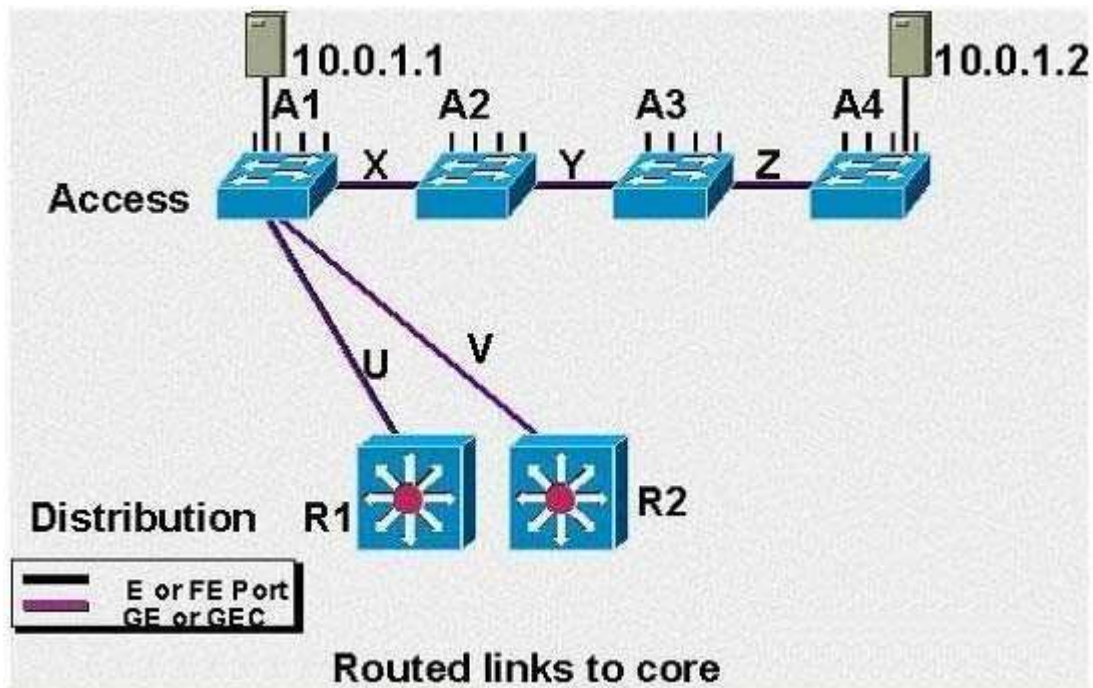
Section: (none)

Explanation

Explanation/Reference:

QUESTION 139

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 R1 and R2. 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 a star. Is this a good idea?



- A. Yes, because packets from R2 to host 10.0.1.2 will take fewer L2 hops.
- B. Yes, because with A1, A2, 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 a STP loop.

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 140

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

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

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 141

An architecture that utilizes PPPoA deals with IP address allocation by what type of negotiation?

- A. DHCP
- B. LDAP
- C. IPCP
- D. RADIUS
- E. NIS

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 142

When a subscriber is configured for PPPoE service, the DSL modem is usually configured as:

- A. A basic router (RFC 1483 routing)
- B. A basic bridge (RFC 1483 bridging)
- C. A router configured for PPPoA session termination
- D. A router configured for PPPoE session origination

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 143

What is the purpose of the following command? `virtual-template {template-number}pre-clone {number}`

- A. Used in a PPPoA environment, it will improve the memory utilization by decreasing the number of dynamic interfaces created.
- B. Used in either a PPPoA or PPPoE environment, it will decrease the time needed to boot the NRP by creating needed access interfaces before they are needed.
- C. Used in a PPPoE environment, it will increase the time needed for a user to connect to the NRP by allocating access interfaces at boot time.
- D. Used in a PPPoE environment, it will pre-create a defined number of dynamic access interfaces to reduce the load on the NRP during times of peak user logins.
- E. Used in either a PPPoA or PPPoE environment, it will increase the initial load on the NRP by pre-creating a defined number of dynamic access interfaces.

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 144

A Network Administrator is unable to configure a PVC with the value of 8/49. He looks at the running config and notices the following entry for the interface he is working with. What is the likely cause of the problem?
interface ATM0/0/0
no ip address
atm vc-per-vp 2048
no atm ilmi-keepalive

- A. ILMI has timed out without keepalives.
- B. The config is fine; the NSP must be the source of the problem.
- C. An IP address is required to turn up PVCs.
- D. The interface is shutdown.
- E. Too many bits have been assigned to the VCs reducing the possible values of the VP.

Correct Answer: E

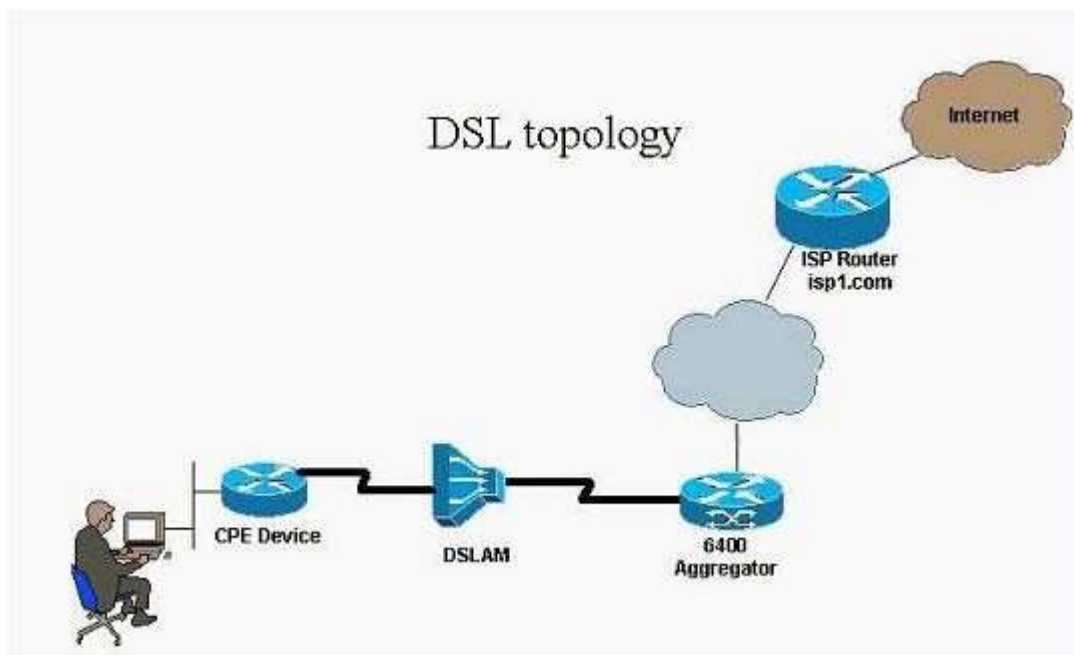
Section: (none)

Explanation

Explanation/Reference:

QUESTION 145

According to the diagram, a PPPoE session is initiated by the user from the PC using the username johndoe@isp1.com. This PPPoE session ultimately terminates on the ISP router, using domain based tunneling on 6400. What is the correct sequence of events which occur during user authentication?



- A. The 6400 will query the PC to get the domain name. The 6400 will issue a PPP authentication challenge to which the PC will respond using the username johndoe@isp1.com. Once the tunnel is established, the ISP router will issue a challenge to the user and will authenticate the response.
- B. The 6400 will issue a PPP authentication challenge to which the PC will respond using the username johndoe@isp1.com. The 6400 will authenticate the user. It will also use the domain name to find out the tunnel endpoint. The tunnel is established and user traffic will now be allowed to flow without any further authentication.
- C. The 6400 will issue a PPP authentication challenge to which the PC will respond using the username johndoe@isp1.com. The 6400 will use the domain name isp1.com to find out the tunnel endpoint. It will forward the authentication information to the ISP router which will authenticate the user.
- D. The 6400 will use the PVC number to decide the tunnel endpoint. Once the tunnel is established, the ISP router will issue a challenge to the user and will authenticate the response.
- E. None of the above

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 146

What statement regarding Service Selection Gateway is INCORRECT?

- A. For Proxy Service, the SSG will proxy the Access-Request to the remote AAA server. Upon receiving an Access-Accept from the remote RADIUS server, the NRP-SSG responds to the subscriber with the Access-Accept.
- B. Transparent passthrough service allows unauthenticated subscriber traffic to be routed through the NRP-SSG in either direction.
- C. For Proxy service, the SSG can perform NAT between the address assigned by the remote server and the subscriber's real IP address.
- D. For non-PPP users, such as those in bridged networks, if the user disconnects from a service without logging off, the connection will remain open and the user can reaccess the service without going through logon procedure as long as the session has not timed out.
- E. The PPP Termination Aggregation (PTA) service can be used only in dialup environments and with PPPoE in DSL environments. It cannot be used with PPPoA.

Correct Answer: E

Section: (none)

Explanation

Explanation/Reference:

QUESTION 147

Virtual path identifier (VPI) and virtual channel identifier (VCI) values on the NRP-2 must share ____ bits. By default, VPI values are limited to ____ bits (0-15), and VCI values are limited to ____ bits (0-1023). A Network Administrator can change the VPI and VCI ranges, but together the VPI and VCI values cannot exceed ____ bits. Which numbers below, correctly fill in the blanks?

- A. 16, 6, 10, 16
- B. 18, 4, 12, 16
- C. 18, 4, 8, 12
- D. 14, 4, 10, 14
- E. 14, 5, 9, 14

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 148

What does the Service Selection Gateway (SSG) feature on the NRP support to authenticate and authorize users?

- A. RADIUS
- B. TACACS+
- C. Kerberos
- D. MS-CHAP

E. Radius and Tacacs+

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 149

Interface FastEthernet 0/0/0ip address 192.168.1.1 255.255.255.0!interface ATM 0/0/0.30 multipointpvc 1/43encapsulation aal5ciscoppp Virtual-Template 2!!interface Virtual-Template 2ip unnumbered FastEthernet 0/0/0no peer default ip addressppp authentication pap chapppp ipcp mask 255.255.255.224!Refer to the configuration above. A customer connected to PVC 1/43 boots their CPE (PPPoA encapsulation). The Radius server is properly configured and recognizes the customer. The Radius server assigns the Framed-IP-netmask 192.168.10.1/29. What information does the CPE receive from the NRP via PPP IPCP negotiation?

- A. 192.168.10.1 IP Address, subnet mask 255.255.255.248
- B. 192.168.10.1 IP Address, subnet mask 255.255.255.224
- C. 192.168.1.1 IP Address, subnet mask 255.255.255.224
- D. 192.168.1.1 IP Address, subnet mask 255.255.255.248
- E. 192.168.1.1 IP Address, subnet mask 255.255.255.0

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 150

What ATM cell header contains a generic flow control (GFC) field?

- A. The NNI ATM cell
- B. The UNI ATM cell
- C. Both UNI and NNI
- D. None of the above

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 151

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

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 152

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



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

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 153

What is the purpose of rate decoupling for ATM transmission?

- A. It provides transparency between SONET and SDH.
- B. It converts higher-speed DS3/E3 to lower-speed optical rates.
- C. It processes the packing and unpacking of frames into 53-octet cells.
- D. It allows lower-speed traffic on an ATM facility without causing traffic gaps.

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 154

The following is an excerpt from a "show run" display in a Cisco DSLAM. interface ATM1/1 no ip address atm clock INTERNAL no atm ilmi-keepalive atm soft-vc 2 32 dest-address

47.0091.8100.0000.0030.949c.0b81.4000.0c80.8000.00 4 100 Referring to this output message, what is true?

- A. The CPE DSL modem is using ATM VPI 2, VCI 32.
- B. The CPE DSL modem is using ATM VPI 4, VCI 100.
- C. The "dest-address" is the ATM NSAP address in the CPE DSL modem.
- D. The destination address can be reached via ATM VPI 2, VCI 32.

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 155

The following configuration is from a Cisco DSLAM: interface ATM1/1 no ip address dsl profile basic no atm ilmi-keepalive atm pvc 2 32 interface ATM0/1 1 32 This configuration is from a Cisco 2600 router with an ADSL WIC installed: interface ATM0/0.1 point-to-point ip address 192.168.1.2 255.255.255.0 pvc 1/32 protocol ip 192.168.1.1 broadcast encapsulation aal5snap The CPE is connected to DSLAM DSL port 1/1 via a DSL line. The subscriber's DSL service is not working correctly. Based on the information shown in these two "show run" output messages, what is the subscriber's trouble symptom?

- A. The ADSL WIC will not train up to the DSLAM.
- B. The subscriber can access the internet, but the data throughput is slower than it should be.
- C. The ADSL WIC will train up to the DSLAM, but the subscriber can not access the internet.
- D. The subscriber can only access destination hosts on network 192.168.1.0.

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 156

What is the difference between AAL5 SNAP and AAL5 MUX virtual circuits?

- A. AAL5 SNAP is used to carry IP packets embedded in PPP encapsulation and AAL5 MUX is used to carry raw IP data.
- B. SNAP allows multiplexing of multiple protocols over a single VC, while AAL5 MUX can carry only one protocol per VC.
- C. SNAP VCs define real time data and MUX VC defines mixed (real time and non real time) data.
- D. SNAP VCs are used inside public carrier network while MUX VCs are used on the edge.
- E. None of the above

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 157

The following configuration is entered on an ATM interface: interface atm 0/0/0 encapsulation aal5mux ppp virtual-template 1 interface atm 0/0/0.10 multipoint pvc 0/100 exit pvc 0/101 encapsulation aal5snap What will the encapsulation type for the PVCs be?

- A. PVC 0/100 will have encapsulation type MUX PPP, and PVC 0/101 will have encapsulation type SNAP.
- B. Both PVC 0/100 and PVC 0/101 will have encapsulation type MUX PPP.
- C. PVC 0/100 will have encapsulation type UNDEFINED, and PVC 0/101 will have encapsulation type SNAP.
- D. Both PVC 0/100 and PVC 0/101 will have encapsulation type SNAP.
- E. The above configuration is invalid.

Correct Answer: E

Section: (none)

Explanation

Explanation/Reference:

QUESTION 158

The following message is from a Cisco DSLAM: Status: Bitrates: Interleave Path: downstream: 2048 kb/s, upstream: 256 kb/s Fast Path: downstream: 0 kb/s, upstream: 0 kb/s Margin: downstream: 18 dB, upstream: 22 dB Attenuation: downstream: 30 dB, upstream: 20 dB Interleave Delay: downstream: 16000 usecs, upstream: 16000 usecs Transmit Power: downstream: 16.0 dB, upstream: 0.0 dB Check Bytes (FEC): Interleave Path: downstream: 16, upstream: 16 Fast Path: downstream: 0, upstream: 0 R-S Codeword Size: downstream: 1, upstream: 8 Trellis Coding: Not In Use Overhead Framing: Mode 3 Operating Mode: ANSI T1 413 Issue 2 Line Type: Interleaved Only This information was presented as a result of what command?

- A. show dsl status atm 1/1
- B. show interface atm 1/1
- C. show dsl interface atm 1/1
- D. show dsl profile atm 1/1

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 159

What is the use of a VC class in IOS configuration?

- A. It defines a template for virtual circuits which can be applied to a (sub)interface such that all PVCs on that (sub)interface will inherit the configuration from that template.
- B. It defines various priorities for the PVCs to enable priority queuing of cells transmitted on a (sub)interface.
- C. It is another name for Virtual Paths.
- D. It is used to classify incoming cells on a physical interface as CBR/ABR/ and UBR traffic.
- E. It defines a template for switching ATM pvcs from one interface to another.

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 160

All of the following are components of LANE except:

- A. LAN Emulation Client (LEC)
- B. LANE Configuration Server (LECS)
- C. LAN Emulation Server (LES)
- D. Broadcast and Unknown Server (BUS)
- E. LANE Routing Table (LRT)

Correct Answer: E

Section: (none)

Explanation

Explanation/Reference:

QUESTION 161

Find the problem in the following configuration:
vpdn enable
vpdn-group 1 request-dialin protocol pppoe
virtual-template 2
interface atm 2/0.1 point-to-point pvc 0/101 encapsulation aal5snapprotocol pppoe
interface atm 2/0.2 point-to-point pvc 0/102 encapsulation aal5snapprotocol pppoe
interface atm 2/0.3 point-to-point pvc 0/103 encapsulation aal5snapprotocol pppoe
interface virtual-template 2 ip unnumbered FastEthernet 4/0
interface FastEthernet 4/0 ip address 172.22.32.1 255.255.255.0

- A. The ATM subinterfaces cannot be defined point to point.
- B. The encapsulation on the PVCs should be aal5mux.
- C. The VPDN-group definition should have the command 'accept-dialin' instead of the command 'request-dialin'.
- D. A static IP address should be configured on the virtual template.
- E. The virtual template number should be the same as the VPDN-group number.

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 162

The field of an ATM address that states what type of address is being used is:

- A. AA
- B. RD
- C. AFI
- D. DCC
- E. ICD

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 163

ATM carries IP and PPP information within ATM cells. What ATM Adaptation Layer is used when an ATM cell carries IP packets and PPP frames?

- A. AAL1
- B. AAL2
- C. AAL3
- D. AAL4
- E. AAL5

Correct Answer: E

Section: (none)

Explanation

Explanation/Reference:

QUESTION 164

A PVC has been configured on the 6400 NRP as follows:pvc

1/100encapsulation aal5mux ppp virtual-template 1ubr 384What does the command "ubr 384" accomplish?

- A. Mean Bandwidth of 384 kilobits per second
- B. Minimum Bandwidth of 384 kilobits per second
- C. Peak Bandwidth of 384 kilobits per second
- D. Mean Bandwidth of 384 kilobytes per second
- E. Does not affect PVC cell rate. It is a descriptive command.

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 165

What VCI value is reserved for PNNI ATM routing?

- A. 5
- B. 16
- C. 18
- D. 22
- E. 31

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 166

The ATM Transmission Convergence Sublayer is NOT responsible for:

- A. Cell delineation
- B. Header error control sequence generation and verification
- C. Cell rate decoupling
- D. Transmission frame adaptation
- E. Fast ReRoute

Correct Answer: E

Section: (none)

Explanation

Explanation/Reference:

QUESTION 167

What statement is correct concerning the shown configuration?


```

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

```

- 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 to 10.0.0.2.
- D. Only one RIP update will be sent out on Ethernet 0 to the unicast address 10.0.0.2.

Correct Answer: D

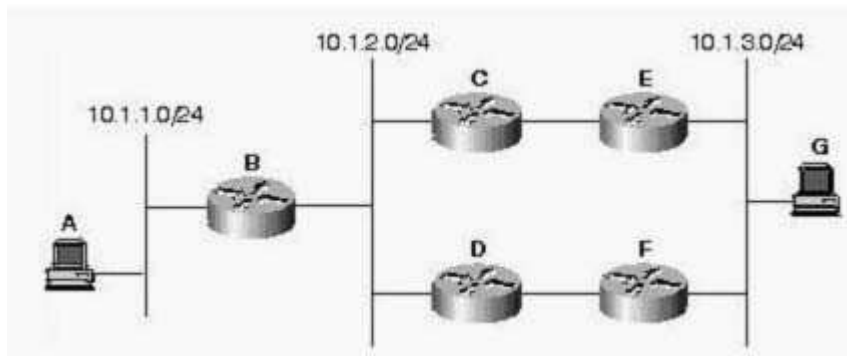
Section: (none)

Explanation

Explanation/Reference:

QUESTION 168

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?



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

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 169

In ADSL DMT systems, the highest downstream transmit power occurs at what rate/reach combinations?

- A. 384 kbps at 17 kft (5.1 km)
- B. 8 mbps at 1 kft (305 meters)
- C. 1 mbps at 9 kft (2.75 km)
- D. 8 mbps at 9 kft (2.75 km)

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 170

A DSLAM is using Reed-Solomon forward error correction on a DMT DSL line. The DSL service is using TCP/IP over ATM over DSL. A high number of upstream RS uncorrected errors are occurring on the DSL line, as reported by the DSLAM in the following status message: DSL Statistics: Init Events: 2 Transmitted Superframes: near end: 93681573 far end: 0 Received Superframes: near end: 93516422 far end: 0 Corrected Superframes: near end: 142631 far end: 31571 Uncorrected Superframes: near end: 191 far end: 1 LOS Events: near end: 0 far end: 0 LOF/RFI Events: near end: 0 far end: 0 ES Events: near end: 5 far end: 1 What is the result of the uncorrected errors?

- A. The DSL frames will be continuously retransmitted by the DSL transceivers until an error-free frame is received.
- B. If errors on the DSL line can not be corrected by the RS algorithm, the line will be automatically taken out of service.
- C. The errored data resulting from uncorrected layer-1 errors will be handled by TCP.
- D. When Reed-Solomon forward error correction is used, all errors are corrected at layer 1. The uncorrected state was present only until forward error correction algorithms corrected the errors.

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 171

- A. Lite is identified in what standard?
- B. ITU G.992.1
- C. ANSI T1E1.4
- D. ITU G.992.2
- E. ANSI T1.601
- F. ANSI T1.413

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 172

Which DSL modulation types allows line sharing (DSL and POTS voice on the same line)?

- A. G.SHDSL, IDSL, and DMT
- B. CAP and DMT
- C. DMT and G.SHDSL
- D. IDSL and SDSL

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 173

What is true concerning interleaved versus fastpath mode in DMT DSL service?

- A. Fastpath mode allows higher DSL rates.
- B. Interleaved mode allocates traffic to more than one ATM PVC.
- C. Interleaved mode allows greater forward error correction (FEC).
- D. Fastpath mode gives data precedence over voice traffic.

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 174

The major difference between DMT and CAP is:

- A. CAP uses a single center frequency; DMT is multiple-carrier.
- B. DMT is single-carrier; CAP is multiple-carrier.
- C. CAP is used in IDSL; DMT is used in ADSL.
- D. DMT is used in VDSL; CAP is used in ADSL.
- E. CAP is used in ADSL, DMT is used in SDSL.

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 175

A DSL subscriber reports that the CPE modem untrains and retrains several times each hour, but not at regular intervals. The subscriber has a DMT modem operating on 10 kft of #26 cable (3 km of 0.4 mm cable). The provisioned downstream rate is 2 mbps, and the provisioned upstream rate is 256 kbps. When the modem retrains, the downstream DSL may be as low as 512 kbps. Sometimes manually retraining the modem allows it to return to a 2 mbps line rate, and sometimes manually retraining the modem does not improve the DSL line rate. Which options would cause the intermittent train/untrain symptom as described? (multiple answer)

- A. A telephone on the same phone line was installed without a microfilter. When the telephone handset is taken off-hook, the phone causes excessive attenuation of the DSL frequencies and the resulting high error rate results in a retrain. Because of the degraded signal levels while the phone is off-hook, the modem can

not retrain at 2 mbps.

- B. There is an interfering signal in the same cable. When the interfering signal is present, an excessive error rate results. The modem retrains at a lower line rate in order to recover an acceptable noise margin and error rate.
- C. The noise margin was incorrectly set too high. Reducing the noise margin will correct the symptom.
- D. ADSL DMT will not permit 2 mbps downstream rates at 10 kft of #26 cable (3 km of 0.4 mm cable). ADSL 2 megabit service will always be unreliable and intermittent on this cable length and wire size.
- E. The DMT profile is using interleaved mode. Changing to fastpath will correct the symptom.
- F. The ATM QoS is UBR, and the subscriber's traffic is yielding to VBR or CBR traffic.

Correct Answer: AB

Section: (none)

Explanation

Explanation/Reference:

QUESTION 176

What ADSL DMT line rate requires (occupies) the most bandwidth on a telephone line?

- A. 8 mbps downstream, 800 kbps upstream on 1 kft (300 meters) of cable.
- B. 8 mbps downstream, 800 kbps upstream on 9 kft (2.75 km) of cable.
- C. 1 mbps downstream, 256 kbps upstream on 1 kft (300 meters) of cable.
- D. 512 kbps downstream, 128 kbps upstream on 17 kft (5.2 km) of cable.

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 177

A DSL subscriber says that his DSL modem is trained at the subscribed rates, 1024 kbps downstream and 256 kbps upstream, but he has no access to the internet. The internet service was working until today. The modem remains trained - it is not dropping train or frequently retraining. Manually retraining the modem does not correct the problem. The customer can ping from his PC to the Ethernet interface on the DSL modem, but not addresses "in the network". Initial troubleshooting shows that the DSL modem can ping the subscriber's PC, but no addresses in the network. What could cause this problem?

- A. A telephone is connected to the DSL line with no microfilter or splitter installed. The phone is "loading" the line and disrupting DSL service.
- B. The subscriber powered-down the DSL modem, and when it was powered-up it defaulted to G.Lite mode (G.992.2). The port in the DSLAM is full-rate DMT (G.992.1).
- C. The DSL port in the DSLAM was left in a "shutdown" state by mistake following DSLAM maintenance.
- D. There is a problem with the subscriber's ATM PVC between the DSLAM and ATM switch. An incorrect VCI was assigned between the DSLAM and ATM switch shortly after midnight, during the service provider's network rearrangements.

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 178

What is not a valid service type between an 827 and a 6400?

- A. PPPoA
- B. HDLC
- C. PPPoE
- D. L2TP
- E. RFC1483

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 179

IDSL and SDSL use what line coding scheme?

- A. B8ZS
- B. 2B1Q
- C. QAM
- D. CAP
- E. DMT

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 180

What is true concerning fastpath versus interleaved mode in DMT DSL service?

- A. Fastpath mode provides lower latency (delay) than interleaved mode.
- B. Fastpath mode allows higher DSL trained rates.
- C. Fastpath mode allows higher effective throughput on noisy transmission lines.
- D. Interleaved mode ensures that all provisioned ATM PVCs on a DSL line are given equal bandwidth.

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 181

In DMT DSL transmission systems, what is the effect of turning off half of the available downstream carriers (tones)?

- A. The downstream DSL bandwidth is reduced.
- B. The downstream line rate and throughput remains unchanged, but FEC efficiency is reduced.
- C. The upstream DSL bandwidth can be increased, since more carriers become available for upstream traffic.

D. Downstream RS error correction effectiveness is reduced.

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 182

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

Correct Answer: AC

Section: (none)

Explanation

Explanation/Reference:

QUESTION 183

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

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 184

Which three are major inhibitors of ADSL line quality? (multiple answer)

- A. Bridge Taps
- B. Distance
- C. Squirrels
- D. Load Coils
- E. Line shared by a telephone

Correct Answer: ABD

Section: (none)

Explanation

Explanation/Reference:

QUESTION 185

A subscriber's DSL service is configured as PPPoA. The subscriber's DSL modem is trained, but the subscriber can not access the internet (can not ping network addresses or reach web servers). Initial troubleshooting shows that a PPP session is open (active) in the DSL modem and aggregator. Based on these conditions and the symptom, what is a possible cause of this problem?

- A. An incorrect PVC (VPI/VCI) was provisioned between the DSLAM and the ATM switch.
- B. An incorrect PVC (VPI/VCI) was provisioned between the ATM switch and the router.
- C. An incorrect PVC (VPI/VCI) was provisioned between the DSLAM and the DSL modem.
- D. There is a problem in the physical connection or configuration between the DSL modem and the CPE.

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 186

A subscriber complains that his DSL rates are slower than the service he ordered. The customer ordered ADSL at 1 mpbs downstream and 256 kbps upstream, but the maximum bitrate observed during file downloads is 100 kbps downstream. Of the following four choices, which is clearly the most appropriate information needed to begin troubleshooting the problem?

- A. The software version running in the DSLAM
- B. The FEC parameters for the subscriber's ADSL port in the DSLAM
- C. The actual DSL rate that is reported when the DSL line is trained
- D. The manufacturer and model of ADSL CPE that is used

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 187

Three of the following statements are correct. Identify the three (3) correct statements.

- A. As ADSL rates are manually reduced by changing the DSL profile in the DSLAM, signal-to-noise margins improve.
- B. As cable length increases, actual noise margins degrade (less margin) for the same DSL rate.
- C. Low actual noise margins can cause lower than desired trained rates and unreliable DSL service.
- D. Higher ATM and IP data rates cause lower DSL margins. For higher ATM and IP data rates, the noise margin options must be set higher in the DSL profiles.

Correct Answer: ABC

Section: (none)

Explanation

Explanation/Reference:

QUESTION 188

A DMT DSL modem is working on a "shared line" with standard telephone service (POTS). When the subscriber picks up the telephone handset, the DSL modem untrains, then retrains at a lower DSL line rate. When the telephone is not off-hook, the DSL modem will train at the subscribed rate (normal operation). Which of the following is the probable cause of this symptom?

- A. An improper DSL line rate was provisioned for shared lines.
- B. A microfilter or splitter was not correctly installed between the telephone and the line.
- C. The noise level on the telephone line will not allow DSL and POTS voice at the same time.
- D. An incorrect DMT operating mode was provisioned in the DSLAM.

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 189

What is the effect of changing DMT interleaved delay from 16 milliseconds to 2 milliseconds?

- A. Fewer ATM PVCs can be provisioned on the DSL line.
- B. Latency is reduced, but error correction effectiveness may also be reduced.
- C. Latency remains the same, but faster error correction occurs.
- D. Latency remains the same, but throughput is increased.

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 190

The following are wire sizes used in telephone company cables. Which will allow the greatest "reach" (distance) in DSL service?

- A. 24 AWG (0.5 mm)
- B. 26 AWG (0.4 mm)
- C. A line that is 50% of #24 (0.5mm) and 50 % of #26 (0.4mm).
- D. None of the above will allow enough reach for DSL service.

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 191

What best describes RADSL?

- A. The DSL line trains at the highest rate possible, limited mainly by line conditions and provisioning options.
- B. The DSL line rate (bandwidth) is automatically increased when data queues are filled to a predetermined threshold.

- C. The DSL line rate remains constant while noise margins are automatically adjusted.
- D. The DSL modems detect the presence of CAP, DMT, SDSL, or G.SHDSL modulation at the receiver input and automatically select the appropriate mode to transmit.

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 192

A DSL modem will not train up. It is on a "shared line" (DSL and POTS), and the telephone on the shared line is working normally. Nine of the ten conditions are possible causes of the symptom, and one is not. What is NOT a possible cause of the problem?

- A. A defective DSL line card in the DSLAM
- B. A defective DSL CPE modem
- C. An open (cut or broken) tip or ring lead on the phone line between the customer premises and the telco C.O
- D. The DSL port in the DSLAM is in "shutdown" state
- E. The DSL port in the CPE DSL modem is in "shutdown" state
- F. The DSL operating mode in the DSLAM does not match the operating mode of the CPE DSL modem
- G. A loose cable between the telco POTS splitter and DSLAM
- H. A loose or broken connection between the DSL modem and telephone line
- I. An incorrectly connected POTS splitter between the DSL modem and telephone line
- J. A DSL microfilter was accidentally installed in the DSL line between the DSL modem and DSL line

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 193

What effect do load coils in a telephone line have on DSL service?

- A. Load coils cause low trained rates for ADSL (CAP or DMT), but do not degrade SDSL, SHDSL, or IDSL transmission.
- B. Load coils in the telephone line can prevent any DSL modem from training up to an ATU-C port.
- C. Load coils cause low upstream rates, but do not degrade downstream rates.
- D. Load coils cause low downstream rates, but do not degrade upstream rates.
- E. Load coils cause low trained rates for SDSL, SHDSL, or IDSL, but do not degrade ADSL (CAP or DMT) transmission.

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 194

The telephone company has placed a bridge-tap (half-tap) on all the pairs in a cable in preparation to reroute the cable. DSL customers are served by this cable. Three of the following five statements are correct. Which

three of the following statements describes the possible effect of placing bridge-taps on a DSL line? (multiple answer)

- A. It may not cause a problem, depending on the location and length of the half taps.
- B. It can cause the DSL modems to train at lower line rates.
- C. It will degrade upstream rates (lower frequencies), but will not degrade downstream rates (higher frequencies).
- D. DSL modems operating at 15 kft (4.5 km) of cable may not train after the bridge-taps are installed.
- E. Bridge-taps will not cause a problem for DSL service unless a telephone or modem is connected at the end of the new cable (half-tap) section, or unless the new section is shorted.

Correct Answer: ABD

Section: (none)

Explanation

Explanation/Reference:

QUESTION 195

What will significantly degrade DSL performance, regardless of DSL rate or line length?

- A. POTS splitters at the subscriber's end of the DSL line
- B. POTS splitters at the telco C.O
- C. Microfilters installed between a telephone and shared line
- D. Radio-frequency filters on the telephone line

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 196

The function of the ATU-R is:

- A. To multiplex xDSL signals into the network core.
- B. To provide a network connection for the end-user.
- C. To split ADSL bandwidth from telephony bandwidth.
- D. To switch ATM cells received from CPE.
- E. To extend xDSL signals past the distance limitation.

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 197

A DSL customer has subscribed to a service that provides 2 mbps downstream and 256 kbps upstream. The cable length is 10 kft (3 km). The customer reports that file transfers on the DSL line seem slower than normal in recent days. After reviewing the DSL profile parameters for the DSL port, and the actual status of the line, what is the possible reason why the subscriber's data rates are slower than usual? DSLAM#show dsl int atm 1/1 DMT profile parameters Maximum Bitrates: Interleave Path: downstream: 2048 kb/s, upstream: 256 kb/s Fast Path:

downstream: 0 kb/s, upstream: 0 kb/s
 Minimum Bitrates: Interleave Path: downstream: 0 kb/s, upstream: 0 kb/s
 Fast Path: downstream: 0 kb/s, upstream: 0 kb/s
 Margin: downstream: 6 dB, upstream: 6 dB
 Interleaving Delay: downstream: 16000 usecs, upstream: 16000 usecs
 Check Bytes (FEC): Interleave Path: downstream: 16, upstream: 16
 Fast Path: downstream: 0, upstream: 0
 R-S Codeword Size: downstream: auto, upstream: auto
 Trellis Coding: Disabled
 Overhead Framing: Mode 3
 Operating Mode: Automatic
 Training Mode: QuickMin
 rate blocking: Disabled
 SNR Monitoring: Disabled
 Status: Bitrates: Interleave Path: downstream: 640 kb/s, upstream: 256 kb/s
 Fast Path: downstream: 0 kb/s, upstream: 0 kb/s
 Margin: downstream: 6 dB, upstream: 9 dB
 Attenuation: downstream: 45 dB, upstream: 31 dB
 Interleave Delay: downstream: 16000 usecs, upstream: 16000 usecs
 Transmit Power: downstream: 19.4 dB, upstream: 12.0 dB
 Check Bytes (FEC): Interleave Path: downstream: 16, upstream: 16
 Fast Path: downstream: 0, upstream: 0
 R-S Codeword Size: downstream: 1, upstream: 8
 Trellis Coding: Not In Use
 Overhead Framing: Mode 3
 Line Fault: NONE
 Operating Mode: ITU G dmt
 Issue 1
 Line Type: Interleaved Only

- A. The signal-to-noise margin on the line will not allow downstream DSL rates faster than 640 kbps. If the subscriber's service was in fact faster at some time, then something has changed in the line characteristics or noise spectrum.
- B. The subscriber is provisioned for 640 kbps downstream, and the service appears to be working normally. The problem is apparently not related to the DSL (physical layer) part of the service.
- C. The service is running in G.DMT, and 640 kbps is normal for the subscriber's cable length. Change the mode to ANSI T1.413 for faster rates.
- D. The DSL profile is set for 16 milliseconds interleave delay. Change the interleave delay to 0, or change the profile to fastpath for faster line rates.

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 198

A DSL line status report shows a high number of corrected and uncorrected errors. The line is configured at 4 milliseconds interleave delay and 4 FEC check-bytes. To reduce the number of uncorrected errors without a detailed analysis of whether the errors are continuous or "bursty", which of the following should provide improved error correction?

- A. Change the interleave delay to 2 milliseconds to reduce latency and change the number of FEC check-bytes to 2 for reduced overhead
- B. Leave the interleave delay at 4 milliseconds and change the FEC check-bytes to 2
- C. Leave the FEC check-bytes at 4 and change the interleave delay to 2 milliseconds
- D. Change the interleave delay to 16 milliseconds and the FEC check-bytes to 16

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 199

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

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 200

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

- A. Configure local preference
- B. Configure route reflectors
- C. Configure IBGP neighbors several hops away
- D. Configure confederations

Correct Answer: BD

Section: (none)

Explanation

Explanation/Reference:

QUESTION 201

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 allow the router to reflect updates from one Internal BGP speaker to another without the need to be fully meshed
- D. To divide Autonomous Systems into mini-Autonomous Systems, allowing the reduction in the number of peers
- E. None of the above

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 202

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'.

Correct Answer: C

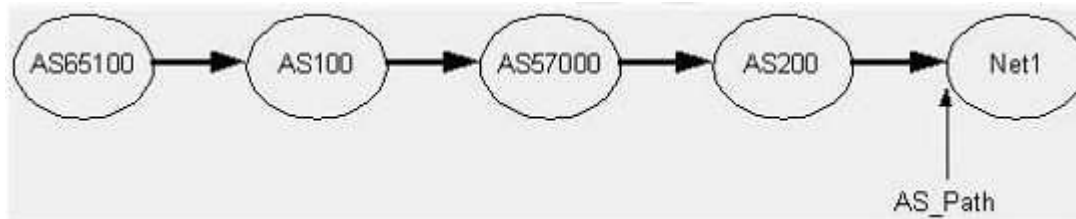
Section: (none)

Explanation

Explanation/Reference:

QUESTION 203

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



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

Correct Answer: AD

Section: (none)

Explanation

Explanation/Reference:

QUESTION 204

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 onto the wire.
- D. This session is about to end.

Correct Answer: A

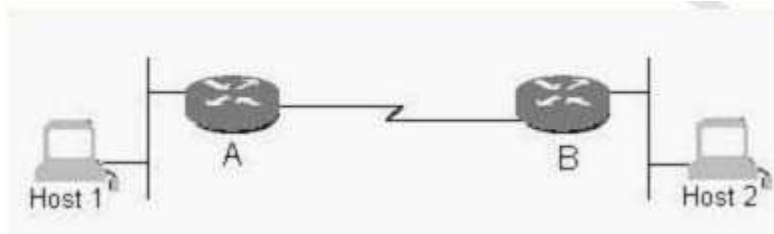
Section: (none)

Explanation

Explanation/Reference:

QUESTION 205

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



- A. Host 1
- B. Host 2
- C. Router A
- D. Router B
- E. The broadcast address

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 206

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

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

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 207

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

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

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 208

Debug is enabled on Router B, 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)

A company has been assigned the Class B address of 191.8.0.0 by the NIC. They have decided to use a subnet mask of 255.255.255.0 and an autonomous system number of 1.

The configuration for Router A is as follows:

```
RouterA#show running-config
Current configuration:
version 11.3
1.) hostname RouterA
2.) enable-password enablepassword
3.) interface ethernet 0
4.) ip address 191.8.1.1 255.255.255.0
5.) no mop enabled
6.) interface serial 0
7.) ip address 191.8.150.1 255.255.255.0
8.) ip name-server 255.255.255.255
9.) ip host RouterB 191.8.150.2 191.8.2.1
10.) snmp-server community c0ie
11.) line vty 0 4
12.) login
13.) line con 0
14.) line aux 0
15.) line vty 0
16.) password vtypassword
17.) line vty 1
18.) password vtypassword
19.) line vty 2
20.) password vtypassword
21.) line vty 3
22.) password vtypassword
23.) line vty 4
24.) password vtypassword
25.) end
RouterA#
```

The configuration for Router B is as follows:

```
RouterB#show running-config
Current configuration:
version 11.3
1.) hostname RouterB
2.) enable-password san-fran
3.) interface tokenring 0
4.) ip address 191.8.2.1 255.255.255.0
5.) ring-speed 16
6.) interface serial 0
7.) ip address 191.8.150.2 255.255.255.0
8.) ip name-server 255.255.255.255
9.) ip host A 191.8.2.1 191.8.150.1
10.) snmp-server community c0ie
11.) logging buffered
12.) line vty 0 4
13.) login
14.) line con 0
15.) line aux 0
16.) line vty 0
17.) password cisco
18.) line vty 1
19.) password cisco
20.) line vty 2
21.) password cisco
22.) line vty 3
23.) password cisco
24.) line vty 4
25.) password cisco
26.) end
RouterB#
```

- A. Router B is not turned on.
- B. Debug information is being sent to A.
- 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.

Correct Answer: CD

Section: (none)

Explanation

Explanation/Reference:

QUESTION 209

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

Correct Answer: AC

Section: (none)

Explanation

Explanation/Reference:

QUESTION 210

A DMT DSL modem is working on a "shared line" with standard telephone service (POTS). When the subscriber picks up the telephone handset, the DSL modem untrains, then retrains at a lower DSL line rate. When the telephone is not off-hook, the DSL modem will train at the subscribed rate (normal operation). Which of the following is the probable cause of this symptom?

- A. An improper DSL line rate was provisioned for shared lines.
- B. A microfilter or splitter was not correctly installed between the telephone and the line.
- C. The noise level on the telephone line will not allow DSL and POTS voice at the same time.
- D. An incorrect DMT operating mode was provisioned in the DSLAM.

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 211

Three of the following statements are correct. Identify the three (3) correct statements.

- A. As ADSL rates are manually reduced by changing the DSL profile in the DSLAM, signal-to-noise margins improve.
- B. As cable length increases, actual noise margins degrade (less margin) for the same DSL rate.
- C. Low actual noise margins can cause lower than desired trained rates and unreliable DSL service.
- D. Higher ATM and IP data rates cause lower DSL margins. For higher ATM and IP data rates, the noise margin options must be set higher in the DSL profiles.

Correct Answer: ABC

Section: (none)

Explanation

Explanation/Reference:

QUESTION 212

What effect do load coils in a telephone line have on DSL service?

- A. Load coils cause low trained rates for ADSL (CAP or DMT), but do not degrade SDSL, SHDSL, or IDSL transmission.
- B. Load coils in the telephone line can prevent any DSL modem from training up to an ATU-C port.
- C. Load coils cause low upstream rates, but do not degrade downstream rates.
- D. Load coils cause low downstream rates, but do not degrade upstream rates.
- E. Load coils cause low trained rates for SDSL, SHDSL, or IDSL, but do not degrade ADSL (CAP or DMT) transmission.

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 213

The telephone company has placed a bridge-tap (half-tap) on all the pairs in a cable in preparation to reroute

the cable. DSL customers are served by this cable. Three of the following five statements are correct. Which three of the following statements describes the possible effect of placing bridge-taps on a DSL line? (multiple answer)

- A. It may not cause a problem, depending on the location and length of the half taps.
- B. It can cause the DSL modems to train at lower line rates.
- C. It will degrade upstream rates (lower frequencies), but will not degrade downstream rates (higher frequencies).
- D. DSL modems operating at 15 kft (4.5 km) of cable may not train after the bridge-taps are installed.
- E. Bridge-taps will not cause a problem for DSL service unless a telephone or modem is connected at the end of the new cable (half-tap) section, or unless the new section is shorted.

Correct Answer: ABD

Section: (none)

Explanation

Explanation/Reference:

QUESTION 214

The following are wire sizes used in telephone company cables. What will allow the best overall DSL performance?

- A. 7 kft (2.1 km) of #26 AWG (0.4 mm) cable
- B. 9 kft (2.75 km) of #26 AWG (0.4 mm) cable
- C. 7 kft (2.1 km) of #24 AWG (0.5 mm) cable
- D. 9 kft (2.75 km) of #24 AWG (0.5 mm) cable

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 215

What is the effect of changing DMT interleaved delay from 16 milliseconds to 2 milliseconds?

- A. Fewer ATM PVCs can be provisioned on the DSL line.
- B. Latency is reduced, but error correction effectiveness may also be reduced.
- C. Latency remains the same, but faster error correction occurs.
- D. Latency remains the same, but throughput is increased.

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 216

A DSL modem will not train up. It is on a "shared line" (DSL and POTS), and the telephone on the shared line is working normally. Nine of the ten conditions are possible causes of the symptom, and one is not. What is NOT a possible cause of the problem?

- A. A defective DSL line card in the DSLAM

- B. A defective DSL CPE modem
- C. An open (cut or broken) tip or ring lead on the phone line between the customer premises and the telco C.O
- D. The DSL port in the DSLAM is in "shutdown" state
- E. The DSL port in the CPE DSL modem is in "shutdown" state
- F. The DSL operating mode in the DSLAM does not match the operating mode of the CPE DSL modem
- G. A loose cable between the telco POTS splitter and DSLAM
- H. A loose or broken connection between the DSL modem and telephone line
- I. An incorrectly connected POTS splitter between the DSL modem and telephone line
- J. A DSL microfilter was accidentally installed in the DSL line between the DSL modem and DSL line

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 217

What best describes RADSL?

- A. The DSL line trains at the highest rate possible, limited mainly by line conditions and provisioning options.
- B. The DSL line rate (bandwidth) is automatically increased when data queues are filled to a predetermined threshold.
- C. The DSL line rate remains constant while noise margins are automatically adjusted.
- D. The DSL modems detect the presence of CAP, DMT, SDSL, or G.SHDSL modulation at the receiver input and automatically select the appropriate mode to transmit.

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 218

A DSL line status report shows a high number of corrected and uncorrected errors. The line is configured at 4 milliseconds interleave delay and 4 FEC check-bytes. To reduce the number of uncorrected errors without a detailed analysis of whether the errors are continuous or "bursty", which of the following should provide improved error correction?

- A. Change the interleave delay to 2 milliseconds to reduce latency and change the number of FEC check-bytes to 2 for reduced overhead
- B. Leave the interleave delay at 4 milliseconds and change the FEC check-bytes to 2
- C. Leave the FEC check-bytes at 4 and change the interleave delay to 2 milliseconds
- D. Change the interleave delay to 16 milliseconds and the FEC check-bytes to 16

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 219

Three of the following are common symptoms of a bridge tap ("half tap") on

a DSL line. Which three are symptoms that result from placing a bridge tap on a DSL line?

- A. The line may not train.
- B. The DSL service will interfere with telephone (POTS) service on the same line.
- C. DSL line rates will be lower than expected (lower than provisioned).
- D. The line may have degraded DSL service, but POTS service may appear normal.

Correct Answer: ACD

Section: (none)

Explanation

Explanation/Reference:

QUESTION 220

The function of the ATU-R is:

- A. To multiplex xDSL signals into the network core.
- B. To provide a network connection for the end-user.
- C. To split ADSL bandwidth from telephony bandwidth.
- D. To switch ATM cells received from CPE.
- E. To extend xDSL signals past the distance limitation.

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 221

Which three are major inhibitors of ADSL line quality? (multiple answer)

- A. Bridge Taps
- B. Distance
- C. Squirrels
- D. Load Coils
- E. Line shared by a telephone

Correct Answer: ABD

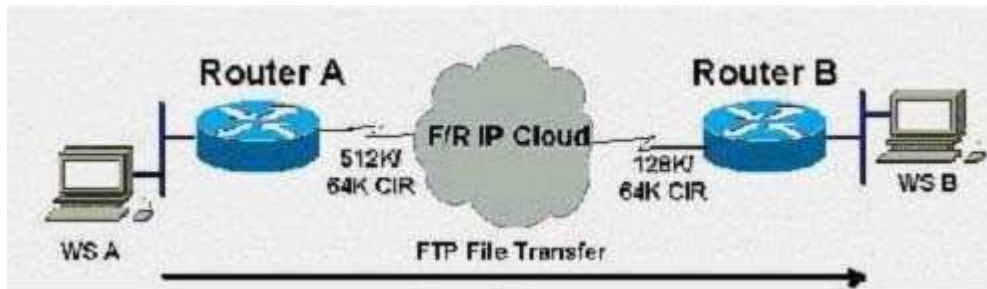
Section: (none)

Explanation

Explanation/Reference:

QUESTION 222

Router A has a 512K-access port into the frame relay cloud. Router B 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 A to prevent workstation A from overrunning the access port on Router B?



- 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

Correct Answer: E

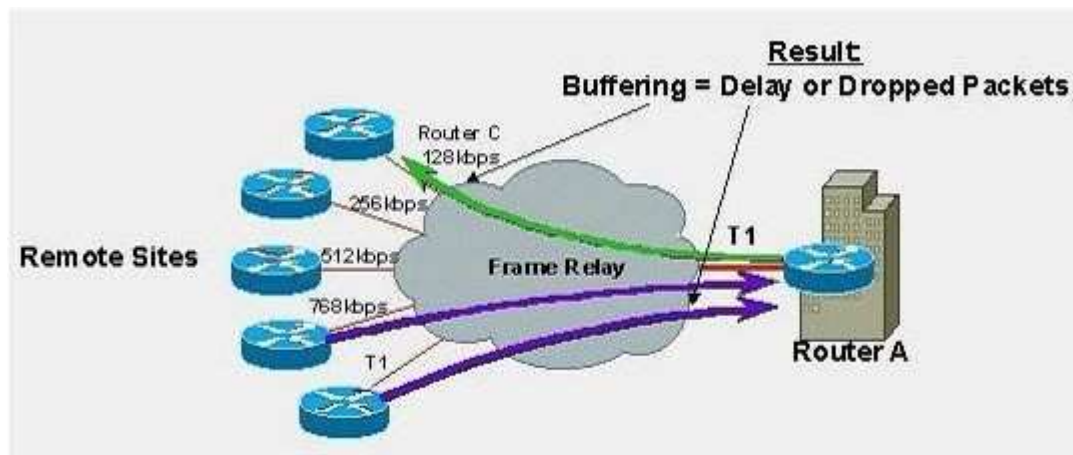
Section: (none)

Explanation

Explanation/Reference:

QUESTION 223

What mechanism should be employed to limit the "transmit rate" from Router A to Router C?



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

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 224

The field of an ATM address that states what type of address is being used is:

- A. AA
- B. RD
- C. AFI
- D. DCC
- E. ICD

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 225

ATM carries IP and PPP information within ATM cells. What ATM Adaptation Layer is used when an ATM cell carries IP packets and PPP frames?

- A. AAL1
- B. AAL2
- C. AAL3
- D. AAL4
- E. AAL5

Correct Answer: E

Section: (none)

Explanation

Explanation/Reference:

QUESTION 226

What is the use of a VC class in IOS configuration?

- A. It defines a template for virtual circuits which can be applied to a (sub)interface such that all PVCs on that (sub)interface will inherit the configuration from that template.
- B. It defines various priorities for the PVCs to enable priority queuing of cells transmitted on a (sub)interface.
- C. It is another name for Virtual Paths.
- D. It is used to classify incoming cells on a physical interface as CBR/ABR/ and UBR traffic.
- E. It defines a template for switching ATM pvcs from one interface to another.

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 227

What VCI value is reserved for PNNI ATM routing?

- A. 5
- B. 16

- C. 18
- D. 22
- E. 31

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 228

The ATM Transmission Convergence Sublayer is NOT responsible for:

- A. Cell delineation
- B. Header error control sequence generation and verification
- C. Cell rate decoupling
- D. Transmission frame adaptation
- E. Fast ReRoute

Correct Answer: E

Section: (none)

Explanation

Explanation/Reference:

QUESTION 229

The following is an excerpt from a "show run" display in a Cisco DSLAM: interface ATM1/1 no ip address atm clock INTERNAL no atm ilmi-keepalive atm soft-vc 2 32 dest-address

47.0091.8100.0000.0030.949c.0b81.4000.0c80.8000.00 4 100 Referring to this output message, what is true?

- A. The CPE DSL modem is using ATM VPI 2, VCI 32.
- B. The CPE DSL modem is using ATM VPI 4, VCI 100.
- C. The "dest-address" is the ATM NSAP address in the CPE DSL modem.
- D. The destination address can be reached via ATM VPI 2, VCI 32.

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 230

A subscriber complains that his DSL rates are slower than the service he ordered. The customer ordered ADSL at 1 mbps downstream and 256 kbps upstream, but the maximum bitrate observed during file downloads is never more than 128 kbps downstream. Initial troubleshooting shows that the subscriber's DSL modem is trained at 1024 kbps downstream and 256 kbps upstream. Which one of the following presented choices is clearly the most appropriate information needed to begin troubleshooting the problem?

- A. The ATM QoS parameters assigned to the subscriber's PVC in the DSLAM, ATM switch, and router.
- B. The software version running in the CPE and DSLAM.
- C. The manufacturer and model of ADSL CPE that is used, to determine correct interoperability with the DSLAM.

- D. The FEC parameters used for the subscriber's ADSL port in the DSLAM, which could be causing the degraded throughput.

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 231

The following configuration is from a Cisco DSLAM: interface ATM1/1 no ip address dsl profile basic no atm ilmi-keepalive atm pvc 2 32 interface ATM0/1 1 32 This configuration is from a Cisco 2600 router with an ADSL WIC installed: interface ATM0/0.1 point-to-point ip address 192.168.1.2 255.255.255.0 pvc 1/32 protocol ip 192.168.1.1 broadcast encapsulation aal5snap The CPE is connected to DSLAM DSL port 1/1 via a DSL line. The subscriber's DSL service is not working correctly. Based on the information shown in these two "show run" output messages, what is the subscriber's trouble symptom?

- A. The ADSL WIC will not train up to the DSLAM.
- B. The subscriber can access the internet, but the data throughput is slower than it should be.
- C. The ADSL WIC will train up to the DSLAM, but the subscriber can not access the internet.
- D. The subscriber can only access destination hosts on network 192.168.1.0.

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 232

All of the following are components of LANE except:

- A. LAN Emulation Client (LEC)
- B. LANE Configuration Server (LECS)
- C. LAN Emulation Server (LES)
- D. Broadcast and Unknown Server (BUS)
- E. LANE Routing Table (LRT)

Correct Answer: E

Section: (none)

Explanation

Explanation/Reference:

QUESTION 233

Find the problem in the following configuration: vpdn enable vpdn-group 1 request-dialin protocol pppoe virtual-template 2 ! interface atm 2/0.1 point-to-point pvc 0/101 encapsulation aal5snap protocol pppoe ! interface atm 2/0.2 point-to-point pvc 0/102 encapsulation aal5snap protocol pppoe ! interface atm 2/0.3 point-to-point pvc 0/103 encapsulation aal5snap protocol pppoe ! interface virtual-template 2 ip unnumbered FastEthernet 4/0 ! interface FastEthernet 4/0 ip address 172.22.32.1 255.255.255.0

- A. The ATM subinterfaces cannot be defined point to point.
- B. The encapsulation on the PVCs should be aal5mux.
- C. The VPDN-group definition should have the command 'accept-dialin' instead of the command 'request-

dialin'.

- D. A static IP address should be configured on the virtual template.
- E. The virtual template number should be the same as the VPDN-group number.

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 234

The following message is from a Cisco DSLAM: Status: Bitrates: Interleave Path: downstream: 2048 kb/s, upstream: 256 kb/s Fast Path: downstream: 0 kb/s, upstream: 0 kb/s Margin: downstream: 18 dB, upstream: 22 dB Attenuation: downstream: 30 dB, upstream: 20 dB Interleave Delay: downstream: 16000 usecs, upstream: 16000 usecs Transmit Power: downstream: 16.0 dB, upstream: 0.0 dB Check Bytes (FEC): Interleave Path: downstream: 16, upstream: 16 Fast Path: downstream: 0, upstream: 0 R-S Codeword Size: downstream: 1, upstream: 8 Trellis Coding: Not In Use Overhead Framing: Mode 3 Operating Mode: ANSI T1 413 Issue 2 Line Type: Interleaved Only This information was presented as a result of what command?

- A. show dsl status atm 1/1
- B. show interface atm 1/1
- C. show dsl interface atm 1/1
- D. show dsl profile atm 1/1

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 235

Which of the following CGMP (Cisco Group Management Protocol) statements is correct? (multiple answer)

- 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.

Correct Answer: AC

Section: (none)

Explanation

Explanation/Reference:

QUESTION 236

What is RPF?

- A. Reverse Path Forwarding
- B. Reverse Path Flooding
- C. Router Protocol Filter

- D. Routing Protocol File
- E. None of the above

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 237

What establishes routing table precedence in a routing table?

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

Correct Answer: E

Section: (none)

Explanation

Explanation/Reference:

QUESTION 238

The Hold-Down Timer used in Distance Vector protocols:

- A. Sets the time limit of how long a router 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 or 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

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 239

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

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 240

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

Correct Answer: AC

Section: (none)

Explanation

Explanation/Reference:

QUESTION 241

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

Correct Answer: B

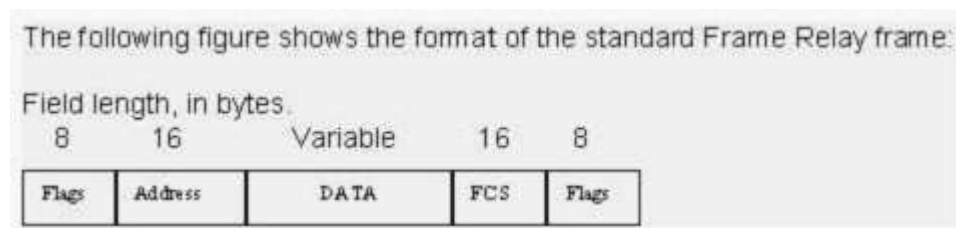
Section: (none)

Explanation

Explanation/Reference:

QUESTION 242

The address field contains: (multiple answer)



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

Correct Answer: ABC

Section: (none)

Explanation

Explanation/Reference:

QUESTION 243

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.

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 244

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

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 245

What is the purpose of rate decoupling for ATM transmission?

- A. It provides transparency between SONET and SDH.
- B. It converts higher-speed DS3/E3 to lower-speed optical rates.
- C. It processes the packing and unpacking of frames into 53-octet cells.
- D. It allows lower-speed traffic on an ATM facility without causing traffic gaps.

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 246

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

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 247

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

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

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 248

What ATM cell header contains a generic flow control (GFC) field?

- A. The NNI ATM cell
- B. The UNI ATM cell
- C. Both UNI and NNI
- D. None of the above

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 249

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 180.60.45.96 255.255.255.32 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 0.0.0.31 area 0
- D. router ospf 1 network 180.60.45.96 0.0.0.224 area 0

Correct Answer: C

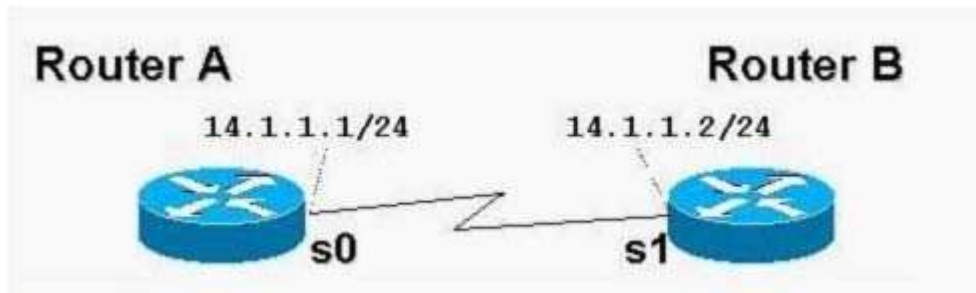
Section: (none)

Explanation

Explanation/Reference:

QUESTION 250

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



- A. routerArouter ospf 1network 14.0.0.0 0.255.255.255 area 0routerBrouter ospf 1network 14.0.0.0 0.255.255.255 area 0
- B. routerArouter ospf 1network 14.1.1.0 0.0.0.255 area 0routerBrouter ospf 2network 14.1.1.0 0.0.0.255 area 0
- C. routerArouter ospf 1network 14.0.0.0 0.0.255.255 area 0routerBrouter ospf 1network 14.1.0.0 0.0.0.255 area 0
- D. routerArouter ospf 1network 14.1.1.0 0.0.0.255 area 1routerBrouter ospf 1network 14.1.0.0 0.0.255.255 area 0

Correct Answer: AB

Section: (none)

Explanation

Explanation/Reference:

QUESTION 251

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.

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 252

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.

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 253

A Network Administrator is unable to configure a PVC with the value of 8/49. He looks at the running config and notices the following entry for the interface he is working with. What is the likely cause of the problem?
 interface ATM0/0/0no ip addressatm vc-per-vp 2048no atm ilmi-keepalive

- A. ILMI has timed out without keepalives.
- B. The config is fine; the NSP must be the source of the problem.
- C. An IP address is required to turn up PVCs.
- D. The interface is shutdown.
- E. Too many bits have been assigned to the VCs reducing the possible values of the VP.

Correct Answer: E

Section: (none)

Explanation

Explanation/Reference:

QUESTION 254

What is the purpose of the following command? virtual-template {template-number}pre-clone {number}

- A. Used in a PPPoA environment, it will improve the memory utilization by decreasing the number of dynamic interfaces created.
- B. Used in either a PPPoA or PPPoE environment, it will decrease the time needed to boot the NRP by creating needed access interfaces before they are needed.
- C. Used in a PPPoE environment, it will increase the time needed for a user to connect to the NRP by allocating access interfaces at boot time.
- D. Used in a PPPoE environment, it will pre-create a defined number of dynamic access interfaces to reduce the load on the NRP during times of peak user logins.
- E. Used in either a PPPoA or PPPoE environment, it will increase the initial load on the NRP by pre-creating a defined number of dynamic access interfaces.

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 255

Interface FastEthernet 0/0/0ip address 192.168.1.1 255.255.255.0!interface ATM 0/0/0.30 multipointpvc 1/43encapsulation aal5ciscoppp Virtual-Template 2!!interface Virtual-Template 2ip unnumbered FastEthernet 0/0/0no peer default ip addressppp authentication pap chapppp ipcp mask 255.255.255.224!Refer to the

configuration above. A customer connected to PVC 1/43 boots their CPE (PPPoA encapsulation). The Radius server is properly configured and recognizes the customer. The Radius server assigns the Framed-IP-netmask 192.168.10.1/29. What information does the CPE receive from the NRP via PPP IPCP negotiation?

- A. 192.168.10.1 IP Address, subnet mask 255.255.255.248
- B. 192.168.10.1 IP Address, subnet mask 255.255.255.224
- C. 192.168.1.1 IP Address, subnet mask 255.255.255.224
- D. 192.168.1.1 IP Address, subnet mask 255.255.255.248
- E. 192.168.1.1 IP Address, subnet mask 255.255.255.0

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 256

When a subscriber is configured for PPPoE service, the DSL modem is usually configured as:

- A. A basic router (RFC 1483 routing)
- B. A basic bridge (RFC 1483 bridging)
- C. A router configured for PPPoA session termination
- D. A router configured for PPPoE session origination

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 257

What does the Service Selection Gateway (SSG) feature on the NRP support to authenticate and authorize users?

- A. RADIUS
- B. TACACS+
- C. Kerberos
- D. MS-CHAP
- E. Radius and Tacacs+

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 258

What statement regarding Service Selection Gateway is INCORRECT?

- A. For Proxy Service, the SSG will proxy the Access-Request to the remote AAA server. Upon receiving an Access-Accept from the remote RADIUS server, the NRP-SSG responds to the subscriber with the Access-Accept.

- B. Transparent passthrough service allows unauthenticated subscriber traffic to be routed through the NRP-SSG in either direction.
- C. For Proxy service, the SSG can perform NAT between the address assigned by the remote server and the subscriber's real IP address.
- D. For non-PPP users, such as those in bridged networks, if the user disconnects from a service without logging off, the connection will remain open and the user can reaccess the service without going through logon procedure as long as the session has not timed out.
- E. The PPP Termination Aggregation (PTA) service can be used only in dialup environments and with PPPoE in DSL environments. It cannot be used with PPPoA.

Correct Answer: E

Section: (none)

Explanation

Explanation/Reference:

QUESTION 259

Virtual path identifier (VPI) and virtual channel identifier (VCI) values on the NRP-2 must share ____ bits. By default, VPI values are limited to ____ bits (0-15), and VCI values are limited to ____ bits (0-1023). A Network Administrator can change the VPI and VCI ranges, but together the VPI and VCI values cannot exceed ____ bits. Which numbers below, correctly fill in the blanks?

- A. 16, 6, 10, 16
- B. 18, 4, 12, 16
- C. 18, 4, 8, 12
- D. 14, 4, 10, 14
- E. 14, 5, 9, 14

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 260

An architecture that utilizes PPPoA deals with IP address allocation by what type of negotiation?

- A. DHCP
- B. LDAP
- C. IPCP



<http://www.gratisexam.com/>

- D. RADIUS
- E. NIS

Correct Answer: C

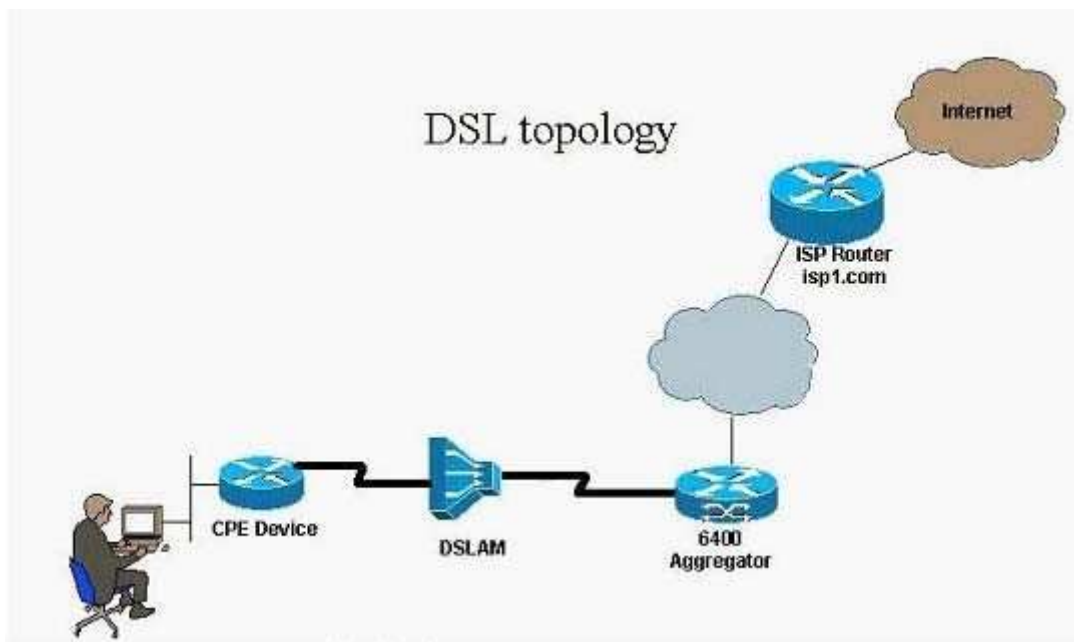
Section: (none)

Explanation

Explanation/Reference:

QUESTION 261

According to the diagram, a PPPoE session is initiated by the user from the PC using the username johndoe@isp1.com. This PPPoE session ultimately terminates on the ISP router, using domain based tunneling on 6400. What is the correct sequence of events which occur during user authentication?



- A. The 6400 will query the PC to get the domain name. The 6400 will issue a PPP authentication challenge to which the PC will respond using the username johndoe@isp1.com. Once the tunnel is established, the ISP router will issue a challenge to the user and will authenticate the response.
- B. The 6400 will issue a PPP authentication challenge to which the PC will respond using the username johndoe@isp1.com. The 6400 will authenticate the user. It will also use the domain name to find out the tunnel endpoint. The tunnel is established and user traffic will now be allowed to flow without any further authentication.
- C. The 6400 will issue a PPP authentication challenge to which the PC will respond using the username johndoe@isp1.com. The 6400 will use the domain name isp1.com to find out the tunnel endpoint. It will forward the authentication information to the ISP router which will authenticate the user.
- D. The 6400 will use the PVC number to decide the tunnel endpoint. Once the tunnel is established, the ISP router will issue a challenge to the user and will authenticate the response.
- E. None of the above

Correct Answer: C

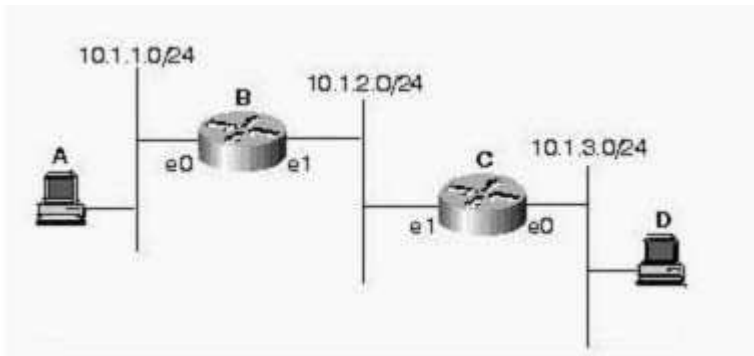
Section: (none)

Explanation

Explanation/Reference:

QUESTION 262

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



- A. This will not work because Router B has no idea of how to forward traffic to the 10.1.3.0/24 network.
- B. 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 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.

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 263

Given the four networks listed, what valid summary address (below) contains the longest prefix?

10.1.1.0/24
10.1.3.0/24
10.1.14.64/26
10.1.5.192/30

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

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 264

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

```
*Mar 1 00:38:43.351: %SGBP-1-AUTHFAILED: Member C4500CD failed authentication
*Mar 1 00:38:57.723: %SGBP-7-NORESP: Fail to response to C4500CD group stack,
may not have password
*Mar 1 00:39:17.719: %SGBP-7-NORESP: Fail to response to C4500CD group stack,
may not have password
```

- 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.

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 265

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

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 266

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

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

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 267

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

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 268

MPLS does not support:

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

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 269

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

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

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 270

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 an 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

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 271

Which DSL modulation types allows line sharing (DSL and POTS voice on the same line)?

- A. G.SHDSL, IDSL, and DMT
- B. CAP and DMT
- C. DMT and G.SHDSL
- D. IDSL and SDSL

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 272

In DMT DSL transmission systems, what is the effect of turning off half of the available downstream carriers (tones)?

- A. The downstream DSL bandwidth is reduced.
- B. The downstream line rate and throughput remains unchanged, but FEC efficiency is reduced.
- C. The upstream DSL bandwidth can be increased, since more carriers become available for upstream traffic.
- D. Downstream RS error correction effectiveness is reduced.

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 273

A DSL subscriber reports that the CPE modem untrains and retrains several times each hour, but not at regular intervals. The subscriber has a DMT modem operating on 10 kft of #26 cable (3 km of 0.4 mm cable). The provisioned downstream rate is 2 mbps, and the provisioned upstream rate is 256 kbps. When the modem retrains, the downstream DSL may be as low as 512 kbps. Sometimes manually retraining the modem allows it to return to a 2 mbps line rate, and sometimes manually retraining the modem does not improve the DSL line rate. Which options would cause the intermittent train/untrain symptom as described? (multiple answer)

- A. A telephone on the same phone line was installed without a microfilter. When the telephone handset is taken off-hook, the phone causes excessive attenuation of the DSL frequencies and the resulting high error rate results in a retrain. Because of the degraded signal levels while the phone is off-hook, the modem can not retrain at 2 mbps.
- B. There is an interfering signal in the same cable. When the interfering signal is present, an excessive error rate results. The modem retrains at a lower line rate in order to recover an acceptable noise margin and error rate.
- C. The noise margin was incorrectly set too high. Reducing the noise margin will correct the symptom.
- D. ADSL DMT will not permit 2 mbps downstream rates at 10 kft of #26 cable (3 km of 0.4 mm cable). ADSL 2 megabit service will always be unreliable and intermittent on this cable length and wire size.
- E. The DMT profile is using interleaved mode. Changing to fastpath will correct the symptom.
- F. The ATM QoS is UBR, and the subscriber's traffic is yielding to VBR or CBR traffic.

Correct Answer: AB

Section: (none)

Explanation

Explanation/Reference:

QUESTION 274

What is not a valid service type between an 827 and a 6400?

- A. PPPoA
- B. HDLC
- C. PPPoE
- D. L2TP
- E. RFC1483

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 275

A DSLAM is using Reed-Solomon forward error correction on a DMT DSL line. The DSL service is using TCP/IP over ATM over DSL. A high number of upstream RS uncorrected errors are occurring on the DSL line, as reported by the DSLAM in the following status message: DSL Statistics: Init Events: 2 Transmitted Superframes: near end: 93681573 far end: 0 Received Superframes: near end: 93516422 far end: 0 Corrected Superframes: near end: 142631 far end: 31571 Uncorrected Superframes: near end: 191 far end: 1 LOS Events: near end: 0 far end: 0 LOF/RFI Events: near end: 0 far end: 0 ES Events: near end: 5 far end: 1 What is the result of the uncorrected errors?

- A. The DSL frames will be continuously retransmitted by the DSL transceivers until an error-free frame is received.
- B. If errors on the DSL line can not be corrected by the RS algorithm, the line will be automatically taken out of service.
- C. The errored data resulting from uncorrected layer-1 errors will be handled by TCP.
- D. When Reed-Solomon forward error correction is used, all errors are corrected at layer 1. The uncorrected state was present only until forward error correction algorithms corrected the errors.

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 276

In ADSL DMT systems, the highest downstream transmit power occurs at what rate/reach combinations?

- A. 384 kbps at 17 kft (5.1 km)
- B. 8 mbps at 1 kft (305 meters)
- C. 1 mbps at 9 kft (2.75 km)
- D. 8 mbps at 9 kft (2.75 km)

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 277

What ADSL DMT line rate requires (occupies) the most bandwidth on a telephone line?

- A. 8 mbps downstream, 800 kbps upstream on 1 kft (300 meters) of cable.
- B. 8 mbps downstream, 800 kbps upstream on 9 kft (2.75 km) of cable.
- C. 1 mbps downstream, 256 kbps upstream on 1 kft (300 meters) of cable.
- D. 512 kbps downstream, 128 kbps upstream on 17 kft (5.2 km) of cable.

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 278

Which modulation techniques are typical of ADSL, but not SDSL, SHDSL, or IDSL?

- A. CAP and DMT
- B. TC/PAM and DMT
- C. CAP and TC/PAM
- D. CAP and 2B1Q

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 279

The major difference between DMT and CAP is:

- A. CAP uses a single center frequency; DMT is multiple-carrier.
- B. DMT is single-carrier; CAP is multiple-carrier.
- C. CAP is used in IDSL; DMT is used in ADSL.
- D. DMT is used in VDSL; CAP is used in ADSL.
- E. CAP is used in ADSL, DMT is used in SDSL.

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 280

- A. Lite is identified in what standard?

- B. ITU G.992.1
- C. ANSI T1E1.4
- D. ITU G.992.2
- E. ANSI T1.601
- F. ANSI T1.413

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 281

A DSL subscriber says that his DSL modem is trained at the subscribed rates, 1024 kbps downstream and 256 kbps upstream, but he has no access to the internet. The internet service was working until today. The modem remains trained - it is not dropping train or frequently retraining. Manually retraining the modem does not correct the problem. The customer can ping from his PC to the Ethernet interface on the DSL modem, but not addresses "in the network". Initial troubleshooting shows that the DSL modem can ping the subscriber's PC, but no addresses in the network. What could cause this problem?

- A. A telephone is connected to the DSL line with no microfilter or splitter installed. The phone is "loading" the line and disrupting DSL service.
- B. The subscriber powered-down the DSL modem, and when it was powered-up it defaulted to G.Lite mode (G.992.2). The port in the DSLAM is full-rate DMT (G.992.1).
- C. The DSL port in the DSLAM was left in a "shutdown" state by mistake following DSLAM maintenance.
- D. There is a problem with the subscriber's ATM PVC between the DSLAM and ATM switch. An incorrect VCI was assigned between the DSLAM and ATM switch shortly after midnight, during the service provider's network rearrangements.

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 282

What is true concerning fastpath versus interleaved mode in DMT DSL service?

- A. Fastpath mode provides lower latency (delay) than interleaved mode.
- B. Fastpath mode allows higher DSL trained rates.
- C. Fastpath mode allows higher effective throughput on noisy transmission lines.
- D. Interleaved mode ensures that all provisioned ATM PVCs on a DSL line are given equal bandwidth.

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 283

IDSL and SDSL use what line coding scheme?

- A. B8ZS

- B. 2B1Q
- C. QAM
- D. CAP
- E. DMT

Correct Answer: B

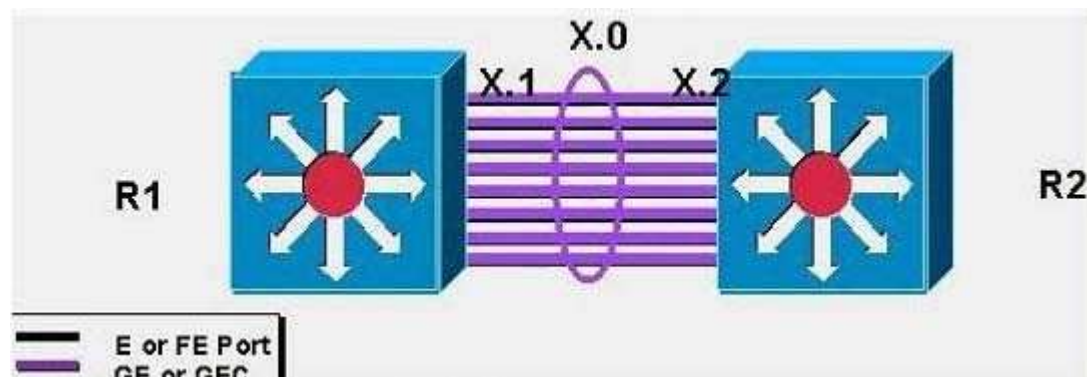
Section: (none)

Explanation

Explanation/Reference:

QUESTION 284

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

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 285

What statement is false about RIP v1?

- A. RIP v1 is a classful routing protocol.
- B. RIP v1 does not carry subnet information in its routing updates.
- C. RIP v1 does not support Variable Length Subnet Masks (VLSM).
- D. RIP v1 can support discontinuous networks.

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 286

What statement is correct concerning the shown configuration?

```
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
```

- 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 to 10.0.0.2.
- D. Only one RIP update will be sent out on Ethernet 0 to the unicast address 10.0.0.2.

Correct Answer: D

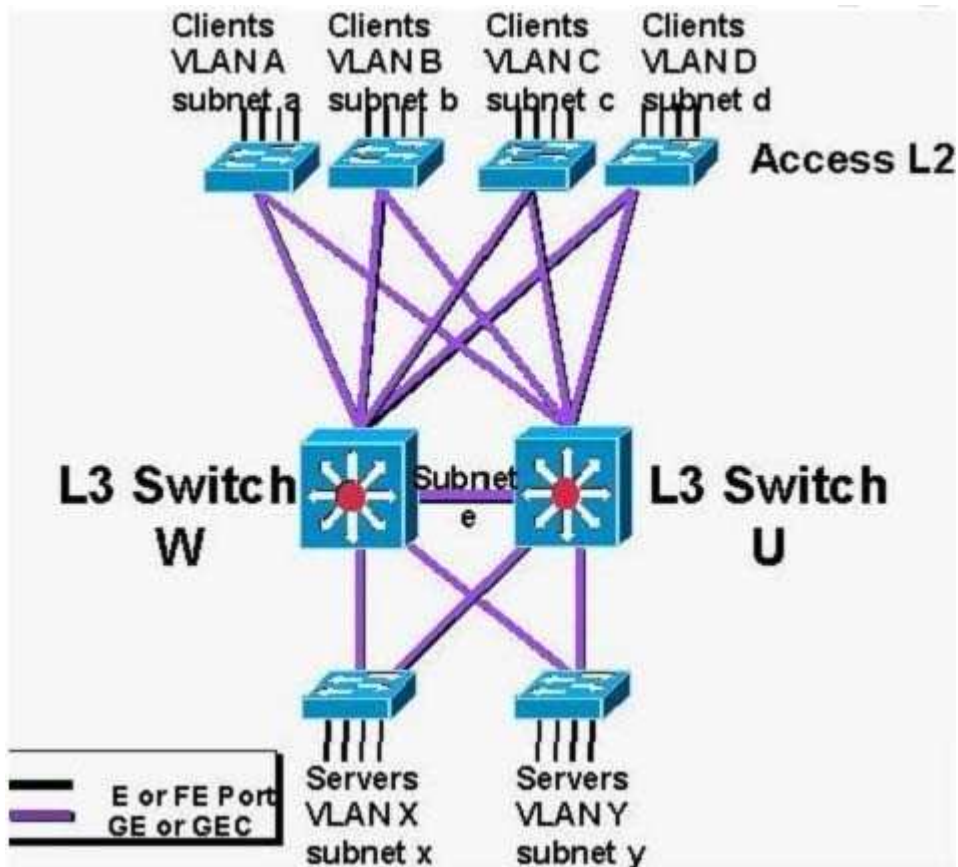
Section: (none)

Explanation

Explanation/Reference:

QUESTION 287

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

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 288

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 source address is at or near the beginning of the frame.
- E. The data is compressed in the middle of the frame.

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 289

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

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

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 290

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

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 291

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?

```
stlilab-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
```

- 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

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 292

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

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 293

What effect will this configuration command have?
line vty 0 4
no password
vty password

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

Correct Answer: A

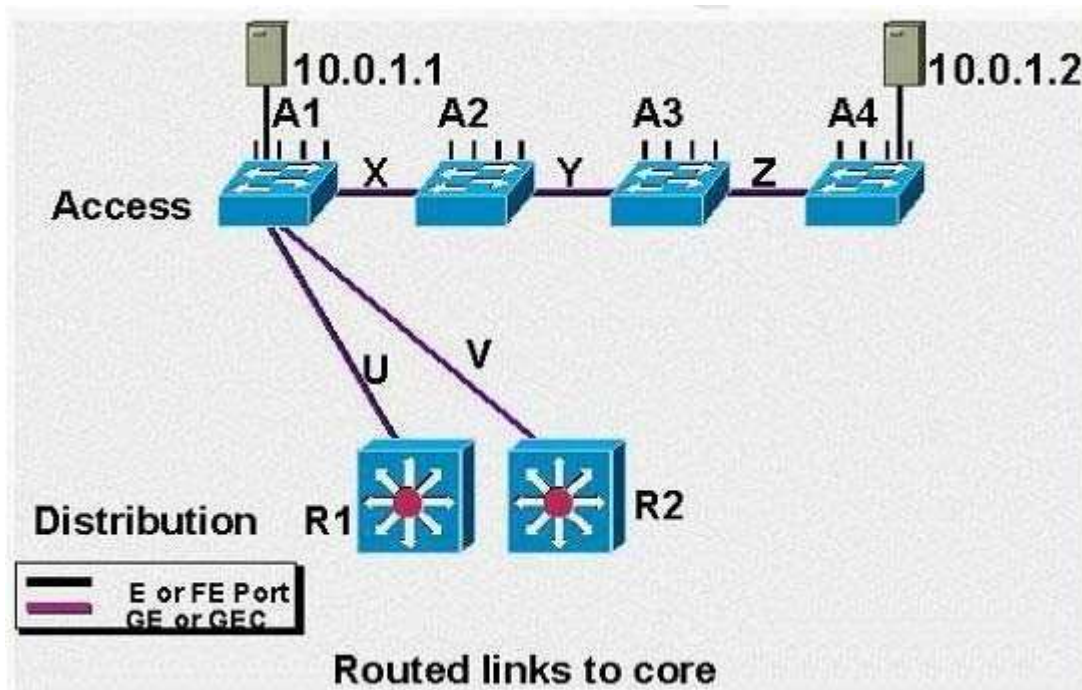
Section: (none)

Explanation

Explanation/Reference:

QUESTION 294

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 R1 and R2. 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 a star. Is this a good idea?



- A. Yes, because packets from R2 to host 10.0.1.2 will take fewer L2 hops.
- B. Yes, because with A1, A2, 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 a STP loop.

Correct Answer: A

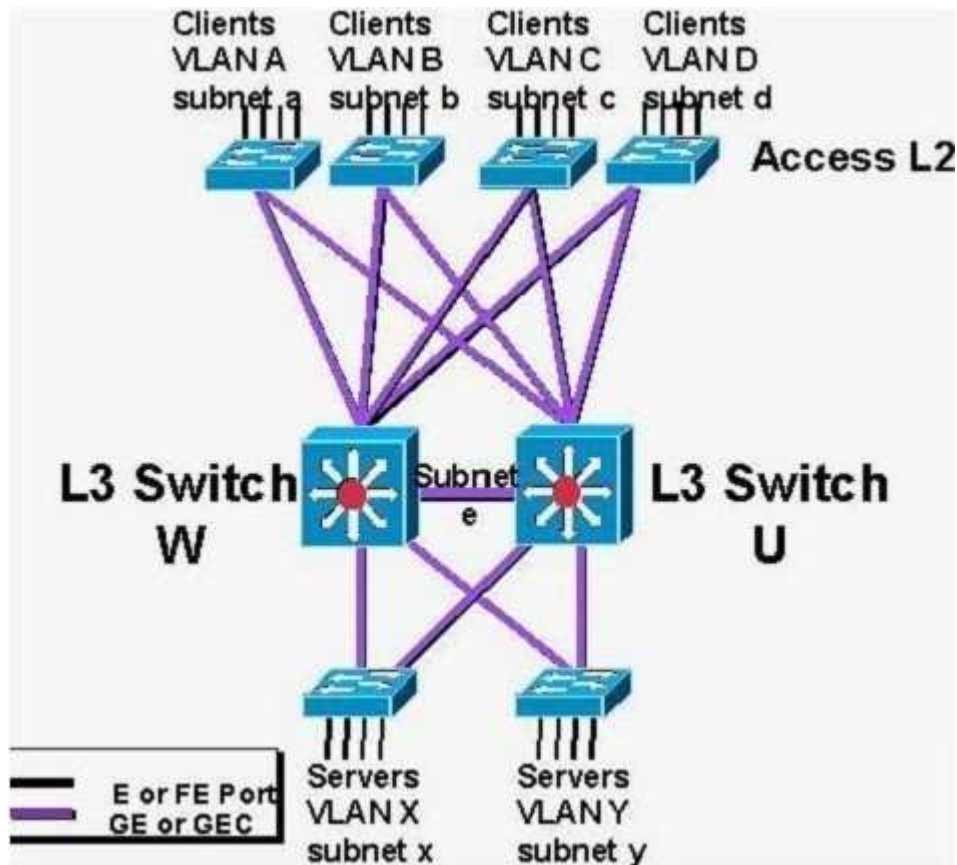
Section: (none)

Explanation

Explanation/Reference:

QUESTION 295

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

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 296

What is an Inter Switch Link (ISL)?

- A. A protocol to interconnect switches across ATM only
- B. A protocol to 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

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 297

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

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 298

Interface FastEthernet 0/0/0ip address 192.168.1.1 255.255.255.0!interface ATM 0/0/0.30 multipointpvc 1/43encapsulation aal5ciscopp Virtual-Template 2!!interface Virtual-Template 2ip unnumbered FastEthernet 0/0/0no peer default ip addressppp authentication pap chapppp ipcp mask 255.255.255.224!Refer to the configuration above. A customer connected to PVC 1/43 boots their CPE (PPPoA encapsulation). The Radius server is properly configured and recognizes the customer. The Radius server assigns the Framed-IP-netmask 192.168.10.1/29. What information does the CPE receive from the NRP via PPP IPCP negotiation?

- A. 192.168.10.1 IP Address, subnet mask 255.255.255.248
- B. 192.168.10.1 IP Address, subnet mask 255.255.255.224
- C. 192.168.1.1 IP Address, subnet mask 255.255.255.224
- D. 192.168.1.1 IP Address, subnet mask 255.255.255.248
- E. 192.168.1.1 IP Address, subnet mask 255.255.255.0

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 299

What statement regarding Service Selection Gateway is INCORRECT?

- A. For Proxy Service, the SSG will proxy the Access-Request to the remote AAA server. Upon receiving an Access-Accept from the remote RADIUS server, the NRP-SSG responds to the subscriber with the Access-Accept.
- B. Transparent passthrough service allows unauthenticated subscriber traffic to be routed through the NRP-SSG in either direction.
- C. For Proxy service, the SSG can perform NAT between the address assigned by the remote server and the subscriber's real IP address.
- D. For non-PPP users, such as those in bridged networks, if the user disconnects from a service without logging off, the connection will remain open and the user can reaccess the service without going through logon procedure as long as the session has not timed out.
- E. The PPP Termination Aggregation (PTA) service can be used only in dialup environments and with PPPoE in DSL environments. It cannot be used with PPPoA.

Correct Answer: E

Section: (none)

Explanation

Explanation/Reference:

QUESTION 300

What is the purpose of the following command? virtual-template {template-number}pre-clone {number}

- A. Used in a PPPoA environment, it will improve the memory utilization by decreasing the number of dynamic interfaces created.
- B. Used in either a PPPoA or PPPoE environment, it will decrease the time needed to boot the NRP by creating needed access interfaces before they are needed.
- C. Used in a PPPoE environment, it will increase the time needed for a user to connect to the NRP by allocating access interfaces at boot time.
- D. Used in a PPPoE environment, it will pre-create a defined number of dynamic access interfaces to reduce the load on the NRP during times of peak user logins.
- E. Used in either a PPPoA or PPPoE environment, it will increase the initial load on the NRP by pre-creating a defined number of dynamic access interfaces.

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 301

An architecture that utilizes PPPoA deals with IP address allocation by what type of negotiation?

- A. DHCP
- B. LDAP
- C. IPCP
- D. RADIUS
- E. NIS

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 302

What does the Service Selection Gateway (SSG) feature on the NRP support to authenticate and authorize users?

- A. RADIUS
- B. TACACS+
- C. Kerberos
- D. MS-CHAP
- E. Radius and Tacacs+

Correct Answer: A

Section: (none)

Explanation**Explanation/Reference:****QUESTION 303**

When a subscriber is configured for PPPoE service, the DSL modem is usually configured as:

- A. A basic router (RFC 1483 routing)
- B. A basic bridge (RFC 1483 bridging)
- C. A router configured for PPPoA session termination
- D. A router configured for PPPoE session origination

Correct Answer: B

Section: (none)

Explanation**Explanation/Reference:****QUESTION 304**

Virtual path identifier (VPI) and virtual channel identifier (VCI) values on the NRP-2 must share ____bits. By default, VPI values are limited to ____ bits (0-15), and VCI values are limited to ____ bits (0-1023). A Network Administrator can change the VPI and VCI ranges, but together the VPI and VCI values cannot exceed ____ bits. Which numbers below, correctly fill in the blanks?

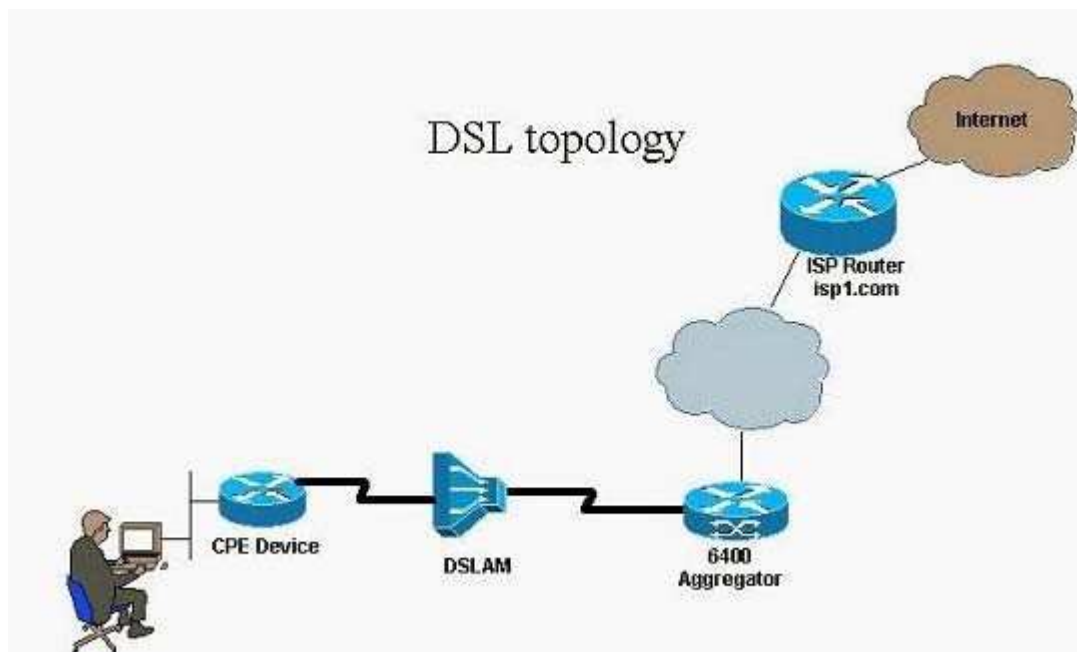
- A. 16, 6, 10, 16
- B. 18, 4, 12, 16
- C. 18, 4, 8, 12
- D. 14, 4, 10, 14
- E. 14, 5, 9, 14

Correct Answer: D

Section: (none)

Explanation**Explanation/Reference:****QUESTION 305**

According to the diagram, a PPPoE session is initiated by the user from the PC using the username johndoe@isp1.com. This PPPoE session ultimately terminates on the ISP router, using domain based tunneling on 6400. What is the correct sequence of events which occur during user authentication?



- A. The 6400 will query the PC to get the domain name. The 6400 will issue a PPP authentication challenge to which the PC will respond using the username johndoe@isp1.com. Once the tunnel is established, the ISP router will issue a challenge to the user and will authenticate the response.
- B. The 6400 will issue a PPP authentication challenge to which the PC will respond using the username johndoe@isp1.com. The 6400 will authenticate the user. It will also use the domain name to find out the tunnel endpoint. The tunnel is established and user traffic will now be allowed to flow without any further authentication.
- C. The 6400 will issue a PPP authentication challenge to which the PC will respond using the username johndoe@isp1.com. The 6400 will use the domain name isp1.com to find out the tunnel endpoint. It will forward the authentication information to the ISP router which will authenticate the user.
- D. The 6400 will use the PVC number to decide the tunnel endpoint. Once the tunnel is established, the ISP router will issue a challenge to the user and will authenticate the response.
- E. None of the above

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 306

A Network Administrator is unable to configure a PVC with the value of 8/49. He looks at the running config and notices the following entry for the interface he is working with. What is the likely cause of the problem?

```
interface ATM0/0/0 no ip address atm vc-per-vp 2048 no atm ilmi-keepalive
```

- A. ILMI has timed out without keepalives.
- B. The config is fine; the NSP must be the source of the problem.
- C. An IP address is required to turn up PVCs.
- D. The interface is shutdown.
- E. Too many bits have been assigned to the VCs reducing the possible values of the VP.

Correct Answer: E

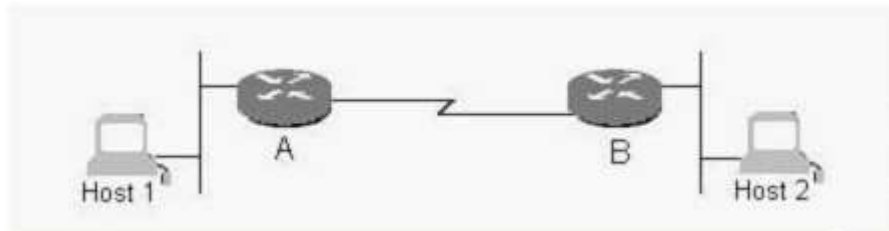
Section: (none)

Explanation

Explanation/Reference:

QUESTION 307

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



- A. Host 1
- B. Host 2
- C. Router A
- D. Router B
- E. The broadcast address

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 308

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

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

Correct Answer: C

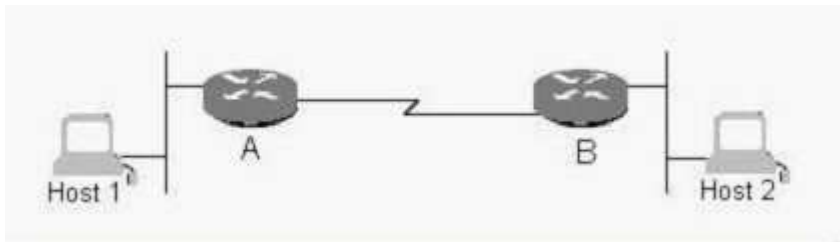
Section: (none)

Explanation

Explanation/Reference:

QUESTION 309

Host 1 and Host 2 are on Ethernet LANs in different buildings. A serial line is installed between two Cisco routers using Cisco HDLC serial line encapsulation. Routers A and B are configured to route IP traffic. Host 1 sends a packet to Host 2. A line hit on the serial line causes an error in the packet. When this is detected, the retransmission is sent by:



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

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 310

In ADSL DMT systems, the highest downstream transmit power occurs at what rate/reach combinations?

- A. 384 kbps at 17 kft (5.1 km)
- B. 8 mbps at 1 kft (305 meters)
- C. 1 mbps at 9 kft (2.75 km)
- D. 8 mbps at 9 kft (2.75 km)

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 311

In DMT DSL transmission systems, what is the effect of turning off half of the available downstream carriers (tones)?

- A. The downstream DSL bandwidth is reduced.
- B. The downstream line rate and throughput remains unchanged, but FEC efficiency is reduced.
- C. The upstream DSL bandwidth can be increased, since more carriers become available for upstream traffic.
- D. Downstream RS error correction effectiveness is reduced.

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 312

A DSL subscriber reports that the CPE modem untrains and retrains several times each hour, but not at regular intervals. The subscriber has a DMT modem operating on 10 kft of #26 cable (3 km of 0.4 mm cable). The

provisioned downstream rate is 2 mbps, and the provisioned upstream rate is 256 kbps. When the modem retrains, the downstream DSL may be as low as 512 kbps. Sometimes manually retraining the modem allows it to return to a 2 mbps line rate, and sometimes manually retraining the modem does not improve the DSL line rate. Which options would cause the intermittent train/untrain symptom as described? (multiple answer)

- A. A telephone on the same phone line was installed without a microfilter. When the telephone handset is taken off-hook, the phone causes excessive attenuation of the DSL frequencies and the resulting high error rate results in a retrain. Because of the degraded signal levels while the phone is off-hook, the modem can not retrain at 2 mbps.
- B. There is an interfering signal in the same cable. When the interfering signal is present, an excessive error rate results. The modem retrains at a lower line rate in order to recover an acceptable noise margin and error rate.
- C. The noise margin was incorrectly set too high. Reducing the noise margin will correct the symptom.
- D. ADSL DMT will not permit 2 mbps downstream rates at 10 kft of #26 cable (3 km of 0.4 mm cable). ADSL 2 megabit service will always be unreliable and intermittent on this cable length and wire size.
- E. The DMT profile is using interleaved mode. Changing to fastpath will correct the symptom.
- F. The ATM QoS is UBR, and the subscriber's traffic is yielding to VBR or CBR traffic.

Correct Answer: AB

Section: (none)

Explanation

Explanation/Reference:

QUESTION 313

IDSL and SDSL use what line coding scheme?

- A. B8ZS
- B. 2B1Q
- C. QAM
- D. CAP
- E. DMT

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 314

A DSL subscriber says that his DSL modem is trained at the subscribed rates, 1024 kbps downstream and 256 kbps upstream, but he has no access to the internet. The internet service was working until today. The modem remains trained - it is not dropping train or frequently retraining. Manually retraining the modem does not correct the problem. The customer can ping from his PC to the Ethernet interface on the DSL modem, but not addresses "in the network". Initial troubleshooting shows that the DSL modem can ping the subscriber's PC, but no addresses in the network. What could cause this problem?

- A. A telephone is connected to the DSL line with no microfilter or splitter installed. The phone is "loading" the line and disrupting DSL service.
- B. The subscriber powered-down the DSL modem, and when it was powered-up it defaulted to G.Lite mode (G.992.2). The port in the DSLAM is full-rate DMT (G.992.1).
- C. The DSL port in the DSLAM was left in a "shutdown" state by mistake following DSLAM maintenance.
- D. There is a problem with the subscriber's ATM PVC between the DSLAM and ATM switch. An incorrect VCI

was assigned between the DSLAM and ATM switch shortly after midnight, during the service provider's network rearrangements.

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 315

What is true concerning interleaved versus fastpath mode in DMT DSL service?

- A. Fastpath mode allows higher DSL rates.
- B. Interleaved mode allocates traffic to more than one ATM PVC.
- C. Interleaved mode allows greater forward error correction (FEC).
- D. Fastpath mode gives data precedence over voice traffic.

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 316

The major difference between DMT and CAP is:

- A. CAP uses a single center frequency; DMT is multiple-carrier.
- B. DMT is single-carrier; CAP is multiple-carrier.
- C. CAP is used in IDSL; DMT is used in ADSL.
- D. DMT is used in VDSL; CAP is used in ADSL.
- E. CAP is used in ADSL, DMT is used in SDSL.

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 317

What ADSL DMT line rate requires (occupies) the most bandwidth on a telephone line?

- A. 8 mbps downstream, 800 kbps upstream on 1 kft (300 meters) of cable.
- B. 8 mbps downstream, 800 kbps upstream on 9 kft (2.75 km) of cable.
- C. 1 mbps downstream, 256 kbps upstream on 1 kft (300 meters) of cable.
- D. 512 kbps downstream, 128 kbps upstream on 17 kft (5.2 km) of cable.

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 318

What is true concerning fastpath versus interleaved mode in DMT DSL service?

- A. Fastpath mode provides lower latency (delay) than interleaved mode.
- B. Fastpath mode allows higher DSL trained rates.
- C. Fastpath mode allows higher effective throughput on noisy transmission lines.
- D. Interleaved mode ensures that all provisioned ATM PVCs on a DSL line are given equal bandwidth.

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 319

- A. Lite is identified in what standard?
- B. ITU G.992.1
- C. ANSI T1E1.4
- D. ITU G.992.2
- E. ANSI T1.601
- F. ANSI T1.413

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 320

What is not a valid service type between an 827 and a 6400?

- A. PPPoA
- B. HDLC
- C. PPPoE
- D. L2TP
- E. RFC1483

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 321

Which DSL modulation types allows line sharing (DSL and POTS voice on the same line)?

- A. G.SHDSL, IDSL, and DMT
- B. CAP and DMT

- C. DMT and G.SHDSL
- D. IDSL and SDSL

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 322

Which modulation techniques are typical of ADSL, but not SDSL, SHDSL, or IDSL?

- A. CAP and DMT
- B. TC/PAM and DMT
- C. CAP and TC/PAM
- D. CAP and 2B1Q

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 323

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

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 324

A new Cisco router has no configuration defined. Which methods can be used to configure the router for the first time? (multiple answer)

- 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 port 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

Correct Answer: BCDE

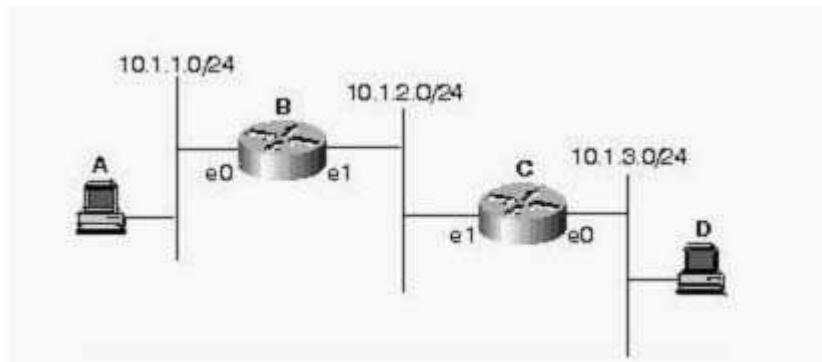
Section: (none)

Explanation

Explanation/Reference:

QUESTION 325

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



- A. This will not work because Router B has no idea of how to forward traffic to the 10.1.3.0/24 network.
- B. 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 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.

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 326

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

```
S* 0.0.0.0/0 [1/0] via 172.31.116.65
D 172.16.0.0/24 [90/48609] via 10.1.1.1
R 172.16.0.0/16 [120/4] via 192.168.1.4
```

- 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.

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 327

A subscriber complains that his DSL rates are slower than the service he ordered. The customer ordered ADSL at 1 mbps downstream and 256 kbps upstream, but the maximum bitrate observed during file downloads is never more than 128 kbps downstream. Initial troubleshooting shows that the subscriber's DSL modem is trained at 1024 kbps downstream and 256 kbps upstream. Which one of the following presented choices is clearly the most appropriate information needed to begin troubleshooting the problem?

- A. The ATM QoS parameters assigned to the subscriber's PVC in the DSLAM, ATM switch, and router.
- B. The software version running in the CPE and DSLAM.
- C. The manufacturer and model of ADSL CPE that is used, to determine correct interoperability with the DSLAM.
- D. The FEC parameters used for the subscriber's ADSL port in the DSLAM, which could be causing the degraded throughput.

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 328

The field of an ATM address that states what type of address is being used is:

- A. AA
- B. RD
- C. AFI
- D. DCC
- E. ICD

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 329

The following is an excerpt from a "show run" display in a Cisco DSLAM.
interface ATM1/1 no ip address
atm clock INTERNAL no atm ilmi-keepalive
atm soft-vc 2 32 dest-address

47.0091.8100.0000.0030.949c.0b81.4000.0c80.8000.00 4 100
Referring to this output message, what is true?

- A. The CPE DSL modem is using ATM VPI 2, VCI 32.
- B. The CPE DSL modem is using ATM VPI 4, VCI 100.
- C. The "dest-address" is the ATM NSAP address in the CPE DSL modem.
- D. The destination address can be reached via ATM VPI 2, VCI 32.

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 330

The following message is from a Cisco DSLAM: Status: Bitrates: Interleave Path: downstream: 2048 kb/s, upstream: 256 kb/s Fast Path: downstream: 0 kb/s, upstream: 0 kb/s Margin: downstream: 18 dB, upstream: 22 dB Attenuation: downstream: 30 dB, upstream: 20 dB Interleave Delay: downstream: 16000 usecs, upstream: 16000 usecs Transmit Power: downstream: 16.0 dB, upstream: 0.0 dB Check Bytes (FEC): Interleave Path: downstream: 16, upstream: 16 Fast Path: downstream: 0, upstream: 0 R-S Codeword Size: downstream: 1, upstream: 8 Trellis Coding: Not In Use Overhead Framing: Mode 3 Operating Mode: ANSI T1 413 Issue 2 Line Type: Interleaved Only This information was presented as a result of what command?

- A. show dsl status atm 1/1
- B. show interface atm 1/1
- C. show dsl interface atm 1/1
- D. show dsl profile atm 1/1

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 331

What is the difference between AAL5 SNAP and AAL5 MUX virtual circuits?

- A. AAL5 SNAP is used to carry IP packets embedded in PPP encapsulation and AAL5 MUX is used to carry raw IP data.
- B. SNAP allows multiplexing of multiple protocols over a single VC, while AAL5 MUX can carry only one protocol per VC.
- C. SNAP VCs define real time data and MUX VC defines mixed (real time and non real time) data.
- D. SNAP VCs are used inside public carrier network while MUX VCs are used on the edge.
- E. None of the above

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 332

The following configuration is from a Cisco DSLAM: interface ATM1/1 no ip address dsl profile basic no atm ilmi-keepalive atm pvc 2 32 interface ATM0/1 1 32 This configuration is from a Cisco 2600 router with an ADSL WIC installed: interface ATM0/0.1 point-to-point ip address 192.168.1.2 255.255.255.0 pvc 1/32 protocol ip 192.168.1.1 broadcast encapsulation aal5snap The CPE is connected to DSLAM DSL port 1/1 via a DSL line. The subscriber's DSL service is not working correctly. Based on the information shown in these two "show run" output messages, what is the subscriber's trouble symptom?

- A. The ADSL WIC will not train up to the DSLAM.
- B. The subscriber can access the internet, but the data throughput is slower than it should be.
- C. The ADSL WIC will train up to the DSLAM, but the subscriber can not access the internet.
- D. The subscriber can only access destination hosts on network 192.168.1.0.

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 333

A PVC has been configured on the 6400 NRP as follows:pvc

1/100encapsulation aal5mux ppp virtual-template 1ubr 384What does the command "ubr 384" accomplish?

- A. Mean Bandwidth of 384 kilobits per second
- B. Minimum Bandwidth of 384 kilobits per second
- C. Peak Bandwidth of 384 kilobits per second
- D. Mean Bandwidth of 384 kilobytes per second
- E. Does not affect PVC cell rate. It is a descriptive command.

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 334

ATM carries IP and PPP information within ATM cells. What ATM Adaptation Layer is used when an ATM cell carries IP packets and PPP frames?

- A. AAL1
- B. AAL2
- C. AAL3
- D. AAL4
- E. AAL5

Correct Answer: E

Section: (none)

Explanation

Explanation/Reference:

QUESTION 335

What is the function of NSP Cross-Connections in the usage of a 6400 in a production network. (multiple answer)

- A. NSP cross connections can be used as conventional PVC cross-connection when both associated physical ports are external.
- B. NSP cross connections can be use to convert IGP protocols.
- C. NSP cross connections as a PVC part of a subscriber downlink or service uplink if one of the physical ports is internal
- D. NSP cross connections can function as IPSec aggregator in a VPN enviornement.
- E. NSP cross connections performs node protection using FRR.

Correct Answer: AC

Section: (none)

Explanation

Explanation/Reference:

QUESTION 336

The ATM Transmission Convergence Sublayer is NOT responsible for:

- A. Cell delineation
- B. Header error control sequence generation and verification
- C. Cell rate decoupling
- D. Transmission frame adaptation
- E. Fast ReRoute

Correct Answer: E

Section: (none)

Explanation

Explanation/Reference:

QUESTION 337

The following configuration is entered on an ATM interface:
interface atm 0/0/0 encapsulation aal5mux ppp
virtual-template 1
interface atm 0/0/0.10 multipoint
pvc 0/100 exit
pvc 0/101 encapsulation aal5snap
What will the encapsulation type for the PVCs be?

- A. PVC 0/100 will have encapsulation type MUX PPP, and PVC 0/101 will have encapsulation type SNAP.
- B. Both PVC 0/100 and PVC 0/101 will have encapsulation type MUX PPP.
- C. PVC 0/100 will have encapsulation type UNDEFINED, and PVC 0/101 will have encapsulation type SNAP.
- D. Both PVC 0/100 and PVC 0/101 will have encapsulation type SNAP.
- E. The above configuration is invalid.

Correct Answer: E

Section: (none)

Explanation

Explanation/Reference:

QUESTION 338

What VCI value is reserved for PNNI ATM routing?

- A. 5
- B. 16
- C. 18
- D. 22
- E. 31

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 339

Find the problem in the following configuration:
vpdn enable
vpdn-group 1 request-dialin protocol pppoe
virtual-template 2
interface atm 2/0.1 point-to-point
pvc 0/101 encapsulation aal5snap protocol pppoe
interface atm 2/0.2 point-to-point
pvc 0/102 encapsulation aal5snap protocol pppoe
interface atm 2/0.3 point-to-point
pvc

```
0/103encapsulation aal5snapprotocol pppoe!interface virtual-template 2ip unnumbered FastEthernet
4/0!interface FastEthernet 4/0ip address 172.22.32.1 255.255.255.0
```

- A. The ATM subinterfaces cannot be defined point to point.
- B. The encapsulation on the PVCs should be aal5mux.
- C. The VPDN-group definition should have the command 'accept-dialin' instead of the command 'request-dialin'.
- D. A static IP address should be configured on the virtual template.
- E. The virtual template number should be the same as the VPDN-group number.

Correct Answer: C

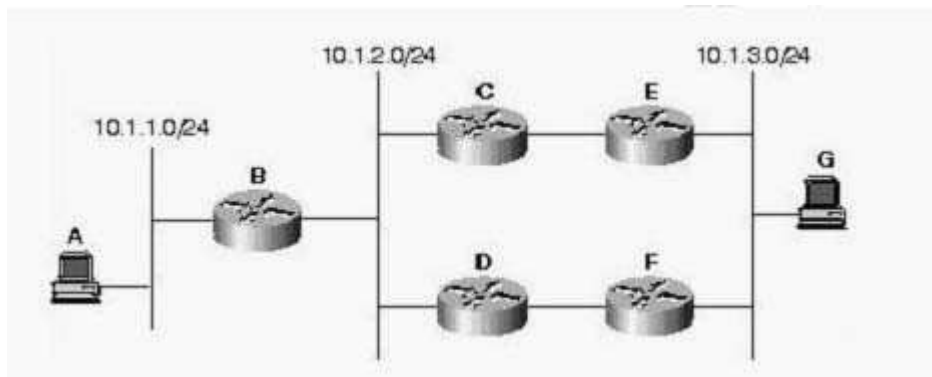
Section: (none)

Explanation

Explanation/Reference:

QUESTION 340

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



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

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 341

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 effect this without losing any of the updates?

- A. Configure a static route with an 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

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 342

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 allow the router to reflect updates from one Internal BGP speaker to another without the need to be fully meshed
- D. To divide Autonomous Systems into mini-Autonomous Systems, allowing the reduction in the number of peers
- E. None of the above

Correct Answer: C

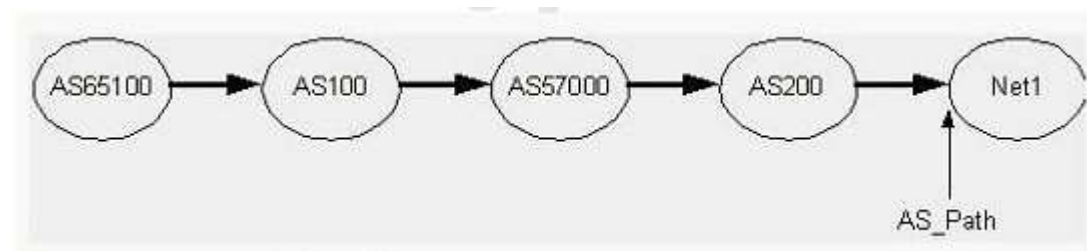
Section: (none)

Explanation

Explanation/Reference:

QUESTION 343

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



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

Correct Answer: AD

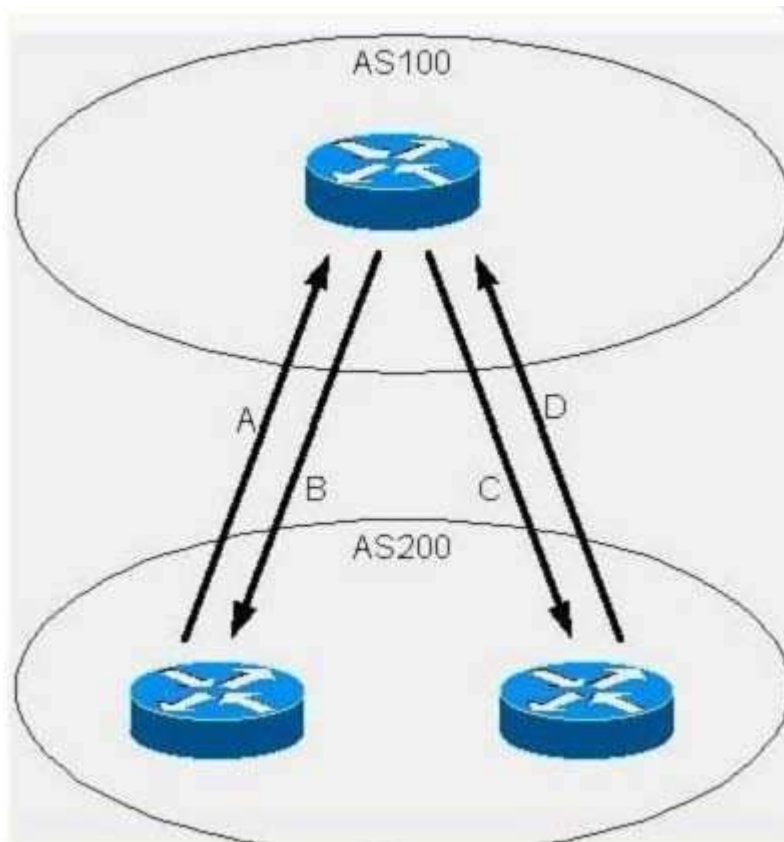
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Explanation

Explanation/Reference:

QUESTION 344

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

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 345

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'.

Correct Answer: C

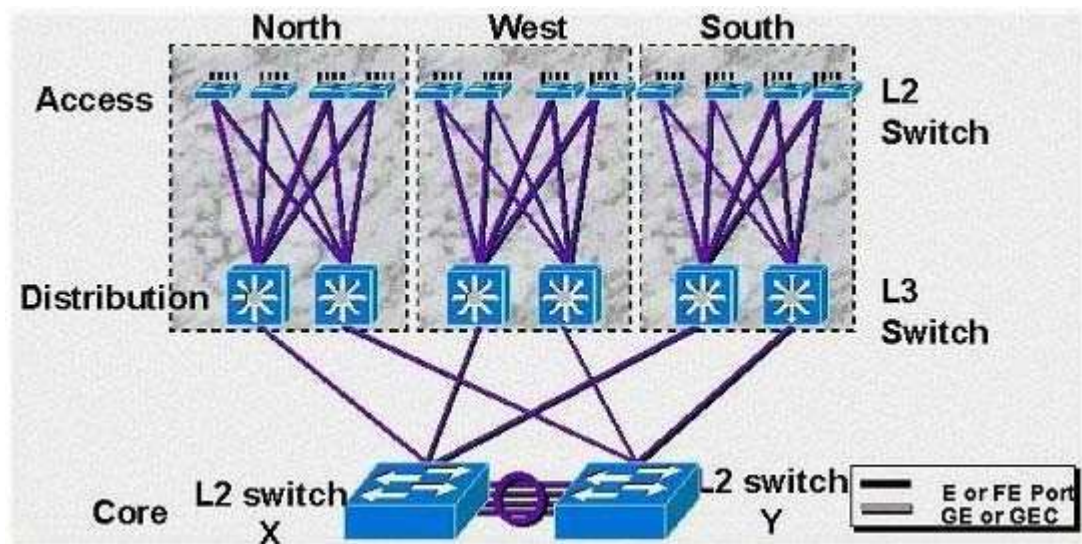
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Explanation

Explanation/Reference:

QUESTION 346

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?



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

Correct Answer: D

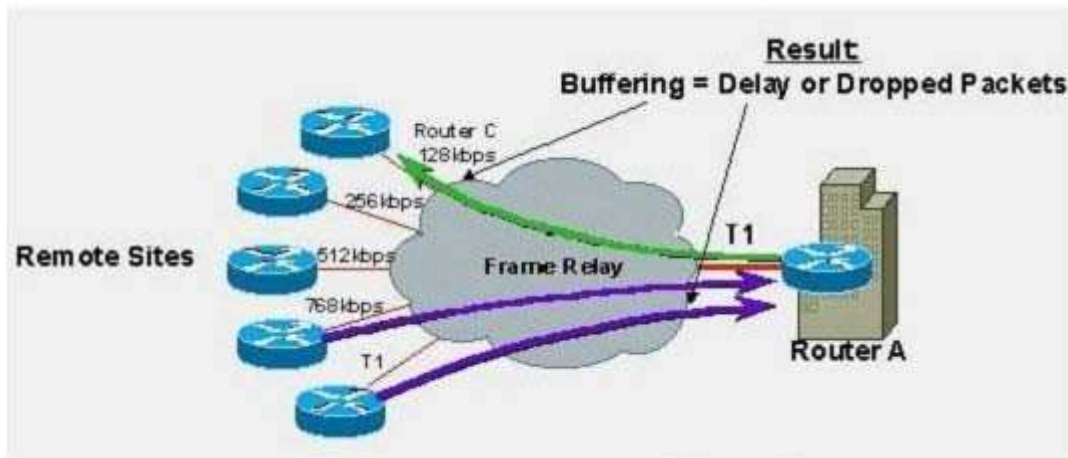
Section: (none)

Explanation

Explanation/Reference:

QUESTION 347

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 priorities?



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

Correct Answer: A

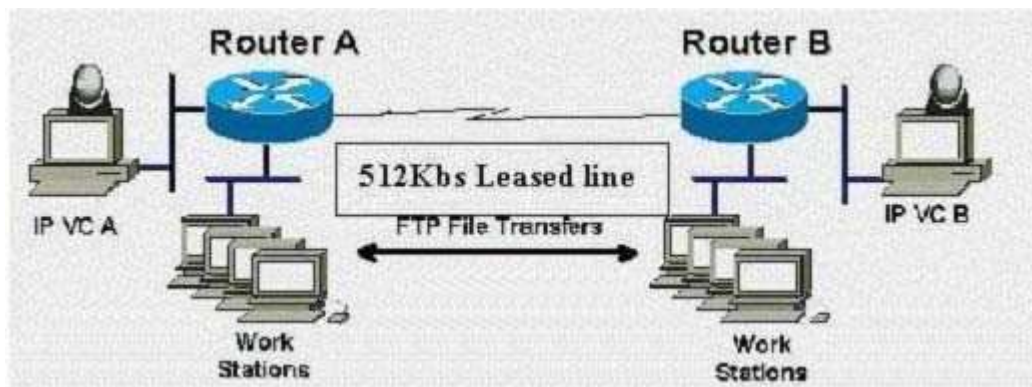
Section: (none)

Explanation

Explanation/Reference:

QUESTION 348

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?



- 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. Resource Reservation Protocol (RSVP)
- E. Weighted Fair Queuing (WFQ) with IP Precedence

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 349

CIDR is primarily used:

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

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 350

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

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 351

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.

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 352

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 180.60.45.96 255.255.255.32 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 0.0.0.31 area 0
- D. router ospf 1 network 180.60.45.96 0.0.0.224 area 0

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 353

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 no longer useful

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 354

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

- A. T301
- B. T303
- C. T302
- D. T310
- E. T305

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 355

If a Dialer Profile exists in the local configuration of a router, what is true?

- A. A virtual-access password is configured automatically.
- B. A virtual-access interface will inherit all configurations from the dialer profile.
- C. AAA parameters cannot be applied to an interface.
- D. None of the above

Correct Answer: B

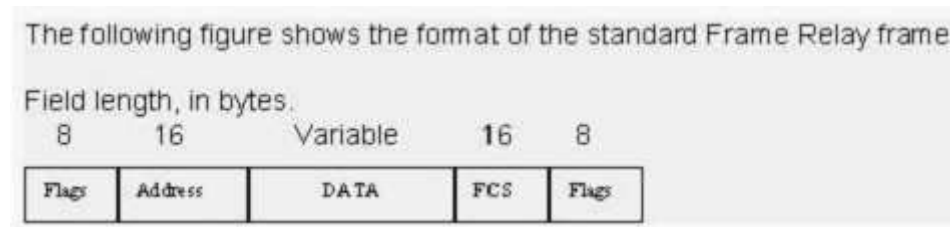
Section: (none)

Explanation

Explanation/Reference:

QUESTION 356

The address field contains: (multiple answer)



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

Correct Answer: ABC

Section: (none)

Explanation

Explanation/Reference:

QUESTION 357

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

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 358

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

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 359

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

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

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 360

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 telnetaccess-list 100 permit ip any any
- B. access-list 100 deny tcp 144.23.67.94 0.0.0.7 any eq telnetaccess-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 0.0.0.15access-list 100 permit ip any any
- D. access-list 100 deny ip 144.23.67.94 0.0.0.7 host 144.23.67.94access-list 100 permit ip any any

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 361

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

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 362

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

Correct Answer: AC

Section: (none)

Explanation

Explanation/Reference:

QUESTION 363

What is RPF?

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

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 364

Which of the following CGMP (Cisco Group Management Protocol) statements is correct? (multiple answer)

- 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.

Correct Answer: AC

Section: (none)

Explanation

Explanation/Reference:

QUESTION 365

What will significantly degrade DSL performance, regardless of DSL rate or line length?

- A. POTS splitters at the subscriber's end of the DSL line
- B. POTS splitters at the telco C.O
- C. Microfilters installed between a telephone and shared line
- D. Radio-frequency filters on the telephone line

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 366

A DSL customer has subscribed to a service that provides 2 mbps downstream and 256 kbps upstream. The cable length is 10 kft (3 km). The customer reports that file transfers on the DSL line seem slower than normal in recent days. After reviewing the DSL profile parameters for the DSL port, and the actual status of the line, what is the possible reason why the subscriber's data rates are slower than usual?DSLAM#show dsl int atm 1/1DMT profile parametersMaximum Bitrates:Interleave Path: downstream: 2048 kb/s, upstream: 256 kb/sFast Path:

downstream: 0 kb/s, upstream: 0 kb/sMinimum Bitrates:Interleave Path: downstream: 0 kb/s, upstream: 0 kb/sFast Path: downstream: 0 kb/s, upstream: 0 kb/sMargin: downstream: 6 dB, upstream: 6 dBInterleaving Delay: downstream: 16000 usecs, upstream: 16000 usecsCheck Bytes (FEC):Interleave Path: downstream: 16, upstream: 16Fast Path: downstream: 0, upstream: 0R-S Codeword Size: downstream: auto, upstream: autoTrellis Coding: DisabledOverhead Framing: Mode 3Operating Mode: AutomaticTraining Mode: QuickMinrate blocking: DisabledSNR Monitoring: DisabledStatus:Bitrates:Interleave Path: downstream: 640 kb/s, upstream: 256 kb/sFast Path: downstream: 0 kb/s, upstream: 0 kb/sMargin: downstream: 6 dB, upstream: 9 dBAttenuation: downstream: 45 dB, upstream: 31 dBInterleave Delay: downstream: 16000 usecs, upstream: 16000 usecTransmit Power: downstream: 19.4 dB, upstream: 12.0 dBCheck Bytes (FEC):Interleave Path: downstream: 16, upstream: 16Fast Path: downstream: 0, upstream: 0R-S Codeword Size: downstream: 1, upstream: 8Trellis Coding: Not In UseOverhead Framing: Mode 3Line Fault: NONEOperating Mode: ITU G dmt Issue 1Line Type: Interleaved Only

- A. The signal-to-noise margin on the line will not allow downstream DSL rates faster than 640 kbps. If the subscriber's service was in fact faster at some time, then something has changed in the line characteristics or noise spectrum.
- B. The subscriber is provisioned for 640 kbps downstream, and the service appears to be working normally. The problem is apparently not related to the DSL (physical layer) part of the service.
- C. The service is running in G.DMT, and 640 kbps is normal for the subscriber's cable length. Change the mode to ANSI T1.413 for faster rates.
- D. The DSL profile is set for 16 milliseconds interleave delay. Change the interleave delay to 0, or change the profile to fastpath for faster line rates.

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 367

The following are wire sizes used in telephone company cables. Which will allow the greatest "reach" (distance) in DSL service?

- A. 24 AWG (0.5 mm)
- B. 26 AWG (0.4 mm)

- C. A line that is 50% of #24 (0.5mm) and 50 % of #26 (0.4mm).
- D. None of the above will allow enough reach for DSL service.

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 368

A DSL line status report shows a high number of corrected and uncorrected errors. The line is configured at 4 milliseconds interleave delay and 4 FEC check-bytes. To reduce the number of uncorrected errors without a detailed analysis of whether the errors are continuous or "bursty", which of the following should provide improved error correction?

- A. Change the interleave delay to 2 milliseconds to reduce latency and change the number of FEC check-bytes to 2 for reduced overhead
- B. Leave the interleave delay at 4 milliseconds and change the FEC check-bytes to 2
- C. Leave the FEC check-bytes at 4 and change the interleave delay to 2 milliseconds
- D. Change the interleave delay to 16 milliseconds and the FEC check-bytes to 16

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 369

A subscriber's DSL service was not working correctly. The subscriber discovered that a DSL microfilter was accidentally installed between the DSL modem and telephone line instead of between the telephone and telephone line. What was the symptom observed by the subscriber?

- A. The modem would train up, but only when the telephone was off-hook (conversation in progress).
- B. DSL service was normal, but the telephone on the same line would not work.
- C. DSL service was normal, but there was excessive noise heard during telephone conversations.
- D. The DSL modem would either not train up, or it trained at very low DSL rates. The modem would not train up when the telephone was off-hook.

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 370

Which three are major inhibitors of ADSL line quality? (multiple answer)

- A. Bridge Taps
- B. Distance
- C. Squirrels
- D. Load Coils
- E. Line shared by a telephone

Correct Answer: ABD

Section: (none)

Explanation

Explanation/Reference:

QUESTION 371

The function of the ATU-R is:

- A. To multiplex xDSL signals into the network core.
- B. To provide a network connection for the end-user.
- C. To split ADSL bandwidth from telephony bandwidth.
- D. To switch ATM cells received from CPE.
- E. To extend xDSL signals past the distance limitation.

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 372

What command shows the number and type of cards in the 6160 DSLAM?

- A. show cards
- B. dspcds
- C. show hardware
- D. show dsl profile
- E. show run

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 373

A subscriber complains that his DSL rates are slower than the service he ordered. The customer ordered ADSL at 1 mpbs downstream and 256 kbps upstream, but the maximum bitrate observed during file downloads is 100 kbps downstream. Of the following four choices, which is clearly the most appropriate information needed to begin troubleshooting the problem?

- A. The software version running in the DSLAM
- B. The FEC parameters for the subscriber's ADSL port in the DSLAM
- C. The actual DSL rate that is reported when the DSL line is trained
- D. The manufacturer and model of ADSL CPE that is used

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 374

The telephone company has placed a bridge-tap (half-tap) on all the pairs in a cable in preparation to reroute the cable. DSL customers are served by this cable. Three of the following five statements are correct. Which three of the following statements describes the possible effect of placing bride-taps on a DSL line? (multiple answer)

- A. It may not cause a problem, depending on the location and length of the half taps.
- B. It can cause the DSL modems to train at lower line rates.
- C. It will degrade upstream rates (lower frequencies), but will not degrade downstream rates (higher frequencies).
- D. DSL modems operating at 15 kft (4.5 km) of cable may not train after the bridge-taps are installed.
- E. Bridge-taps will not cause a problem for DSL service unless a telephone or modem is connected at the end of the new cable (half-tap) section, or unless the new section is shorted.

Correct Answer: ABD

Section: (none)

Explanation

Explanation/Reference:

QUESTION 375

What is the effect of changing DMT interleaved delay from 16 milliseconds to 2 milliseconds?

- A. Fewer ATM PVCs can be provisioned on the DSL line.
- B. Latency is reduced, but error correction effectiveness may also be reduced.
- C. Latency remains the same, but faster error correction occurs.
- D. Latency remains the same, but throughput is increased.

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 376

A DSL modem will not train up. It is on a "shared line" (DSL and POTS), and the telephone on the shared line is working normally. Nine of the ten conditions are possible causes of the symptom, and one is not. What is NOT a possible cause of the problem?

- A. A defective DSL line card in the DSLAM
- B. A defective DSL CPE modem
- C. An open (cut or broken) tip or ring lead on the phone line between the customer premises and the telco C.O
- D. The DSL port in the DSLAM is in "shutdown" state
- E. The DSL port in the CPE DSL modem is in "shutdown" state
- F. The DSL operating mode in the DSLAM does not match the operating mode of the CPE DSL modem
- G. A loose cable between the telco POTS splitter and DSLAM
- H. A loose or broken connection between the DSL modem and telephone line
- I. An incorrectly connected POTS splitter between the DSL modem and telephone line
- J. A DSL microfilter was accidentally installed in the DSL line between the DSL modem and DSL line

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 377

What effect do load coils in a telephone line have on DSL service?

- A. Load coils cause low trained rates for ADSL (CAP or DMT), but do not degrade SDSL, SHDSL, or IDSL transmission.
- B. Load coils in the telephone line can prevent any DSL modem from training up to an ATU-C port.
- C. Load coils cause low upstream rates, but do not degrade downstream rates.
- D. Load coils cause low downstream rates, but do not degrade upstream rates.
- E. Load coils cause low trained rates for SDSL, SHDSL, or IDSL, but do not degrade ADSL (CAP or DMT) transmission.

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 378

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

- 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

Correct Answer: AD

Section: (none)

Explanation

Explanation/Reference:

QUESTION 379

What effect will this configuration command have?
line vty 0 4
no password
vtypassword

A company has been assigned the Class B address of 191.8.0.0 by the NIC. They have decided to use a subnet mask of 255.255.255.0 and an autonomous system number of 1.

The configuration for Router A is as follows:

```
RouterA#show running-config
Current configuration:
version 11.3
1.) hostname RouterA
2.) enable-password enablepassword
3.) interface ethernet 0
4.) ip address 191.8.1.1 255.255.255.0
5.) no mop enabled
6.) interface serial 0
7.) ip address 191.8.150.1 255.255.255.0
8.) ip name-server 255.255.255.255
9.) ip host RouterB 191.8.150.2 191.8.2.1
10.) snmp-server community c0ie
11.) line vty 0 4
12.) login
13.) line con 0
14.) line aux 0
15.) line vty 0
16.) password vtypassword
17.) line vty 1
18.) password vtypassword
19.) line vty 2
20.) password vtypassword
21.) line vty 3
22.) password vtypassword
23.) line vty 4
24.) password vtypassword
25.) end
RouterA#
```

The configuration for Router B is as follows:

```
RouterB#show running-config
Current configuration:
version 11.3
1.) hostname RouterB
2.) enable-password sah-fran
3.) interface tokenring 0
4.) ip address 191.8.2.1 255.255.255.0
5.) ring-speed 16
6.) interface serial 0
7.) ip address 191.8.150.2 255.255.255.0
8.) ip name-server 255.255.255.255
9.) ip host A 191.8.2.1 191.8.150.1
10.) snmp-server community c0ie
11.) logging buffered
12.) line vty 0 4
13.) login
14.) line con 0
15.) line aux 0
16.) line vty 0
17.) password cisco
18.) line vty 1
19.) password cisco
20.) line vty 2
21.) password cisco
22.) line vty 3
23.) password cisco
24.) line vty 4
25.) password cisco
26.) end
RouterB#
```

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

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 380

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.

Correct Answer: B

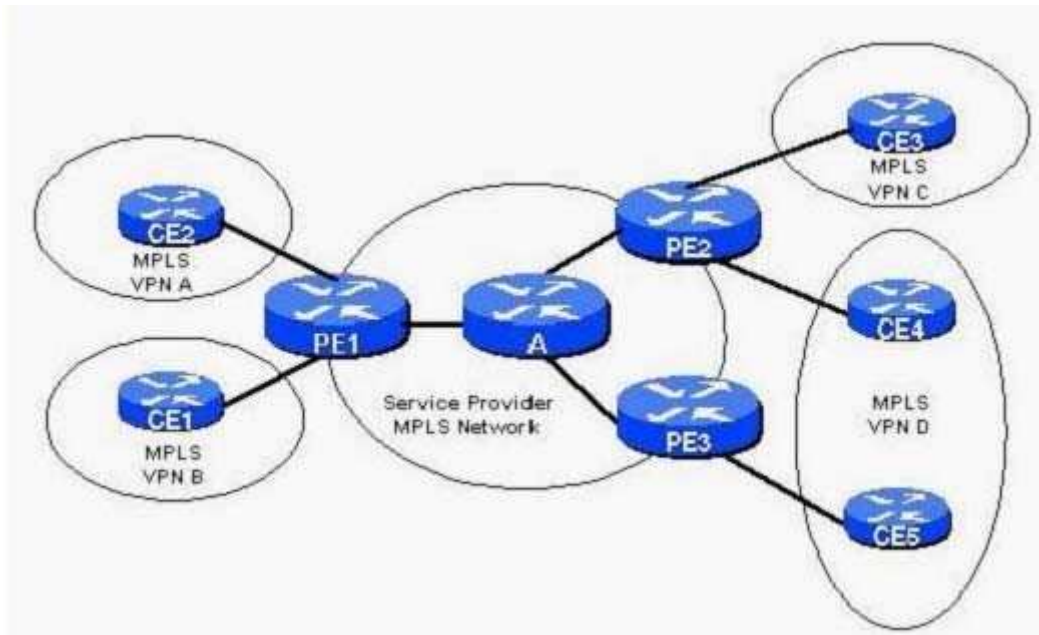
Section: (none)

Explanation

Explanation/Reference:

QUESTION 381

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



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

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 382

MPLS does not support:

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

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 383

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

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 384

What is the purpose of rate decoupling for ATM transmission?

- A. It provides transparency between SONET and SDH.
- B. It converts higher-speed DS3/E3 to lower-speed optical rates.
- C. It processess the packing and unpacking of frames into 53-octet cells.
- D. It allows lower-speed traffic on an ATM facility without causing traffic gaps.

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 385

What is NOT an ATM class of service?

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

Correct Answer: E

Section: (none)

Explanation

Explanation/Reference:

QUESTION 386

In the Internet core, routers communicating over ATM typically use:

- A. SVCs
- B. HFCs
- C. PVCs
- D. SUVs
- E. None of the above

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 387

What establishes routing table precedence in a routing table?

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

Correct Answer: E

Section: (none)

Explanation

Explanation/Reference:

QUESTION 388

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

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

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 389

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

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

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 390

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 onto the wire.
- D. This session is about to end.

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 391

A DSLAM is using Reed-Solomon forward error correction on a DMT DSL line. The DSL service is using TCP/IP over ATM over DSL. A high number of upstream RS uncorrected errors are occurring on the DSL line, as reported by the DSLAM in the following status message: DSL Statistics: Init Events: 2 Transmitted Superframes: near end: 93681573 far end: 0 Received Superframes: near end: 93516422 far end: 0 Corrected Superframes: near end: 142631 far end: 31571 Uncorrected Superframes: near end: 191 far end: 1 LOS Events: near end: 0 far end: 0 LOF/RFI Events: near end: 0 far end: 0 ES Events: near end: 5 far end: 1 What is the result of the uncorrected errors?

- A. The DSL frames will be continuously retransmitted by the DSL transceivers until an error-free frame is received.
- B. If errors on the DSL line can not be corrected by the RS algorithm, the line will be automatically taken out of service.
- C. The errored data resulting from uncorrected layer-1 errors will be handled by TCP.
- D. When Reed-Solomon forward error correction is used, all errors are corrected at layer 1. The uncorrected state was present only until forward error correction algorithms corrected the errors.

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 392

Three of the following are common symptoms of a bridge tap ("half tap") on a DSL line. Which three are symptoms that result from placing a bridge tap on a DSL line?

- A. The line may not train.
- B. The DSL service will interfere with telephone (POTS) service on the same line.
- C. DSL line rates will be lower than expected (lower than provisioned).
- D. The line may have degraded DSL service, but POTS service may appear normal.

Correct Answer: ACD

Section: (none)

Explanation

Explanation/Reference:

QUESTION 393

A DSL line status report shows a high number of corrected and uncorrected errors. The line is configured at 4

milliseconds interleave delay and 4 FEC check-bytes. To reduce the number of uncorrected errors without a detailed analysis of whether the errors are continuous or "bursty", which of the following should provide improved error correction?

- A. Change the interleave delay to 2 milliseconds to reduce latency and change the number of FEC check-bytes to 2 for reduced overhead
- B. Leave the interleave delay at 4 milliseconds and change the FEC check-bytes to 2
- C. Leave the FEC check-bytes at 4 and change the interleave delay to 2 milliseconds
- D. Change the interleave delay to 16 milliseconds and the FEC check-bytes to 16

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 394

A subscriber complains that his DSL rates are slower than the service he ordered. The customer ordered ADSL at 1 mpbs downstream and 256 kbps upstream, but the maximum bitrate observed during file downloads is 100 kbps downstream. Of the following four choices, which is clearly the most appropriate information needed to begin troubleshooting the problem?

- A. The software version running in the DSLAM
- B. The FEC parameters for the subscriber's ADSL port in the DSLAM
- C. The actual DSL rate that is reported when the DSL line is trained
- D. The manufacturer and model of ADSL CPE that is used

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 395

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.

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 396

The ATM reference model is composed of which ATM layers? (multiple answer)

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

Correct Answer: ABD

Section: (none)

Explanation

Explanation/Reference:

QUESTION 397

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

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

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 398

What effect will this configuration command have? line vty 0 4 no password vtypassword

A company has been assigned the Class B address of 191.8.0.0 by the NIC. They have decided to use a subnet mask of 255.255.255.0 and an autonomous system number of 1.

The configuration for Router A is as follows:

```
RouterA#show running-config
Current configuration:
version 11.3
1.) hostname RouterA
2.) enable-password enablepassword
3.) interface ethernet 0
4.) ip address 191.8.1.1 255.255.255.0
5.) no mop enabled
6.) interface serial 0
7.) ip address 191.8.150.1 255.255.255.0
8.) ip name-server 255.255.255.255
9.) ip host RouterB 191.8.150.2 191.8.2.1
10.) snmp-server community ccie
11.) line vty 0 4
12.) login
13.) line con 0
14.) line aux 0
15.) line vty 0
16.) password vtypassword
17.) line vty 1
18.) password vtypassword
19.) line vty 2
20.) password vtypassword
21.) line vty 3
22.) password vtypassword
23.) line vty 4
24.) password vtypassword
25.) end
RouterA#
```

The configuration for Router B is as follows:

```
RouterB#show running-config
Current configuration:
version 11.3
1.) hostname RouterB
2.) enable-password san-fran
3.) interface tokenring 0
4.) ip address 191.8.2.1 255.255.255.0
5.) ring-speed 16
6.) interface serial 0
7.) ip address 191.8.150.2 255.255.255.0
8.) ip name-server 255.255.255.255
9.) ip host A 191.8.2.1 191.8.150.1
10.) snmp-server community ccie
11.) logging buffered
12.) line vty 0 4
13.) login
14.) line con 0
15.) line aux 0
16.) line vty 0
17.) password cisco
18.) line vty 1
19.) password cisco
20.) line vty 2
21.) password cisco
22.) line vty 3
23.) password cisco
24.) line vty 4
25.) password cisco
26.) end
RouterB#
```

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

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 399

What establishes routing table precedence in a routing table?

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

Correct Answer: E

Section: (none)

Explanation

Explanation/Reference:

QUESTION 400

Three of the following are common symptoms of a bridge tap ("half tap") on a DSL line. Which three are symptoms that result from placing a bridge tap on a DSL line?

- A. The line may not train.
- B. The DSL service will interfere with telephone (POTS) service on the same line.
- C. DSL line rates will be lower than expected (lower than provisioned).
- D. The line may have degraded DSL service, but POTS service may appear normal.

Correct Answer: ACD

Section: (none)

Explanation

Explanation/Reference:



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